

Human Journals

Research Article

November 2020 Vol.:17, Issue:1

© All rights are reserved by Lizzette Gómez-de-Regil

Depressive Symptoms and Risk of Postpartum Depression in Pregnant Women Living in a Shelter



IJSRM
INTERNATIONAL JOURNAL OF SCIENCE AND RESEARCH METHODOLOGY
An Official Publication of Human Journals



Lizzette Gómez-de-Regil

*Hospital Regional de Alta Especialidad de la Península de Yucatán Calle 7, No. 433 por 20 y 22,
Fraccionamiento Altabrisa Mérida, Yucatán, México,
97130*

Submission: 22 October 2020
Accepted: 28 October 2020
Published: 30 November 2020



HUMAN JOURNALS

www.ijsrm.humanjournals.com

Keywords: depression, pregnancy, postpartum depression, CES-D, PDPI-R

ABSTRACT

Female hormonal changes, particularly present during pregnancy, increase the vulnerability for the onset or return of depression. Depressive symptoms during pregnancy may go untreated as they are not recognized, even by health professionals, or the person may feel embarrassed to acknowledge them and seek help. Untreated depression may have a detrimental effect in both the mother and the child. The present study aimed at exploring depressive symptoms and the risk of postpartum depression in a group of pregnant women temporarily residing in a shelter. In an interview, 13 participants responded the Centre for Epidemiologic Studies Depression Scale (CES-D) and the Postpartum Depression Predictors Inventory-Revised (PDPI-R scale). Depression was reported by 10 of the 13 participants (76.9%), 9 (69.2%) with severe depression, and 1 (7.7%) with moderate depression. All the participants but one (92.3%) scored at risk of postpartum depression. Pregnant women in vulnerable conditions, such as the ones in the present study, present high rates of depression and risk for PDD. Measures must be taken to prevent the onset and/or worsening of symptoms, for the sake of both, the mother and the baby.

INTRODUCTION

Depression is a significant illness worldwide. Women are more vulnerable to depression, and there is a high degree of impairment associated with this disorder. Female hormonal changes, particularly present during pregnancy, increase the vulnerability for the onset or return of depression (1). Although pregnancy is commonly thought as a period of happiness and illusions, about 25 to 35% of pregnant women experience depressive symptoms, and about 9 to 18% meet criteria for major depression (2,3). The prevalence of depression by trimester has been estimated in 7.4%, 12.8% and 12.0% in the first, second and third trimesters respectively. These rates can increment up to 47% and 39%, in the second and third trimesters in women of low socioeconomic status (1). Other identified risk factors for antenatal depression are unplanned or unwanted pregnancy, lack of psychosocial support, difficulty coping with changes in body image, marital difficulties, a history of depressive illness, sexual abuse, pregnancy at an early age and intra family violence(3–5).

Depressive symptoms during pregnancy may go untreated as they are not recognized, even by health professionals, or the person may feel embarrassed to acknowledge them and seek help. In this situation, a number of depressed pregnant women may resort to using tobacco, alcohol, or other substances to cope with their symptoms (2). Outcomes associated with prenatal depression include functional impairment, inadequate maternal nutrition and weight loss, risk-taking behaviour, pre-eclampsia, poor adherence to prenatal care plans, substance abuse, and suicide. Also, poor pregnancy outcomes such as low birth weight, preterm delivery, and small-for-gestational age infants. Some behavioural effects have been observed in the neonates, e.g. fewer expressions of interest, more pre-cry expressions, excessive crying, lower orientation scores and motor behaviour cluster, inferiorexcitability and more abnormal reflexes. Moreover, women with prenatal depression are at increased risk of progression to postpartum depression (2,6).

Postpartum depression (PPD) is a serious mental condition and, despite what one might think, it is very common, with an estimated prevalence of between 13% and 19% in the first six months after delivery (7). In Mexico, the 2012 National Health and Nutrition survey reported a 19.91% prevalence of depressive symptoms in mothers of children under five years of age, with low rates of detection (17.06%) and attention (15.19%) (8).

Depression in the postnatal stage impairs the establishment of the affective bond and the mother-baby interaction (9–11). Children of depressed mothers are at higher risk of showing cognitive, behavioural(12–14)and socio-emotional problems (14,15).

Some identified risk factor for PPD are previous episodes of anxiety or depression, particularly during pregnancy, unplanned/unwanted pregnancy, stressful life events, low levels of social support and a delivery that was more difficult than expected(16–19).

Considering the possible negative effects of maternal depression for both the mother and the baby, some efforts must focus on its early detection and prevention. The prenatal period is the right time to work with women since they have more contact with health professionals. A number of women find themselves living a pregnancy in unfavourable social and emotional conditions. Non-profit organizations have emerged with the purpose to provide support to those pregnant women in need, for the sake of the mothers and their babies.

The present study aimed at exploring depressive symptoms and the risk of postpartum depression in a group of pregnant women temporarily residing in a shelter. It is important to know the emotional and psychological aspects present in women who, for various reasons, require social assistance during their pregnancy. This will make it easier for those responsible for social programs to detect high-risk cases of depression before and/or after delivery.

METHOD

The study was carried out with a group of pregnant women who live temporarily in the Vifac association shelter, in the city of Merida (Mexico). This non-governmental and non-profit association seeks to attend and skill train pregnant women, offering them alternatives for their development and that of their child. With the prior approval of the Vifac board of directors, the participants were asked to sign the informed consent and in the case of minors, the signature of the legal guardian was additionally required.

Of the 15 users registered at the shelter, two were absent when the interviews were conducted. The 13 participants answered the questionnaires privately; only in two cases was it necessary to help the participant to answer the questionnaires due to a low level of reading comprehension. Age ranged from 15 to 36 years, with a mean of 23 (SD = 5.83). Two cases (15.4%) of

pregnancy were the result of sexual abuse, in 5 cases (38.5%) the father abandoned the mother for the pregnancy, in 1 case (7.7%) the couple's relationship did not continue but the father did assume his responsibility, and in 5 cases (38.5%) the father continues in a relationship with the mother. For five participants (38.5%) it is their first pregnancy.

The CES-D (Center for Epidemiologic Studies Depression Scale) (20) was used to assess depressive symptoms. It is a widely used instrument to evaluate depressive symptoms in the general population. It consists of 20 Likert-type items with four answer options, in which each question asks how many days during the last week the person experienced a series of depressive symptoms. Response scores are 0 ("less than 1 day"), 1 ("1 or 2 days"), 2 ("3 or 4 days"), and 3 ("5 to 7 days"). Adding the score for each item gives an overall score with a range between 0 and 60. A score of 26 or higher indicates severe depression, between 21 and 25 indicates moderate depression, between 16 and 20 indicates mild depression, and less than 16 indicates no depression. Designed to identify symptoms of depression, it is easy and quick to apply and has adequate validity in pregnant women. The CES-D has been applied in previous studies with pregnant women in Mexico with good psychometric results (21).

The PDPI-R scale (Postpartum Depression Predictors Inventory-Revised) (22) was applied to estimate the risk of postpartum depression. It is made up of 39 items distributed in 13 factors, of which only the first 10 factors (32 items) are applied in the gestation stage. The predictive factors are marital status (1 item), socioeconomic status (1 item), self-esteem (3 items), prenatal depression (1 item), prenatal anxiety (1 item), pregnancy intendedness (2 items), prior depression (1 item), social support (12 items), marital satisfaction (3 items), and life stress (7 items). As a cut-off point, a score equal to or greater than 10.5 indicates a risk for postpartum depression. This scale has been validated in the Mexican population (23).

RESULTS

The global score of the CES-D scale had a mean of 31.2 (SD = 13.3), in a range between 9 and 47 points. Depression was reported by 10 of the 13 participants (76.9%), 9 (69.2%) with severe depression, and 1 (7.7%) with moderate depression. Three cases did not present depression. Table 1 presents the mean score and standard deviation for each item individually. It is observed that "I felt lonely" and "I felt sad" were the depressive symptoms with the highest mean scores,

followed by "I (did not) enjoy life" and "I had crying spells". The symptoms with the lowest mean scores were "I was bothered by things that usually don't bother me", "I talked less than usual", and "I felt that I could not shake off the blues even with help from my family or friends".

Table No. 1: Means and standard deviations of the CES-D items	
	Mean (SD)
I was bothered by things that usually don't bother me	0.85 (1.07)
I did not feel like eating; my appetite was poor	1.31 (1.18)
I felt that I could not shake off the blues even with help from my family or friends	1.15 (1.28)
I felt I was just as good as other people*	1.62 (1.33)
I had trouble keeping my mind on what I was doing	1.54 (1.20)
I felt depressed	1.54 (1.33)
I felt that everything I did was an effort	1.23 (1.01)
I felt hopeful about the future*	1.69 (1.38)
I thought my life had been a failure	1.31 (1.38)
I felt fearful	1.85 (1.41)
My sleep was restless	1.62 (1.12)
I was happy*	1.62 (1.39)
I talked less than usual	1.00 (1.08)
I felt lonely	2.08 (1.89)
People were unfriendly	1.69 (1.25)
I enjoyed life*	1.92 (1.19)
I had crying spells	1.92 (1.26)
I felt sad	2.00 (1.29)
I felt that people dislike me	1.46 (1.27)
I could not get "going"	1.85 (1.41)
*Scores are reverted	
CES-D: Center for Epidemiologic Studies Depression Scale	

The total PDPI-R scores had a mean of 18.8 (SD = 6.3), in a range between 8 and 29 points; that is, all the participants but one (92.3%) scored "at risk of postpartum depression" (≥ 10.5). Table 2 presents the descriptive statistics for each of the factors and items. The frequencies indicate that all risk factors were reported to be rather present than absent ($\geq 50\%$), with the exception of "relative with a severe illness" and "change of job". When observing the mean scores, considering the midpoint scores corresponding to the score ranges (1.0, 1.5, 2.0, or 6.0) it can be interpreted that pregnancy intendedness, social support and marital satisfaction are risk factors

for PDD present in this group. Self-esteem and life stress scores were below their corresponding midpoints (1.5 and 4.5). Two participants reported not feeling depressed during pregnancy, and it matches their CES-D score. One case reported feeling depressed in the corresponding PDPI-R item but her CES-D score suggests that the symptoms have resolved.

Table No. 2: Descriptive statistics of the PDPI-R items				
Predictive factor	Number of items	Score range	Mean (SD) *	n (%)**
Marital status	1	0-1		No partner = 8 (61.5)
Socioeconomic status	1	0-1		Low = 10 (76.9)
Self-esteem	3	0-3	1.00 (1.29)	
Prenatal depression	1	0-1		Yes = 11 (84.6)
Prenatal anxiety	1	0-1		Yes = 7 (53.8)
Pregnancy intendedness	2	0-2	1.23 (0.93)	
Prior depression	1	0-1		Yes = 8 (61.5)
Social support	12	0-12	7.46 (2.85)	
Partner	4	0-4	2.39 (1.98)	
Family	4	0-4	2.31 (1.93)	
Friends	4	0-4	2.77 (1.69)	
Marital satisfaction	3	0-3	1.62 (1.26)	
Life stress	7	0-7	4.08 (2.06)	
Financial problems	1	0-1		Yes = 9 (69.2)
Problems with partner	1	0-1		Yes = 7 (53.8)
Family death	1	0-1		Yes = 9 (69.2)
Unemployment	1	0-1		Yes = 7 (53.8)
Relative with a severe illness	1	0-1		Yes = 4 (30.8)
Moving away	1	0-1		Yes = 11 (84.6)
Change of job	1	0-1		Yes = 6 (46.2)
*Higher scores mean higher risk for postpartum depression				
**These answers score 1 point as predictors of postpartum depression				
PDPI-R: Postpartum Depression Predictors Inventory-Revised				

Although according to the CES-D score, there are some participants who do not present significant levels of depression, it is notable that all participants but one qualify as at risk of postpartum depression given the social and psychological conditions in which they live their pregnancies.

DISCUSSION

Pregnancy is usually seen as an ideal and happy time in a woman's life. Nevertheless, in many occasions, pregnancy occurs in unfavourable conditions that may increase the risk for depression during gestation or immediately after delivery.

Depression is highly prevalent, also in pregnant women, and early detection might prevent some adverse outcomes for the mother and the baby. However, no treatment can be offered and received if women are undiagnosed (3). Here, a group of women who, due to unfavourable socioeconomic conditions, are under the care of a non-governmental and non-profit shelter were interviewed to explore the presence of depressive symptoms and the risk for postpartum depression.

It is estimated that about 25 to 35% of pregnant women experience depressive symptoms (2,3); but in this study, 76.9% of the participants reported depressive symptoms, most of them at a severe level. This high prevalence concurs with previous findings that depression estimates are higher in women of low socioeconomic status and without a partner (24). In addition, this sample also had other factors that have been associated with higher prevalence of depressive symptoms in pregnancy, such as major financial problems, poor marital relationships, unwanted pregnancy, exposure to violence and poor social support(25,26).

Antenatal depressive symptoms and other socioeconomic factors may contribute to continuity of depression or its onset in the postpartum period (19,27). Reported PPD rates ranged between 13% and 19% (7,8,19). Reviewing various studies on the topic, Yim and colleagues (2015) identified that the strongest PPD risk predictors among biological processes are hypothalamic-pituitary-adrenal dysregulation, inflammatory processes, and genetic vulnerabilities. In addition, among psychosocial factors, the strongest predictors are severe life events, some forms of chronic strain, relationship quality, and support from partner and mother (28). In the present study, 92.3% of participants qualified as "at risk of postpartum depression", as they presented factors that have been identified as significant predictors: prenatal depression, poor self-esteem, prenatal anxiety, life stress, poor social support, low socioeconomic status, and unplanned/unwanted pregnancy(19).

PPD affects the personal development of mothers and their children. Sloman and colleagues(29)have summarized the various negative outcomes and categorized them as “maternal consequences” (e.g. physical health, psychological health, quality of life), “infant consequences” (e.g. weight, length, sleep, motor and cognitive development), and “mother-child interactions” (e.g. bonding and attachment, breastfeeding, and maternal role).

Given the detrimental consequences of depression on mother and fetus/infant efficacious treatments are needed. Treatment for maternal depression, as for other type of depression, relies on psychotherapy for mild depression and combining medication and psychotherapy for more severe cases (2,4).In addition, treatments targeting the mother-infant relationship and home-based interventions seem to ameliorate efficaciously the detrimental consequences for children of depressed mothers (30). Some studies have also applied complementary/alternative medicine approaches for treating maternal depression, such as light and massage therapy, acupuncture and sleep deprivation, with some promising early results (2). Moreover, psycho-educational programs have been developed for the identification of depressive symptoms in gestational and postpartum periods(31–33). In Mexico, Lara and colleagues(34)developed and tested a psycho-educational intervention to prevent postpartum depression in women at high risk, with most participants that completed the intervention reporting a significant change in their well-being, depression, current problems, role as mothers and their relationship with the baby.

The mental health professional, in agreement and collaboration with the patient must decide on the most suitable treatment. In any case, early detection will favour the amelioration of symptoms and their detrimental effects. That is why maternal depression awareness, from professionals and patients, is clue during the prenatal and postpartum periods.

This study found high rates of both depressive symptoms and risk factors for postpartum depression in a group of pregnant women living in a shelter. Due to setting conditions, some limitations were present: sample size was relatively small and not sufficient for comparative analyses and follow-up was not possible given that most participants left the shelter before or immediately after delivery and contact was lost.

CONCLUSION

Pregnant women in vulnerable conditions, such as the ones in the present study, present high rates of depression and risk for PPD. Measures must be taken to prevent the onset and/or worsening of symptoms, for the sake of both, the mother and the baby.

ACKNOWLEDGMENTS

Author thanks the Vifac association for the facilities and support and to all those women who kindly took part as participants.

REFERENCES

1. Bennett HA, Einarson A, Taddio A, Koren G, Einarson TR. Prevalence of depression during pregnancy: Systematic review. *Obstet Gynecol.* 2004;103(4):698–709.
2. Born L, Zinga D, Phillips SD. Update on the treatment of depression during pregnancy. *Therapy.* 2006;3(1):153–61.
3. Bonari L, Pinto N, Ahn E, Einarson A, Steiner M, Koren G. Perinatal risks of untreated depression during pregnancy. *Can J Psychiatry.* 2004;49(11):726–35.
4. Conlon O, Lynch J. Maternal depression: risk factors and treatment options during pregnancy. *Obstet Gynaecol.* 2008;10(3):151–5.
5. Martínez-Paredes JF, Jácome-Pérez N. Depresión en el embarazo. *Rev Colomb Psiquiatr.* 2019;48(1):58–65.
6. Bennett HA, Einarson A, Taddio A, Koren G, Einarson TR. Depression during pregnancy. Overview of clinical factors. *Clin Drug Investig.* 2004;24(3):157–79.
7. O'Hara MW, McCabe JE. Postpartum depression: Current status and future directions. *Annu Rev Clin Psychol.* 2013;9(1):379–407.
8. de Castro F, Place JM, Villalobos A, Allen-Leigh B. Sintomatología depresiva materna en México: Prevalencia nacional, atención y perfiles de riesgo. *Salud Publica Mex.* 2015;57(2):144–54.
9. Martins C, Gaffan EA. Effects of early maternal depression on patterns of infant-mother attachment: a meta-analytic investigation. *J Child Psychol Psychiatry.* 2000;41(6):737–46.
10. Wouk K, Stuebe AM, Meltzer-Brody S. Postpartum mental health and breastfeeding practices: An analysis using the 2010–2011 pregnancy risk assessment monitoring system. *Matern Child Health J.* 2017;21(3):636–47.
11. Young KS, Parsons CE, Stein A, Kringelbach ML. Motion and emotion: depression reduces psychomotor performance and alters affective movements in caregiving interactions. *Front Behav Neurosci.* 2015;9:26.
12. Grace SL, Evindar A, Stewart DE. The effect of postpartum depression on child cognitive development and behavior: A review and critical analysis of the literature. *Arch Womens Ment Health.* 2003;6(4):263–74.
13. Kingston D, McDonald S, Austin M-P, Tough S. Association between prenatal and postnatal psychological distress and toddler cognitive development: A systematic review. *PLoS One.* 2015;10(5):e0126929.
14. Kingston D, Tough S, Whitfield H. Prenatal and postpartum maternal psychological distress and infant development: A systematic review. *Child Psychiatry Hum Dev.* 2012;43(5):683–714.
15. Moore GA, Cohn JF, Campbell SB. Infant affective responses to mother's still face at 6 months differentially predict externalizing and internalizing behaviors at 18 months. *Dev Psychol.* 2001;37(5):706–14.
16. Verreault N, Da Costa D, Marchand A, Ireland K, Dritsa M, Khalifé S. Rates and risk factors associated with depressive symptoms during pregnancy and with postpartum onset. *J Psychosom Obstet Gynecol.* 2014;35(3):84–91.

17. Mohammad KI, Gamble J, Creedy DK. Prevalence and factors associated with the development of antenatal and postnatal depression among Jordanian women. *Midwifery*. 2011;27(6):e238–45.
18. Robertson E, Grace S, Wallington T, Stewart DE. Antenatal risk factors for postpartum depression: A synthesis of recent literature. *Gen Hosp Psychiatry*. 2004;26(4):289–95.
19. Beck CT. Predictors of postpartum depression: An update. *Nurs Res*. 2001;50(5):275–85.
20. Radloff LS. The CES-D Scale: A self-report depression scale for research in the general population. *Appl Psychol Meas*. 1977;1(3):385–401.
21. Lara MA, Navarrete L. Detección de depresión en mujeres embarazadas mexicanas con la CES-D. *Salud Ment*. 2012;35(1):57–62.
22. Records K, Rice M, Beck CT. Psychometric assessment of the Postpartum Depression Predictors Inventory-Revised. *J Nurs Meas*. 2007;15(3):189–202.
23. Ibarra-Yruegas B, Lara MA, Navarrete L, Nieto L, Kawas Valle O. Psychometric properties of the Postpartum Depression Predictors Inventory-Revised for pregnant women in Mexico. *J Health Psychol*. 2018;23(11):1415–23.
24. Gazmararian JA, James SA, Lepkowski JM. Depression in black and white women. *Ann Epidemiol*. 1995;5(6):455–63.
25. Lteif Y, Kesrouani A, Richa S. Symptômes dépressifs pendant la grossesse : Prévalence et facteurs de risque. *J Gynécologie Obs Biol la Reprod*. 2005;34(3):262–9.
26. Fekadu Dadi A, Miller ER, Mwanri L. Antenatal depression and its association with adverse birth outcomes in low and middle-income countries: A systematic review and meta-analysis. *PLoS One*. 2020;15(1):e0227323.
27. Abdollahi F, Zarghami M, Sazlina S-G, Lye M-S. Stability of depressive symptoms over 3 months post-partum. *Early Interv Psychiatry*. 2017;11(1):57–62.
28. Yim IS, Tanner Stapleton LR, Guardino CM, Hahn-Holbrook J, Dunkel Schetter C. Biological and psychosocial predictors of postpartum depression: systematic review and call for integration. *Annu Rev Clin Psychol*. 2015;11(1):99–137.
29. Slomian J, Honvo G, Emonts P, Reginster J-Y, Bruyère O. Consequences of maternal postpartum depression: A systematic review of maternal and infant outcomes. *Women's Heal*. 2019;15:174550651984404.
30. Nylén KJ, Moran TE, Franklin CL, O'hara MW. Maternal depression: A review of relevant treatment approaches for mothers and infants. *Infant Ment Health J*. 2006;27(4):327–43.
31. Steardo L, Caivano V, Sampogna G, Di Cerbo A, Fico G, Zinno F, et al. Psychoeducational intervention for perinatal depression: Study protocol of a randomized controlled trial. *Front Psychiatry*. 2019 Feb 13;10(55).
32. Sikander S, Lazarus A, Bangash O, Fuhr DC, Weobong B, Krishna RN, et al. The effectiveness and cost-effectiveness of the peer-delivered Thinking Healthy Programme for perinatal depression in Pakistan and India: The SHARE study protocol for randomised controlled trials. *Trials*. 2015;16(1):534.
33. Ugarte AU, López-Peña P, Vangeneberg CS, Royo JGT, Ugarte MAA, Compains MTZ, et al. Psychoeducational preventive treatment for women at risk of postpartum depression: Study protocol for a randomized controlled trial, PROGEA. *BMC Psychiatry*. 2017;17(1):13.
34. Lara MA, Navarro C, Navarrete L. Outcome results of a psycho-educational intervention in pregnancy to prevent PPD: A randomized control trial. *J Affect Disord*. 2010;122(1–2):109–17.