PREDICTORS OF POSTPARTUM DEPRESSION AMONG NURSING MOTHERS ATTENDING IMMUNIZATION CLINIC IN LAGOS NIGERIA

Afolabi Wasiu Adebowale & Rasheed Tajudeen Olusegun

ABSTRACT

Postpartum Depression (PPD) is a debilitating disorder that is mostly unrecognized among women after childbirth. The study assesses the prevalence and predictors of postpartum depression among nursing mothers attending immunization clinic in Lagos Nigeria. The design adopted for this study is a cross-sectional design. Target population of this study are nursing mothers attending immunization clinic in Lagos and balloting sampling technique was used to select 290 participants. The instrument used for this study was a self-administered questionnaire with validity established and reliability done through pilot test using Cronbach's Alpha with coefficient value of 0.84. Data collected was analyzed with Statistical Package of Social Science (SPSS) version 21. Descriptive statistics was used to generate frequencies and percentages, while Chi-square was used to test the significant association that exists between the variables of interest at $p < 0.05$ and 95% confidence interval. The results are presented in tables and charts as appropriate. The result of this study shows that the prevalence rate of postpartum depression is low using Edinburgh Postnatal Depression Scale (EPDS) with cut off $\geq$ 10. Further findings reported in this study is that age is significantly associated with the prevalence of postpartum depression with ($X^2 \geq 37.119$, $df \geq 3$, $p \geq 0.000$), while socio-economic status, family history and postnatal week is the predictors of postpartum depression with ($X^2 \geq 9.872$, $df \geq 3$, $p \geq 0.0200$), ($X^2 \geq 70.212$, $df \geq 1$, $p \geq 0.0001$) and ($X^2 \geq 45.623$, $df \geq 2$, $p \geq 0.000$). Conversely, a small number (six) of the independent variables are not predictors of the prevalence of postpartum depression. But an association exists between lack of sufficient support during pregnancy and at early stage of childbirth and prevalence of postpartum depression of mothers. It is therefore recommended that early screening, creation of a support group and awareness program on postpartum depression could prevent mental health problems among nursing mothers.

Keywords: Postpartum depression, prevalence, predictors, nursing mothers, Nigeria

INTRODUCTION

During pregnancy, childbirth and postpartum period, women undergo various physical, physiological and mental changes (Anokye et al., 2018). Consequently, a number of women who could not cope successfully with the situation might suffer a depressive state known as postpartum depression (Ahmed et al., 2015; Anokye et al., 2018). Postpartum Depression (PPD) is internationally recognized as one of the most severe complications of childbirth and most neglected aspect of the maternal health (Atim, 2017; Chinawa et al., 2016). Postpartum depression usually becomes apparent after the first week of delivering a baby and may last for up to fourteen months (Ukaegbe et al., 2012). The condition is considered postpartum depression if it meets the DSM-V code criteria stipulated in the (Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, Issued, 2017) for depressive episode.

Globally, the prevalence of PPD varies widely from place to place (WHO, 2010). For example, WHO (2007) estimate the prevalence of PPD as being 12–13% internationally. But, the prevalence of PPD may be as high as 15–28% in many countries in Africa and Asia, 50% in

Bangladesh, 28–57% in Pakistan, and 35–47% in Latin America (Wachs, Black, & Eagle, 2009). The disorder occurs 3 times more commonly in developing countries compared to developed countries (Wachs et al., 2009). This could be attributed in part to cross-cultural beliefs, differences in the perception of mental health or differences in socioeconomic backgrounds (Joel, Onasoga, Rejuaro, Yusuf & Chibuike, 2016). In Africa, there is a difference in the range of the prevalence of PPD reported in the studies. It is reported that Uganda has the lowest prevalence of PPD – 7%, and Zimbabwe has 33% (Tungchama et al., 2018). In Nigeria, the prevalence of PPD varies from region to region and within the same region. Obindo et al. (2013). In a cross-sectional study, reports that the rate of prevalence of PPD is 44.39%, using the Edinburgh Postnatal Depression Scale (EPDS) among 392 women attending the postnatal clinics and the children's welfare clinic in Jos, Plateau State, Nigeria. Furthermore, Owoeye, Aina & Morakinyo (2004) in a prospective cohort study reported a 23% prevalence rate of PPD in a maternity center in Lagos, Southwest Nigeria.

According to Ahmed et al. (2015), the burden of the postpartum depression is significant as the disorder may remain unrecognized and the adverse effect is not only on the afflicted mothers. Postpartum depression has a negative consequence on the husband, mother-infant interaction and on the long term emotional and cognitive development of the baby (Desai, Mehta & Ganjiwale, 2012). The symptoms of postpartum depression are similar to that of the depression. But in addition to low mood, sleep disturbance, change in appetite, diurnal variation in mood, poor concentration and irritability, women with the PPD experience uneasiness, confusion, forgetfulness, anhedonia, fatigue, anxiety, guilt of inability to cope with their baby care, and suicide ideation (Olatunji, 2017). Though a few women suffer the symptoms of the PPD, which most time

may be transient, relatively mild and known as postpartum blues, 10–15% of the women who experience a more disabling and persistent form of mood disturbance will develop full blown postpartum depression (Anokye et al., 2018; Chinawa et al., 2016). Postpartum depression is an important public health problem considering its impact on the mother and the family (Chinawa et al., 2016).

Prevention of postpartum depression could be achieved through public health intervention that focuses on the predictive factors. The causes of the PPD are unknown, but studies have attributed the predisposing factor of the condition in part to hormonal changes or imbalance, which occurs in a woman immediately after the delivery of the baby as a major contributor (Desai et al., 2012; Joel et al, 2016). In addition to the above factors, a woman who faces persistent life stressor may feel incapable of coping with the demands of pregnancy (Kazi et al., 2006). Studies have also suggested that mothers who had pre-term, very low birth weight infants may be at an increased risk of psychological distress in a postpartum period (Parsons, Young, Rochat & Kringelbach, 2012).

It should be acknowledged that extreme cases of postpartum depression can actually lead to suicide or even postpartum psychosis; it can be the precursor of chronic recurrent depression for the mother, while it can contribute to child emotional, behavioural, cognitive, and interpersonal problems later in life (Joel et al., 2016). Furthermore, such infants are highly sensitive to their interpersonal environment because depressed mothers are inconsistent in childcare and have poor coping strategies (Parsons et al., 2012). The developmental progress of the new born is undermined. Consequently, it causes disruption of normal infant engagements with the mother (Parsons et al., 2012). Severely distressed mothers may even have infantile suicidal thoughts and

approximately 4% of them do slay their children (Ahmed et al., 2015).

The theoretical framework applied to this study is the Roy's adaptation theory (Matt, 2014). The adaptation model sees the individual as a set of interrelated systems who strives to maintain balance between various stimuli (Matt, 2014). There are stimuli that may affect the mothers coping ability and it can either be positive or negative stimuli. Any stimulus (stressor) that will cause stress during the prenatal, intranatal or postnatal period could result in low mood; sleep disturbance; change in appetite; diurnal variation in mood; poor concentration; irritability etc. (Matt, 2014).

The ability of the mother to cope with the stressors will depend on how the mother is able to function well, her metabolism or elimination pattern combined with her activities of living e.g. eating and sleeping pattern (Matt, 2014). Exhibition of maladaptive coping mechanism by the mother could result in negative behaviours e.g. poor infant development and altered mother-infant relationship (Matt, 2014). But, if the mother adaptive coping mechanism is perfect, it could result in positive behaviours e.g. proper infant development and well-developed mother-infant relationship (Matt, 2014). Researchers have conducted studies on the PPD in Nigeria, but there is dearth in the literature on the predictors of the PPD. Hence, this study conducted on the prevalence and predictors of postpartum depression among nursing mothers attending immunization clinic in Lagos Nigeria.

RESEARCH QUESTIONS

i.   What is the socio-demographic characteristics and prevalence of postpartum depression (PPD)?

ii. What is the current prevalence of PPD among nursing mothers attending immunization clinic at Ajebo Primary Health Centre, Mushin, Lagos, Nigeria?

iii. What are the predictors of the PPD among mothers attending immunization clinic at Ajebo Primary Health Centre, Mushin, Lagos, Nigeria?

METHODOLOGY

The design of this study is cross-sectional. The setting of this study is Mushin Local Government Areas Council of Lagos State, Nigeria with estimated population of 2 million (NPC, 2014; MYM, 2015). The study was conducted in Ajebo Primary Health Centre and is one of the 288 Primary Health Centers in Lagos State (Opeifa, 2012). Mushin Local Government Areas Council is located right in the heart of Lagos State. It is a commercial centre and home of the Aworis tribes (Opeifa, 2012). It shares boundaries in the north with Oshodi-Isolo Local Government Areas Council, in the east with Somolu and the south with Surulere (Opeifa, 2012). The target population include nursing mothers attending the Ajebo Primary Health Centre for the purpose of receiving immunization for their babies. The inclusion criteria are mothers in their 1st to 6th month's postpartum period and who agreed to participate in the study. This is the period that mothers could manifest postpartum depression. Mothers who do not fall into this category were excluded from the study.

The Cochran's formula for calculating sample size for a descriptive study was used. The size obtained was increased by 10% attrition rate to account for contingencies such as non-response or recording error, approximately 317. Simple random sampling technique was used to select the participants; mothers in their first to sixth months of postpartum period. Data

collection was done using a semi-structured questionnaire that was divided into two sections and contained close-ended questions. Section A questions are on socio-demographic information of the participants, while section B questions assessed the predictors and prevalence of the postpartum depression, using Edinburgh Postnatal Depression Scale (EPDS). It consists of 10 items with a total of 30 points. For each question, mothers are asked to choose one option out of the four responses that most closely describe how they felt in the past 7 days. Each response has a range between 0 and 3. Mothers who score more than 10 points are considered to be depressed. The instrument was administered to mothers who are within the 6-week of postpartum to maintain high specificity and sensitivity in detecting postnatal depression.

The EPDS is a validated screening tool for postnatal depression developed for use at the primary healthcare level and has been validated and translated into 57 languages. It is a screening test consisting of 10 inventory questions that investigate the feelings occurring within the previous 7 days with each question having four possible answers rated from 0-3. A woman is considered "test positive" when she scores 10 or more out of 30 (O'Hara et al., 2012). EPDS has good psychometric properties and was validated in a number of studies (Mancini, Carlson & Albers, 2007; Krajl, 2014). In the study conducted by Obindo and Omigbodun in North-central, Nigeria, the specificity was 62% and sensitivity 72% at cut-off of 7. Similarly, Uwakwe and Okonkwo in South-East, Nigeria reported 0.97 specificity and 0.75 sensitivity at a cut-off point of 9.

The instrument used for this study is reliable because it is pilot tested in a similar Primary Health Care Center (Ayantuga Primary Health Care Center, Odi Olowo, Mushin Local Government Area, Lagos). The result of test using Cronbach's Alpha yielded a coefficient value that is high 0.84. The questionnaires were administered daily from Monday to Friday at the Ajebo Primary Health Centre for a period of one month before the required number of the participants was met. A total of 317 questionnaires were administered, but 290 (91%) were successfully retrieved and found adequate for analysis. Some participants fill the questionnaire on their own without any interference from the investigator while some participants required the assistance of the investigator before the questionnaire could be completed. The questionnaires were collected back from the participants after they had responded to the questions. The study was conducted between May and November 2018.

The data collected with the questionnaires were reviewed, collated, organized and entered into a computer. The data analysis was done with Statistical Package of Social Science (SPSS) version 21. Descriptive statistics was used to generate the frequencies and percentages, while Chi-square statistics was used to test the significant association and the cause-relationship effect that exists between the variables of interest at $p < 0.05$ and 95% confidence interval. The results were presented in tables and charts as appropriate based upon data collected from the participants.

Approval was received from Ethical and Research Committee of the University of Lagos Teaching Hospital, Idi-Araba, Mushin, Nigeria before the conduct of this study. The approval index number for this study is 2018/2421/47782/M. Permission was sought from the Officer-in-Charge (IOC) of the primary healthcare centre. Details of the study explained verbally to all the participants and informed consent was obtained before they were requested to fill the questionnaire. They were assured of confidentiality and their freedom to withdraw from participating in the study at any time they wish to do so.

RESULTS

The results of the analysis presented in Table 1 show the socio-demographic characteristics of respondents that participated in this survey. The age of respondents showed that 10.3% are below 20years in age, 43.1% are between 20-29years, 31.7% are between 30-34years and 14.8% are more than 34years. The marital status of the respondents showed that 94.8% are married and 3.4% divorced while non are widowed. The religion of the respondents observed that 56.10% are Muslims and 43.1% are Christians. The ethnic of respondents reported that 28.3% are Hausas, 29.5% Yoruba, 29.3% Igbos. Lastly, 16.6% are from other tribes. The level of education of respondents showed that 4.5% have formal education, 8.6% has primary school education, 62.8% ha secondary school education and 24.1% had tertiary education. The occupation of respondents revealed that 19.7% are house wives, 42.1% self-employed and 38.3% employed.

This study conclude that majority of respondents are within the ages of 20-21 married and are Muslims. Majority of the respondents are Igbo by tribe with secondary school education and are self-employed.

TABLE 1
Socio-Demographic Characteristics of Participants

Variables		N	Percentage (%)
Age	<20	30	10.3
	20-29	125	43.1
	30-34	92	31.7
	>34	43	14.8
	Total	290	100
Marital Status	Married	275	94.8
	Divorced	10	3.4
	Widowed	0	0
	Single	5	1.7
	Total	290	100
Religion	Islam	165	56.9
	Christianity	125	43.1
	Others	0	0
	Total	290	100
Ethnicity	Hausa	82	28.3
	Yoruba	75	25.9
	Igbo	85	29.3
	Others	48	16.6
	Total	290	100
Level of Education	No formal Education	13	4.5
	Primary	25	8.6
	Secondary	182	62.8
	Tertiary	70	24.1
	Total	290	100
Occupation	Housewife	57	19.7
	Self-employed	122	42.1
	Employed	111	38.3
	Total	290	100

Research question one

What is the socio-demographic characteristics and prevalence of postpartum depression (PPD)?

The prevalence of postpartum depression among participants vis-à-vis their demographic information is shown in Table 2. The Prevalence rate of postpartum depression is significant with age. Marital status with p-value of 0.377, ethnicity with p-value0.569, level of education with p-value of 0.66723, and occupation status with p-value of 0.19203 are not significant with the prevalence of post-partum depression among participants.

TABLE 2
Prevalence of Postpartum Depression Among the Participants

Variables	Depressed n=72 (%)	Not Depressed n=218 (%)	Total N=290 (%)	Prevalence of PPD=24.8	Statistics
Age					
$\leqslant$ 19	21(7.24)	9(3.10)	30(10.3)	7.24	
20-29	22(7.59)	103(35.52)	125(43.2)	7.59	X^2=37.119
30-39	20(6.90)	72(24.83)	92(31.7)	6.90	p=0.000
$\geqslant$ 40	9(3.10)	34(11.72)	43(14.8)	3.10	
Marital Status					
Married	61(21.03)	207(71.4)	275(94.8)	21.03	
Divorced	5(1.72)	6(2.07)	10(3.4)	1.72	X^2=1.951
Widowed	0(0.0)	0(0.0)	0(0.0)	0.0	p=0.377
Single	6(2.07)	5(1.71)	5(1.7)	2.07	
Ethnicity					
Hausa	21 (7.24)	61(21.03)	82(28.3)	7.24	
Yoruba	15(5.17)	60(20.69)	75(25.9)	5.17	X^2=2.014
Igbo	25(8.62)	60(20.69)	85(29.3)	8.62	p= 0.569
Others	11(3.79)	37(12.76)	48((16.6)	3.79	
Level of Education					
No formal Education	05(1.72)	08(2.76)	13(4.5)	1.72	
Primary	06(2.07)	19(6.55)	25(8.6)	2.07	X^2=3.9471
Secondary	49(16.9)	133(45.86)	182(62.8)	16.9	p= 0.26723
Tertiary	12(4.14)	58(20.00)	70(24.1)	4.14	
Occupational status					
Housewife	21(7.24)	36(12.43)	57(19.7)	7.24	X^2=3.3002
Self-employed	29(10.0)	93(32.06)	122(42.1)	10.0	p= 0.19203
Employed	22(11.03)	89(27.24)	111(38.3)	7.59	

Research question two

What is the current prevalence of PPD among nursing mothers attending immunization clinic at Ajebo Primary Health Centre, Mushin, Lagos, Nigeria?

Table 3 shows the prevalence of depression at different EPDS scores. At an EPDS cut-off of $\geq$ 10 the prevalence rate is 24.8 % (72), at a cut-off of $\geq$12 the rate is reduced to 17.6% (51), and at a cut-off of $\geq$13 the prevalence rate is 12.1% (35). At an EPDS cut-off of $\geq$10, the prevalence rate is 24.80 % (72), at a cut-off of $\geq$ 12, the prevalence rate reduced to 17.60% (51), and at a cut-off of $\geq$13, the prevalence rate is 12.10% (35). This study shows that the prevalence rate of postpartum depression is low with the average score of 18.2%.

TABLE 3
Prevalence of Depression at Different EPDS *Scores

*EPDS Score	Depressed	Not Depressed
$\geq$10	72(24.8%)	218(75.2%)
$\geq$12	51(17.6%)	239(82.4%)
$\geq$13	35(12.1%)	255(87.9%)

* Edinburgh Postnatal Depression Scale.

Research question three

What are the predictors of the PPD among mothers attending immunization clinic at Ajebo Primary Health Centre, Mushin, Lagos, Nigeria?

Table 4 shows that family monthly income, family history of postpartum depression and postnatal week were predictors of the prevalence of postpartum depression with (X^2 =9.872, df=3, p=0.020), (X^2=70.212, df=1, p=0.00001) and (X^2=45.623, df=2, p=0.0000) respectively. The mode of delivery, gender of the present baby and previous miscarriages experienced by the mothers are not significantly associated with the prevalence of postpartum depression (P-value $\geq$0.05).

TABLE 4
Predictors of Post-Partum Depression Among the Participants

Variables	Depressed n=72 (%)	Not Depressed n=218 (%)	Total N=290 (%)	Prevalence of PPD	Statistical analysis
Family monthly income					
≤ 9,999	5(1.72)	8(2.76)	13(4.5)	1.72	
10,000-49,999	27(9.31)	48(16.55)	75(25.9)	9.31	X^2 =9.872
50,000-99,999	21(7.24)	71(24.48)	92(31.7)	7.24	p=0.020
≥ 100,000	19(6.55)	91(31.38)	110(37.9)	6.55	
Family history of PPD					
Yes	59(20.35)	57(19.66)	116(40.0)	20.35	X^2=70.212
No	13(4.47)	161(55.52)	174(60.0)	04.47	p=0.00001
Postnatal week					
≤ 6 weeks	41(14.14)	34(11.72)	75(25.9)	14.14	X^2=45.623
6-12 weeks	27(9.31)	158(54.48)	185(63.8)	9.31	p=0.0000
12-24 weeks	6(2.07)	24(8.28)	30(10.3)	2.07	
Mode of delivery					
Normal delivery	68(23.45)	210(72.41)	278(95.9)	23.45	X^2=0.485
Caesarean section	4(1.34)	8(2.76)	12(4.1)	1.34	p=0.486
Gender of present baby					
Male	27(9.31)	95(32.76)	122(42.1)	9.31	X^2=0.820
Female	45(15.52)	123(42.41)	168(57.9)	15.52	p=0.365
Previous miscarriage					
Yes	11(3.79)	21(7.24)	32(11.0)	3.79	X^2=1.757
No	61(21.03)	197(67.93)	258(89.0)	21.03	p=0.185

DISCUSSION

This study assesses the prevalent rate and examined variables that are associated with the postpartum depression among mothers attending immunization clinic at the Ajebo Primary Health Centre, Mushin, Lagos State, Nigeria at the EPDS score of ≥10. The findings of this study reveal that age is significantly associated with the prevalence of postpartum depression among the studied participants. This finding is consistent with the outcome of the study conducted by Ahmed, et al (2015) on prevalence of postpartum depression in an urban setting. The implication of this finding on age is that older participants cope better than the younger nursing mothers. On the contrary, the finding of this study shows that marital status, ethnicity, level of education and occupation of the mothers are not significantly associated with the prevalence of postpartum depression. This result on socio-demographic characteristics of the participants is consistent with that of the study conducted on postpartum depression among mothers seen in hospitals in Enugu, Southeast, Nigeria (Chinawa et al., 2016). The implication of this finding is that PPD is not of particular ethnic origin or related to neither education level nor particular occupation practice by nursing mothers.

In this study, the prevalence rate of postpartum depression is low with average score of 18.2%. 24.8% of nursing mothers have postpartum depression as measured by the Edinburgh Postpartum Depression Scale (EPDS) with a cut-off point ≥ 10. This is similar to a study conducted by Owoeye, et al, (2004) in a

prospective cohort study reports a 23% prevalence rate of PPD in a maternity centre in Lagos, Southwest Nigeria. In addition, Tungchama et al. (2018) reports similar findings among women attending postnatal and children's welfare clinic in a tertiary hospital in Jos, Plateau State, Nigeria. The findings are also in accordance with the report of World Health Organization's (2010) that indicates 20–40% prevalence of PPD in developing countries. However, the proportion of participants in this study experiencing postpartum depression is lower compared to the study done by Obindo et al. (2013) that reports a higher prevalence rate of 44.39% in a study conducted in the north central Nigeria. Meanwhile, study conducted by Anokye et al. (2018) on the prevalence of postpartum depression and interventions utilized for its management report lower prevalence rate of 7%.

The possible reasons for lower PPD prevalence could be due to single centered sample collection (Almutairi, Salam, Alanazi, Alweldawi, Alsomali & Alotaibi, 2017) or limiting the interview time to 8–12 weeks post-delivery (Alharbi & Abdulghani, 2014). Existing studies have shown PPD rates from 18 countries (Bromet, Andrade, Hwang, et al.,2011); the average lifetime and 12-month prevalence estimates of major depression are 14.6% and 5.5% in high-income countries and 11.1% and 5.9% in low- to middle-income countries. Also, comparing findings of this study with that of the Asian countries like Bangladesh with 50%, Pakistan with 28–57%, and 35–47% in Latin America (Wachs et al., 2009), the prevalence of 24.8% is low. These differences may be related to the mothers' characteristics (demographic, pregnant history, and interpersonal characteristics) and study design (sample, method, and cut-off point). The implication of this study finding is that prevalence of postpartum depression varies from region to region and within the same region, and that there is need for further intervention to reduce the prevalence of postpartum depression in Lagos, Nigeria.

The outcome of this study indicates that variables such as family monthly income, family history and postnatal week are the predictors of postpartum depression. The finding is consistent with the outcome of the study conducted by Ukaegbe et al. (2012) on postpartum depression among Igbo women in an urban mission hospital, Southeast, Nigeria. The researchers report that poor socioeconomic status is significantly associated with postpartum depression. Furthermore, Babatunde (2010) conducts study on an exploration of perception of postnatal depression in African women in Greenwich community health care. He notes that socioeconomic status and postnatal week are not predictors of PPD in the study but found family history only to be associated with PPD. Conversely, Atim (2017) conducts a study titled breaking the silence: Postpartum depression among reproductive-aged women in Akwa-Ibom state, Nigeria. The finding of the study is consistent with this study's findings because socio-economic status, family history and postnatal week are the predictors of postpartum depression. The implication of this study's finding is that certain factors could influence prevalence of postpartum depression among mothers aside hormonal imbalance.

Prevention of PPD is not just identifying the symptoms, but looking for all the predisposing factors that increase the mother's vulnerability. Early recognition of the problem by the healthcare provider during antepartum and postpartum period is an important paradigm that will allow for the development of strategies for treatment of the affected mothers, with the goal of reducing the morbidity and mortality associated with the PPD disorder. To reduce the prevalence of postpartum depression, mothers need support systems during pregnancy, puerperia and postpartum period.

CONCLUSION AND RECOMMENDATIONS

Prevalence of postpartum depression among mothers studied is significant and there is possibility that some cases may be undetected. Therefore, awareness program on postpartum depression and screening could assist in early detection of the affected mothers. There is need to communicate the benefits of screening to the pregnant and nursing mothers to reduce and prevent PPD mental health problems in the population. In conclusion, effective support systems may possibly reduce the incidence and prevalence of postpartum depression among nursing mothers.

Frequent screening exercises for postpartum depression should be organized by teaching hospitals and Primary Health Centre's in conjunction with the Ministry of Health and Non-governmental Organizations.

The Ministry of Health should collaborate with the National Commission on civic education to embark on public education on the effective use of psychosocial support as an intervention to reduce the prevalence of postpartum depression at the various health facilities. Periodic suitable training program on PPD should be developed for healthcare professionals to train them on how to assess patients for the early warning signs and risks of PPD and the need to take appropriate courses of action. This is important for healthcare professionals especially for nurse-midwives who are the first point of contact during antenatal, labor and postnatal period. Disease algorithms should be developed for easy screening of patient for PPD. Health education of the mothers should focus on risk factors, symptoms and the resources available for treatment. It is suggested that studies should be conducted to assess the knowledge of nursing mothers on postpartum depression in other parts of the country.

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