

Prevalence and Risk Factors of Postpartum Depression Among Post-Natal Mothers Attending Ahmadu Bello University Teaching Hospital, Zaria, Nigeria

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Abstract

Background: Post-partum depression (PPD) is a global public health problem that affects many post-partum mothers. When PPD is not timely assessed, identified, and treated, it can lead to problems with mother and child bonding and cause family problems, negligence, and infant death. This study was conducted to assess the knowledge, attitude, prevalence of PPD among mothers presenting for post-natal care and also identifying the risk factors among post-natal mothers attending post-natal care at Ahmadu Bello University teaching hospital (ABUTH) Zaria.

Methods: The Social Cognitive Theory and Evolutional Theory were adopted for this study. The study design was descriptive cross-sectional. It was conducted among 200 post-natal mothers selected using a simple random sampling technique. A semi-structured interviewer administered questionnaire was used to gather information on socio-demographic characteristics, knowledge, attitude, level and risk factors of PPD. Data to assess the severity of PPD was collected using the Patient Health Questionnaire-9 (PHQ-9). Validity of the research instruments was done using face and content validation. Data analysis was carried out with IBM SPSS version 27. Descriptive statistics and Chi-square test were used to analyse the quantitative data at $p \leq 0.05$.

Results: The mean age was 30.8 ± 8.1 years. The result showed that some of the respondents 80 (40%) were Muslims, and 78 (39%) were Christians. On the ethnicity distribution, some 86 (43%) of the respondents were Hausas while 41 (20.5%) were

Yoruba. Over half 120 (60.0%) of the respondent had poor knowledge of PPD while 80 (40.0%) had good knowledge of PPD. Over half 106 (53%) of the respondent had poor attitude towards PPD while 94 (47%) had good attitude towards PPD. The test of hypothesis showed no statistically significant association between PPD and knowledge of PPD ($p=0.31$), and between PPD and attitude towards PPD ($p=0.09$). Also, there was no statistically significant association between educational status and PPD ($p=0.34$). Knowledge about PPD, attitude towards PPD and mothers' education were not predictors of PPD.

Conclusion: The study concluded that there are moderately good knowledge of PPD, moderately good attitude towards PPD but high prevalence of PPD among mothers receiving post-natal care at Ahmadu Bello University teaching hospital (ABUTH) Zaria. Pre-and post-natal women should be educated on the symptoms, causes, detection and treatment of post-partum depression for early detection and treatment.

Keywords: Post-Partum Depression; Post-Natal Mothers; Post-Natal Care; Abuth; Zaria

Introduction

Postpartum depression is depression that occurs after having a baby [1]. Postpartum depression deprives the mother of the joy of motherhood and leaves her functionally and emotionally impaired. Postpartum depression is often unrecognized and untreated. If left untreated, the woman's emotional state and her symptoms of postpartum depression may worsen, and the potential for severe consequences of suicide and infanticide are increased, therefore early recognition and adequate treatment are important in battling postpartum depression.

Post-partum depression (PPD) is a mental health disorder that yearly affects about 10–15% of mothers worldwide [2]. Various studies reported different prevalence rates of PPD in Nigeria. These rates vary from region to region and also within the same region. [13] in a cross-sectional study reported a prevalence rate of 44.3% of PPD using the Edinburgh postnatal depression scale (EPDS) among 392 women attending the post-natal clinic and the children's welfare in Jos, Nigeria. [3] in a prospective cohort study from 5 days post-partum reported a 23% prevalence rate of PPD in a Maternity centre (a primary Health Care Centre) in Lagos, South West Nigeria. In western Nigeria, the lowest and highest prevalence of PPD reported were 14.6% and 23.0% respectively [4]. In northern Nigeria, seemingly high prevalence rates of 44.5% and 21.8% were reported [5]. The prevalence of mothers who suffer from symptoms of post-partum depression, often unreported and untreated, identifies a great need to bring awareness to this issue amongst

them

The four objectives of this study are to assess the Mother's knowledge on PPD, determine the Mother's attitude towards PPD, determine the prevalence of PPD and explore the risk factors associated with PPD while presenting for post-natal care at Ahmadu Bello University teaching hospital Tudun-wada Zaria.

Methodology

This study was carried out at Ahmadu Bello University teaching hospital (ABUTH) Tudun-wada, Zaria. ABUTH, Tudun-wada, was formally known as the institute of Health. It was established in 1968 and the hospital is run by a board of established by degree No. 110 of 1985 with website of www.abuth.org.ng/. A descriptive cross-sectional study was used in this research. The sample size was calculated using the Leslie Kish's formula and a standard normal value of 1.96 at 95% confidence interval and 5% margin error with a prevalence rate of 13.6%. A simple random sampling technique was adopted in selecting the target population of 200 post-natal women within ABUTH premises. Data to assess the severity of PPD was collected using the Patient Health Questionnaire-9 (PHQ-9), because it is a widely used and validated tool for screening and assessing depression because it has a good sensitivity and specificity for perinatal depression. The instrument is also has a similar operating characteristics to the Edinburgh Postnatal Depression Scale (EPDS), which is the legacy screening measure for perinatal depression, the instrument is cost efficient,

easy to administer, and easy to analyse quantitatively. It was further recommended by Postpartum Support International (PSI), as an evidence-based tool for screening for prenatal or postpartum mood and anxiety disorders. Prior to the data collection, the instrument used (Questionnaire) was translated to the local language of the people Hausa and was back translated to English to retain its original meaning to avoid some form of distortion. For some of the respondents who were not Hausas, they understand English and could read and write, so they were interviewed in English Language. Data collection was carried out randomly within 5 working days from the hours of 8am-11am. The information obtained from respondents includes the socio-demographic characteristics, knowledge, attitude, prevalence and risk factors of PPD.

Data was imported on and analysed using IBM statistical package for social sciences (SPSS version 27). Tables and charts were used for data presentation. Chi-square test

and Fisher's exact test were used for statistically significant associations between categorical variables, and the level of significance was set at 0.05.

Mothers who were within 1 to 14 months puerperium presenting for post-natal care who were not suffering from any chronic disease and were willing to participate were included in the study while Mothers who were within 1 to 14 months puerperium presenting for post-natal care who were suffering from a chronic disease were excluded from this study .

Ethical approval was obtained from the department of public health before conducting this study. Prior to the study, a letter of consent to carry out the study was obtained from the clan head of Ahmadu Bello University teaching hospital Tudun-wada, Zaria. Respondents were reassured of anonymity and confidentiality.

Results

Table 1: Socio-demographic characteristics of respondents

Variable	Frequency (n=200)	Percentage (%)
Age (years)		
15-20	19	9.5
21-30	82	41.0
31-40	63	31.5
41-50	36	18.0
Marital status		
Single	17	8.5
Married	139	69.5
Divorced	33	16.5
Separated	11	5.5
Educational status		
No formal education	16	8.0
Primary	34	17.0
Secondary	61	30.5
Tertiary	89	44.5
Employment		
Employed	45	22.5

Unemployed/house wife	59	29.5
Self- employed	96	48.0
Ethnic Group		
Yoruba	41	20.5
Igbo	45	22.5
Hausa	86	43.0
Others	28	14.0
Religion		
Muslims	80	40.0
Christian	78	39.0
Traditional	35	17.5
Others	7	3.5

Majority (41%) of respondents were in the age-group 21-30 years, 31.5% in age-group 31-40 years, 18% in age-group 41-50 years and 9.5% in age-group 15-20 years. Most (69.5%) respondents were married, 16.5% divorced, 8.5% single and 5.5% separated. Almost half (44.5%) of respondents had tertiary education, 30.5% had secondary education, 17% had primary education and 8% had no formal education. Close to half of them (48%) were self- employed, 9.5% were unemployed/ house wife and 22.5% were employed. Majority (43%) of respondents were Hausas, 22.5% were Igbos, 20.5% were Yoruba and 14% were from other tribes. Most respondents (40%) were Muslims, 39% were Christians, 17.5% practice Traditional religion while 3.5% practiced other religions (Table 1).

Majority (65%) of respondents identified correctly that having trouble concentrating, remembering details or making decisions were symptoms of post-partum depression and 56% identified correctly that crying more than usual is a symptom of post-partum depression. More than half (55.5%) of respondents identified correctly that poor sleep or oversleeping were symptoms of post-partum depression, that post-partum depression is a health problem and that post-partum depression can be detected early and treated when detected. A moderate proportion (54.5%) identified

correctly that post-partum depression is a mood disorder, 53.5% identified correctly that feeling sad, hopeless or empty were symptoms of post-partum depression and 52% identified correctly that depressed mood is a symptom of post-partum depression. Half (50%) of respondents identified correctly that age, family history, alcohol use and unemployment were risk factors of post-partum depression while less than half (45%) identified correctly that post-partum depression can be treated by drug therapy and psychotherapy. A moderate proportion, (56.5%) identified incorrectly that possession by evil spirit is a cause of postpartum depression (Figure 1).

Nearly half (46.5%) of respondents strongly agreed and agreed that all post-natal mothers were at risk of post-partum depression, 38.5% strongly agreed and agreed that depressed mothers were unpredictable and 37.5% strongly agreed and agreed that depressed mothers were dangerous to live with. Also, 35% strongly agreed and agreed they will advise a depressed mother to see a doctor, 31% strongly agreed and agreed I am at risk of developing post-partum depression and 33.5% strongly agreed and agreed that they will see a doctor if I happen to be depressed. Whereas, a low proportion (33%) strongly agreed and agreed that they would be depressed if they get close to a depressed mother (Figure 2).

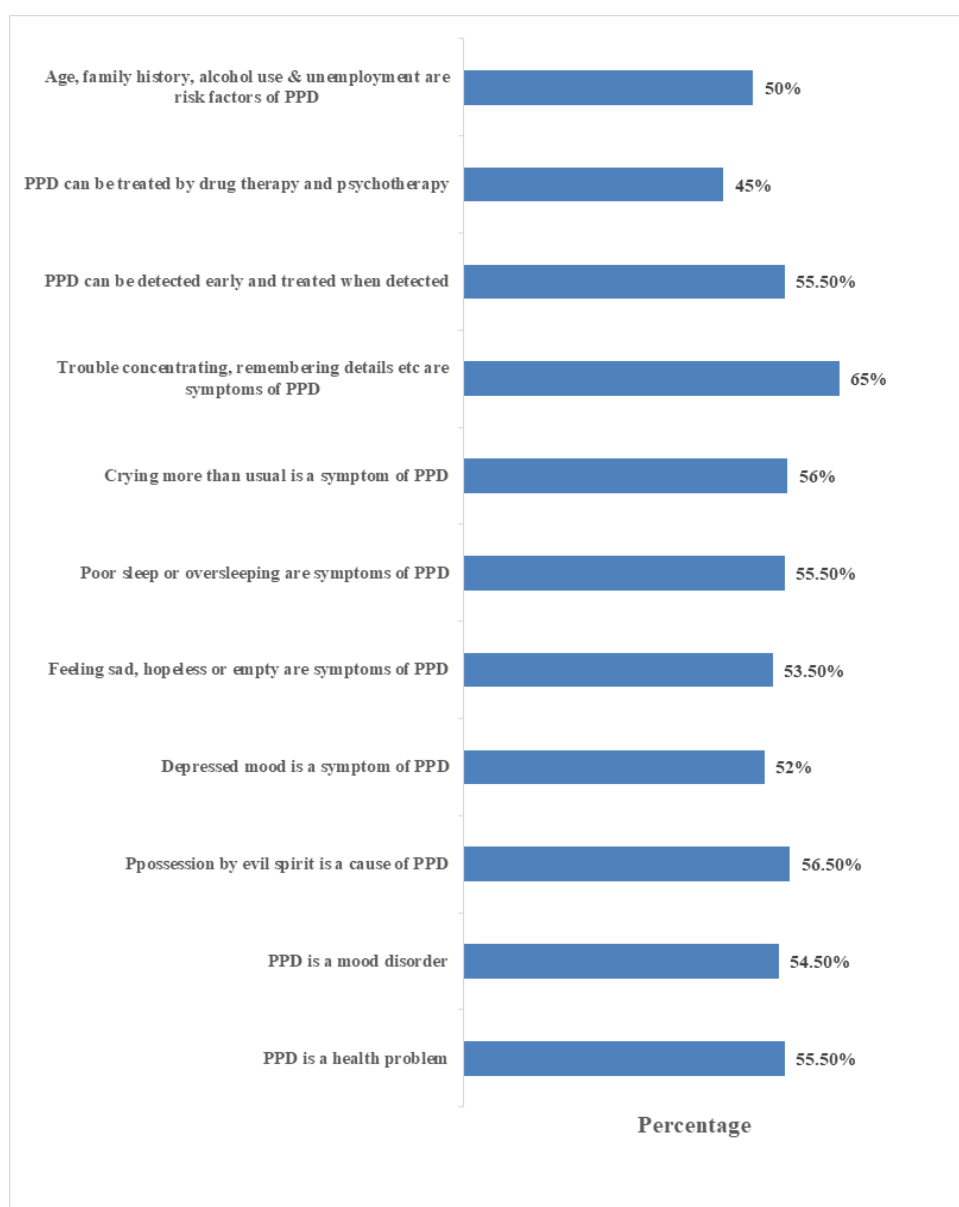


Figure 1: Knowledge of Post-Partum Depression among respondents

Table 2: Prevalence of Post-partum Depression

Prevalence of Post-partum Depression	Frequency (n=200)	Percentage (%)
None (0-4)	22	11.0
Mild (5-9)	50	25.0
Moderate (10-14)	49	24.5
Moderately Severe (15-19)	51	25.5
Severe (20-27)	28	14.0
Total	200	100.0

Most (25.5%) respondents had moderately severe post-partum depression, 25% had mild post-partum depres-

sion, 24.5% had moderate post-partum depression, 14% had severe post-partum depression and 11% had no post-partum depression (Table 2).



Figure 2: Attitude towards of Post-Partum Depression among respondents

Over half of respondents (56.5%) of respondents strongly agreed and agreed that loss of appetite may lead to post-partum depression, 55.5% strongly agreed and agreed lack of support from loved ones can lead to post-partum depression, 52% strongly agreed and agreed that fatigue from

stress makes mothers experience post-partum depression, 51.5% strongly agreed and agreed mothers may experience post-partum depression out of difficulty in sleeping and 51.5% strongly agreed and agreed that mothers with family history of depression were likely to experience post-partum depression (Figure 3).

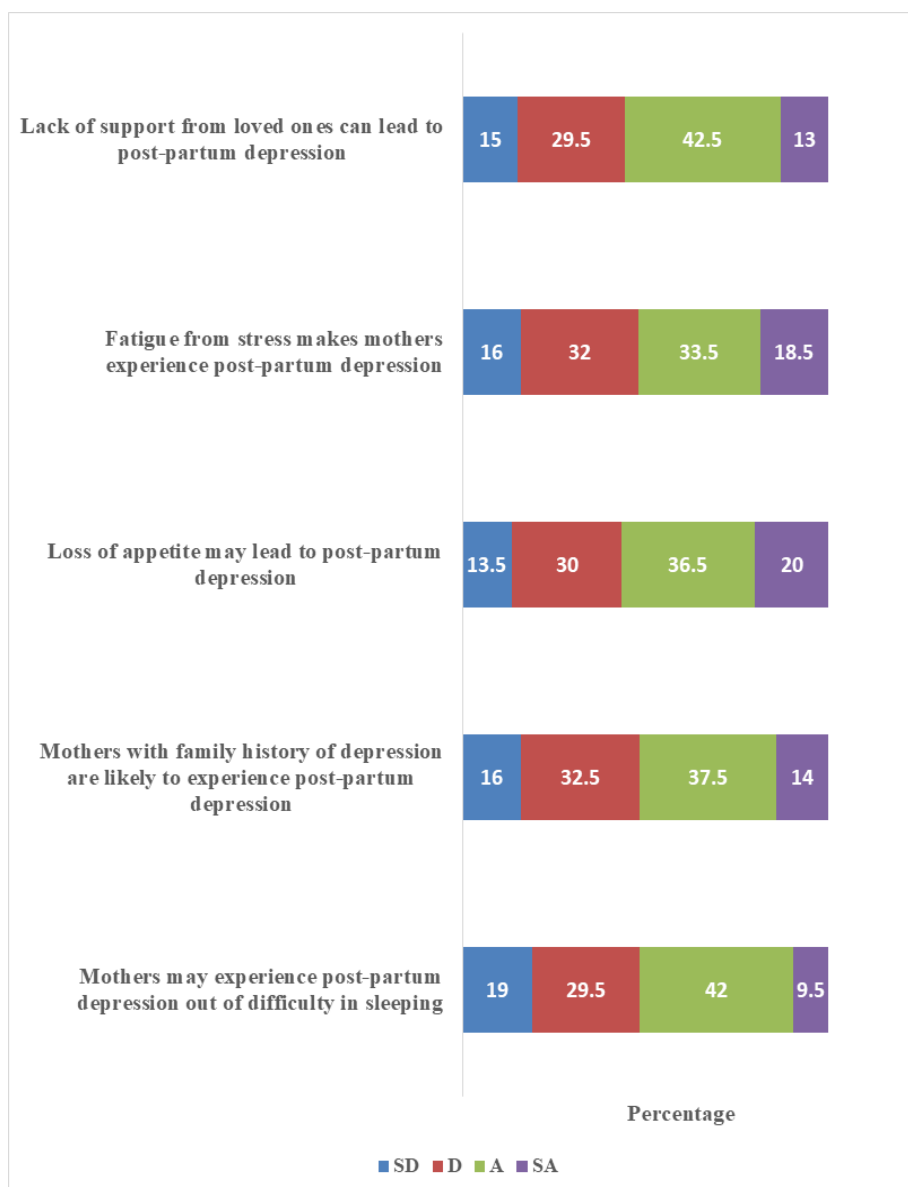


Figure 3: Risk Factors for Post-Partum Depression among respondents

Table 3: Association between Post-partum Depression, Knowledge, Attitude, Educational Status and Risk Factors

Variables	Category	Option	Normaln=22	Depressedn=178	Total	Chi-Square	PValue
Knowledge	Level of Knowledge	Poor knowledge	11	109	120	1.0	0.31
		Good knowledge	11	69	80		
Attitude	Level of Attitude	Negative Attitude	8	98	106	2.75	0.09
		Positive Attitude	14	80	94		
SocioDemographic	Educational status	No formal education	2	14	16	3.4	0.34
		Primary	5	29	34		

		Secondary	3	58	61		
		Tertiary	12	77	89		
Perceived Risk Factors	Difficulty in Sleeping	Strongly disagree	4	34	38	0.76	0.85
		Disagree	7	52	59		
		Agree	10	74	84		
		Strongly agree	1	18	19		
	Family history of depression	Strongly disagree	3	29	32	2.98	0.39
		Disagree	4	61	65		
		Agree	11	64	75		
		Strongly agree	4	24	28		
	Loss of appetite	strongly disagree	5	22	27	1.81	0.61
		Disagree	6	54	60		
		Agree	7	66	73		
		strongly agree	4	36	40		
	Fatigue from stress	strongly disagree	5	27	32	2.46	0.48
		Disagree	6	58	64		
		Agree	9	58	67		
strongly agree		2	35	37			
Lack of support from loved ones	Strongly disagree	3	27	30	0.65	0.88	
	Disagree	8	51	59			
	Agree	8	77	85			
	Strongly agree	3	23	26			

There is no statistically significant association between knowledge of post-partum depression ($p=0.31$), attitude towards post-partum depression ($p=0.09$) and post-partum depression. Also, there was no statistically significant association between educational status and post-partum depression ($p=0.34$). In addition, there were no statisti-

cally significant association between post-partum depression and perceived difficulty in sleeping ($p=0.85$), family history of depression ($p=0.39$), loss of appetite ($p=0.6$), fatigue from stress ($p=0.48$) and lack of support from loved ones with p value of 0.88 (Table 3).

Discussion

Knowledge of Post-partum Depression

This study reveals a mean knowledge score of 5.99 and 40% of respondents with good knowledge of post-partum depression. Also, 43.5 - 65% identified correctly 10 out of 11 questions measuring knowledge of symptoms, causes, detection and treatment of post-partum depression while 56.5% incorrectly responded to 1 out of the 11 questions. This means moderately good knowledge of post-partum depression among respondents. This finding is similar to results from studies by [6] which observed 60.8% with poor knowledge of post-partum depression, [7] which reported 60% with fair knowledge of post-partum depression and [8] which reported only 6% with good knowledge of post-partum depression but in contrast to findings by [9] which reported 57% with good knowledge.

Attitude Towards Post-partum Depression

In addition, the study showed a mean attitude score of 21.4 and 47% of respondents having good attitude. Likewise, 33-46.5% strongly agreed and agreed correctly to 6 out of 7 questions measuring appropriate attitude to the risk, effect, response and treatment of post-partum depression while 67% strongly agreed and agreed incorrectly to 1 question out of the 7 questions. This suggests moderately good attitude towards post-partum depression among respondents. This finding is similar to results from studies by [7] which reported 52.4% with moderate attitude and [9] which reported 79.3% of with positive attitude but in contrast to [8] which reported only 11% with good attitude.

Prevalence of Post-partum Depression

This study disclosed a mean depression score of 12.3 and 89% with overall post-partum depression. It also observed no statistically significant association between depression and perceived difficulty in sleeping ($p=0.85$), family history of depression ($p=0.39$), loss of appetite ($p=0.6$), fatigue from stress ($p=0.48$) and lack of support from loved ones with p value of 0.88. Also, there were no statistically significant association between depression and knowledge of post-partum depression ($p=0.31$), attitude of post-partum depression ($p=0.09$). Also, there was no statistically sig-

nificant association between educational status and depression ($p=0.34$). This concludes that knowledge about post-partum depression, attitude towards post-partum depression and mothers' education are not predictors of post-partum depression.

Risk Factors

This finding is in agreement with result of [7] which reported no statistically significant association between knowledge of post-partum depression, attitude towards post-partum depression and prevalence of post-partum depression and [10] which reported that educational level is not statistically significantly associated with post-partum depression ($p= 0.67$). The finding is however in contrast to observations from studies by [11] which reported lack of support during and after pregnancy to be statistically significantly associated with post-partum depression, [12] which reported lack of support from the husband to be statistically significant associated with post-partum depression ($p=0.00$).

Limitation

During the course of this study, the researcher experienced some barriers. Language barrier of which some of the respondents only understood their language and because of this, they couldn't participate properly in this study. Some of the respondents could not read and understand English language, and there were limited interpreters which also affected my time.

Conclusion

The study provided information on the knowledge, attitude, prevalence and risk factors of post-partum depression in post-natal mothers. Based on our findings, we hereby conclude that more respondents had a moderately good knowledge of post-partum depression while fact that over half of them exhibited poor knowledge of post-partum depression is a significant public health concern, with a moderately good attitude towards post-partum depression and high prevalence of post-partum depression ranging from mild to severe levels. This underscores the need for comprehensive interventions to address both the knowledge and the underlying mental health issues

This highlights the urgent need for increased awareness and education campaigns to dispel the myths, reduce stigma and promote early identification and treatment of postpartum depression. Knowledge about post-partum depression, attitude towards post-partum depression and mothers' education were not predictors of post-partum depression.

Recommendations

Pre-and post-natal women should be educated on the symptoms, causes, detection and treatment of post-partum depression for early detection and treatment. Women

should not only be educated about the symptoms of post-partum depression, but they should also be encouraged to take preventive measures as early as pregnancy stage. Routine screening for post-partum depression should be provided by health worker for early detection and referral mental healthcare and intervention should be carried out to reduce the high prevalence of post-partum depression. In addition, early pregnancy and childbearing should be discouraged to reduce risk of post-partum depression. Women should be empowered with the right and accurate information and encouraging open dialogue, to significantly improve maternal health outcomes and reduce the burden of postpartum depression on individuals, families and society as a whole.

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