

**PREVALENCE OF POSTPARTUM DEPRESSION AMONG FILIPINO MOTHERS SEEN AT THE UNIVERSITY OF THE EAST RAMON MAGSAYSAY MEMORIAL MEDICAL CENTER, INC. (UERMMMMCI) FROM 2012-2013: A DESCRIPTIVE STUDY**

*Cherryrich M. Cheng MD, DSBPP\* & Melissa Paulita V. Mariano, MD, DSBPP*



**ABSTRACT**

**OBJECTIVE:** This paper sought to describe the prevalence rate of postpartum depression in patients seen for follow-up at the UERMMMMCI Obstetrics and Gynecology Services from June 01, 2012 to May 31, 2013. **METHODOLOGY:** Participants of the study included mothers who sought consult at the Obstetrics and Gynecology Service of the UERMMMMCI Outpatient Department after giving birth. These participants were recruited via convenience sampling. A survey method was used to determine variables under study, which included age, relational status and length of relationship, occupation, income, presence of fetomaternal complications, and manner of delivery, while the Filipino version of the Edinburgh Postnatal Depression Scale (EPDS) was used to screen for depression risk. Ethics approval was secured prior to study initiation. Analysis of data was done using SPSS v.16.0. **RESULTS:** A total of fifty-one mothers participated in the study. Of the total sample, the majority were of adult age and were unemployed. It was observed that 20% of the sample had an EPDS of 10 and above, with 6% having an EPDS score of 14 and above. Mothers who presented with higher EPDS scores were noted to have had a caesarean section delivery and fetomaternal complications after delivery. **CONCLUSION:** This study showed that the prevalence of post partum depression was clinically significant to warrant routine screening among mothers.

**KEYWORDS:** *Postpartum Depression, Maternal Care, Filipino Mothers, Puerperal Psychiatric Illness*

**INTRODUCTION**

Nonpsychotic depression in the postpartum period is a well-known clinical phenomenon, but women at risk for this are rarely recognized during pregnancy or at the delivery ward. The presence of psychiatric complications after delivery has been recognized as early as the fourth century B.C., when Hippocrates noted the case of a woman who had recently delivered twins as being a “severe case of insomnia and restlessness that began on the sixth day” (Hippocrates with an English translation by W.H.S. Jones, 1923-1931)<sup>1</sup> after the birth.

Postpartum depression is currently known clinically as major depressive disorder with peripartum onset by the 5th edition

of the Diagnostic and Statistical Manual of Mental Disorders<sup>2</sup>. While the DSM-5 classifies it under the depressive disorders, the spectrum of postpartum psychiatric illness generally includes “postpartum blues”, postpartum depression and postpartum psychosis<sup>2</sup>.

Postpartum blues, which is also known as “baby blues”, is commonly observed and is considered as a normative phenomenon in the first several days following child delivery. It is characterized by labile, depressed or irritable mood, interpersonal hypersensitivity and tearfulness. Postpartum mood changes of this nature typically arise and resolve 7 to 14 days following the delivery and symptoms peak in severity in 5 days<sup>2</sup>.

On the other end of the spectrum, postpartum psychosis has consistently been estimated to occur in 1 to 2 women per 1,000 following delivery of a child. The most tragic outcome associated with postpartum psychosis is infanticide, the prevalence of which is poorly documented. Approximately 75% of women with postpartum psychosis have an onset within 2 weeks of delivery. Wisner and colleagues found that women with childbearing – related psychotic illness were more likely to display cognitive impairment and bizarre behavior<sup>3</sup>. In a study by Kendell and colleagues on psychiatric admissions within 90 days postpartum, the highest rates of admission were those women with histories of bipolar disorder depressed type (13.3%) and manic or cycling type (21.4%)<sup>4</sup>.

Finally, nonpsychotic depression in the postpartum period (postpartum depression) is a well-known clinical phenomenon and is estimated to occur in 13 percent of women within the first six weeks after delivery<sup>5</sup>. Mothers with this disorder may experience tearfulness, despondency, emotional lability, feelings of guilt, loss of appetite, suicidal ideation and sleep disturbances as well as feelings of inadequacy and inability to cope with the infant, poor concentration and memory, fatigue and irritability. The DSM 5 diagnostic criteria for postpartum depression does not differ from that used to diagnose depression at any other developmental period – specifically, the symptoms must be

*\*Corresponding Author: Department of Psychiatry, University of the East Ramon Magsaysay Memorial Medical Center, Inc, Quezon City, Metro Manila, cherryrichmd@gmail.com*

present throughout the day for a period of at least two weeks<sup>2</sup>.

Postpartum depression has a long term effect on maternal mental health since it may increase the risk of continuing or recurrent depression for the mother. In addition to this, postpartum depression has been associated with adverse effects on early infant development, especially among socially disadvantaged children – for example, infants of depressed mothers have been found to be less responsive and more irritable<sup>6</sup>. Other serious consequences for the child include a heightened risk of accidents and sudden infant death syndrome as well as an overall higher frequency of hospital admissions<sup>6</sup>. Another study noted the presence of poor cognitive development and increased behavioral disturbances among four-year-old boys whose mothers had postpartum depression<sup>7</sup>. Hence, the occurrence of depressive illness following childbirth can be detrimental to the mother, her marital relationship as well as for her children. It can also have adverse long-term effects if left untreated. For the children, a mother's ongoing depression can contribute to later emotional, behavioral, cognitive and interpersonal problems. Because of these serious consequences, early diagnosis and treatment interventions of postpartum illnesses are imperative for the health and well-being of the mother and child<sup>6,7</sup>.

The long-term effects of maternal depression on their children include: behavior problems, cognitive delays, physical health problem and disturbed early interactions. In a meta-analysis of studies on the early interactions of postpartum depressed mothers, they were noted to be more irritable and hostile towards their infants. Furthermore, their interactions with the infants were less engaged, with lower levels of emotion, warmth, and play compared to the interactions observed between non-depressed mothers and their infants<sup>6</sup>. These findings appear to be present cross-culturally. For example, less vocal and visual communication as well as less smiling have been noted in depressed mother-infant interactions in Switzerland, while depressed mothers in England were noted to be less sensitively attuned to their infants. Similar disturbances have also been noted in Arabic countries, as well as in Turkey<sup>6</sup>.

Infants of depressed mothers have been found to show less expressive language and perform more poorly on measures of cognitive-linguistic functioning<sup>6</sup>. Several care giving activities also appear to be compromised by postpartum depression effects on the developing parenting roles including feeding practices, most especially breastfeeding, sleep routines, well-child visits and vaccinations. These would seem to be even more basic functions of parenting, although they have received less attention than the effects of postpartum depression on mother-infant interactions<sup>6</sup>.

In studies conducted among Caucasian women, the prevalence of postpartum depression ranged from 8 to 15%, with a mean of 13% in one meta-analysis<sup>5,8,9,10</sup>. While studies in developing countries such as the Philippines are scarce, one local study revealed that 7.3% of a sample of 191 women met the diagnostic criteria for depression with peripartum onset<sup>11</sup>. Risk factors identified were below college education, income of P 5,000/month, history of depression, urban living and smoking<sup>11</sup>.

Given the scarcity of local data, this study aims to determine the prevalence of postpartum depression and describe demographic and clinical characteristics of Filipino mothers at high risk for postpartum depression seen at the UERMMMCI Obstetrics and Gynecology Department.

## **METHODOLOGY**

### *Study Setting & Design*

This was a cross-sectional descriptive study conducted from June 1, 2012 to May 31, 2013 at the University of the East Ramon Magsaysay Medical Center Inc., a Philippine hospital located in Aurora Boulevard, Quezon City. It is classified as a private general hospital with a total bed capacity of three hundred beds. It is divided into the Pay Hospital and the Service Hospital, which contains the Obstetrics and Gynecology ward and outpatient department under study. Yearly, the Obstetrics and Gynecology department of the institution assists approximately 500 patients in giving birth regardless of presence of complications. Patients are discharged one to four days after giving birth and are asked to be seen at the Obstetrics and Gynecology Outpatient Department for their follow up.

### *Participants*

Study participants included mothers who recently gave birth in UERMMMCI to one day to one week prior to the time of the screening. Additional inclusion criteria were the ability to give informed consent, literacy in the Filipino language and ability to comply with follow-up instructions. Exclusion criteria included those with a history of a previous psychiatric or neurological illness as well as those with a history of a chronic medical illness not acquired during the period of the latest pregnancy. Patients with histories of these illnesses were excluded as the possible presence of psychiatric symptoms, such as depression and anxiety, may be due to conditions other than postpartum depression i.e. mood disorder secondary to another medical condition.

Using the formula below, with an average prevalence rate of 13% from previous studies<sup>8</sup> a confidence level of 95% and margin of error set at 10%, the minimum computed sample size for the study was 43.

$$SS = \frac{(1.96)^2 * (0.13) * (0.87)}{(0.10)^2} = 43$$

$$SS = \frac{Z^2 * (p) * (1-p)}{c^2}$$

### Data Gathering & Analysis

Data was gathered at the UERMMMCI Obstetrics and Gynecology Outpatient Department from participating mothers through convenience sampling. Specifically, all mothers who presented at the UERMMMCI Obstetrics and Gynecology Outpatient Department and met the inclusion criteria were invited to take part in the study. Study participants included mothers who recently gave birth in UERMMMCI to one day to one week prior to the time of the screening. Informed consent was secured from each participant; henceforth, they were asked to fill out a general information questionnaire and answer the Filipino version of the Edinburgh Postnatal Depression Scale<sup>10</sup>.

The study protocol was reviewed and approved by the Review Board of the UERMMMCI prior to its commencement. Confidentiality and anonymity were ensured through the use of participant codes.

Descriptive statistics using frequency measures and measures of tendency were used to analyze data gathered. For all statistical analysis, SPSS v.16.0 was used.

### Tools

The general data questionnaire, which was developed for the current study, included questions on age, relational status and length of relationship, occupation, income, presence of feto-maternal complications and manner of delivery. These questions were included due to the representation of these variables as possible factors, which heighten the risk for the development of postpartum depression<sup>3,4</sup>. (Appendix 1)

The Edinburgh Postnatal Depression Scale (EPDS) was used in order to screen for and quantify the risk for postpartum depression among the participants. The scale, which is a 10-item self-report questionnaire, in which women were asked to rate how they have been feeling in the previous 7 days.

The EPDS is the most widely used screening tool for postpartum depression. Each question was scored 0 – 3, with a total possible score of 0 – 30. A cut – off for ‘probable depression’ has been suggested at 12/13, and ‘possible depression’ at 9/10. The cut-off points of 9/10 and 12/13 were also used as markers of possible minor and major depression respectively. In a study regarding the use of the Edinburgh Postnatal Depression scale, it was noted that the scale detected a rate of 10.7% for postpartum depression

compared to a detection rate of 3.7% when the scale was not used<sup>12,13</sup>.

The EPDS has also been translated and validated in many languages other than English. In particular, the study utilized the Filipino Version of the EPDS, which was previously validated in the Philippine General Hospital. In the validation study, where the EPDS was compared to the DSM criteria for depression, the sensitivity of the scale was 71.4 percent and specificity was 84.2 percent<sup>11</sup>.

However, it should be noted that the EPDS was designed to indicate the possibility of illness and not to make a definitive assessment. The utility of the EPDS rests in its free availability to women, ease of administration and general acceptability to women, if given sympathetically. Therefore, it remains a useful tool in the field of perinatal mental health<sup>12,13</sup>.

### RESULTS

Data gathered revealed a study sample consisting of fifty-one (51) mothers aged 20 to 41 years old, with a mean age of 29 years old. Sixty percent (31/ 51) were unemployed and spent their time managing their households. The household income for the participants ranged from Php 6,000.00 – 15,000.00 per month. With respect to their relational and previous childbearing status, the means of 4.37 years of length of relationship with their partner and 2 child births were computed.

The most common manner of delivery was normal spontaneous delivery, which was followed by Caesarian section. One case each of vacuum assisted and forceps assisted delivery were noted. Thirty-nine percent (20 / 51) experienced feto-maternal complications during the delivery, including gestational diabetes, preeclampsia, eclampsia, hyperemesis gravidarum, urinary tract infection, hyperthyroidism, breech presentation and duodenal agenesis.

Ten out of 51 subjects (19.60%) presented with EPDS score of 10 and above, scores corresponding to possible depression. Of these 51 participants, sixty percent were unemployed. Thirty percent delivered via caesarean section, which accounted for 25% of all caesarean deliveries of the hospital at that time. The percentage of mothers presenting with possible depression was higher than the 13% prevalence rate previously reported in a Western meta-analysis<sup>8</sup>.

The highest EPDS score in the study population was 18, with high EPDS scores ranging from 14 to 18 (probable depression) being present in 3 mothers or 5.8% of the sample. These mothers were noted to have been unemployed and had experienced feto-maternal complications.

## DISCUSSION

It is worth noting that the number of study participants at risk for postpartum depression, as assessed by the EPDS, was higher than what previous research studies suggested<sup>8</sup>.

Limitations of the study included the restricted setting in which it was conducted, possible information bias due to the self-administered nature of the tools as well as the purely descriptive nature of the study.

While the sample size was limited, these findings may still be of clinical value when it comes to screening for post-partum depression.

The use of the EPDS may have led to an information bias, as it was self-administered. It is therefore suggested that future research studies address this possible bias through the use of a diagnostic interview based on the DSM-5 criteria instead of a self-administered scale.

It is suggested that future studies extend the scope of the study through an increased sample size and inclusion of other medical centers. Specifically, a multicenter study would be significantly more comprehensive and would provide a better epidemiological basis for future clinical research and policy development.

Furthermore, it is recommended that a comparison group consisting of post-partum women at low risk for depression be recruited in order to be able to quantitatively measure the effect sizes of the risk factors for postpartum depression, which were potentially identified in this study, as the sample size of the study was not adequate enough to allow for a comparison between groups with and without depression.

### *Conclusion*

The study results revealed that nearly 24% percent of Filipino mothers presented with possible or probable postpartum depression at the UERMMMCI, a percentage higher than what research from other countries suggest. Hence, it may be useful for clinicians to screen for postpartum depression in patients as part of routine follow-up care in order to minimize the negative consequences associated with postpartum depression. It is hoped that these study findings pave the way for future research in the field of peripartum psychiatric disorders in the Philippines.

It is hoped that the data generated in the study can contribute to the increased awareness regarding postpartum depression and encourage clinicians to screen for postpartum depression in patients as part of routine follow-up care in order to minimize the negative consequences associated with it.

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**APPENDIX 1. General Demographics**

Pangalan: \_\_\_\_\_

Edad: \_\_\_\_\_

Trabaho: \_\_\_\_\_

Status: \_\_\_\_\_

Tagal ng pagsasama: \_\_\_\_\_

OB Score: \_\_\_\_\_

Ilang beses na nag buntis: \_\_\_\_\_

Ilang beses na nanganak: \_\_\_\_\_

Mga problema/ komplikasyon habang nag bubuntis: \_\_\_\_\_

Sanggol: \_\_\_\_\_

Babae

Lalaki

Komplikasyon sa sanggol: \_\_\_\_\_

Pag bubuntis:

Gestational Diabetes

Eclampsia/ Preeclampsia

Iba pang mga karam daman habang nag bubuntis

Pag papa nganak:

Normal spontaneous delivery

Caesarean Section Dahilan: \_\_\_\_\_

Forceps induced

Iba pang komplikasyon sa pa nganganak: \_\_\_\_\_

Income kada buwan (PhP)

1,000.00 - 5,000.00

6,000.00 - 10,000.00

11,000.00 - 15,000.00

15,000.00+



*Hungduan Rice Terraces by Angela Rivera*