

# Assessment of Knowledge, Attitude and Practice of Postpartum Depression Screening and Management Skills Among Midwives in Selected Hospitals in Ondo State, Nigeria

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## Abstract:

Despite being one of the most under-recognized morbidities in the world, postpartum depression (PPD) is a serious health problem for many women from different cultures. This study therefore assessed knowledge, attitude and practice of postpartum depression screening and management skills among midwives in selected hospitals in Ondo State, Nigeria. The descriptive research design of the survey type was adopted in the study. The population targeted for the study were nurse-midwives working in post-natal wards and child welfare clinic in selected hospitals in Ondo State, Nigeria. Sample size of 200 was used after using Leslie Kish formula to calculate sample size. Sample size was selected through multi-stage sampling procedure. A self-structured questionnaire that focuses on assessing knowledge, attitude and practice of PPD screening and management skills was used for data collection. The obtained Cronbach alpha values for section B, C and D of the instrument were 0.866, 0.883 and 0.821 respectively, hence the instrument was adjudged reliable. Descriptive and inferential statistics were used in analysing the data collected while the hypothesis was tested at 0.05 level of significance. Findings of the study revealed that more than half of the respondents had good knowledge and attitude towards PPD screening and management skills while only half of the respondents were willing to partake in screening and management of women with PPD. The degree of

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knowledge of nurse-midwives is not at the expected level since the majority still lacks awareness of risk factors and how to identify PPD. It was recommended among others that Government/ appropriate authorities should provide education, training programs and seminar on PPD screening and management skills for nurses and midwives.

**Keywords:** Attitude, Knowledge, Management skills, Postpartum Depression (PPD), Practice, Screening,



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## Introduction

Despite being one of the most under-recognized morbidities in the world, postpartum depression (PPD) is a serious health problem for many women from different cultures (American College of Obstetricians and Gynecologists [ACOG], 2019). Postpartum depression, as reported by Armitage et al (2019), affects a sizable percentage of women and, if left untreated, increases the mother's and her child's risk of developing long-term mental health problems and attempting suicide. Negative effects on infant development and family functioning across a variety of dimensions have been linked to untreated PPD (Armitage et al., 2019).

Recent studies have shown that postpartum depression (PPD) may impact up to 40% of all women after delivery, with symptoms typically ranging in severity from mild to moderate by 50-80% of cases (Gavin et al., 2019). Sub-Saharan Africa has a greater incidence rate than other regions because of risk factors that compromise maternal health, such as inadequate postpartum care and services that midwives should be trained to provide.

According to Bewley (2016), untreated postpartum depression can lead to subpar antenatal care, self-harm, negative obstetric outcomes, neglect of the infant, insufficient mother-infant bonding, impaired long-term emotional development of the child, and an increased risk of the mother developing a chronic, recurrent mood disorder in the future. Despite the seriousness of the repercussions, it is often overlooked and left untreated, which has negative effects on the health of the infant and the economy as a whole.

For the health of both mother and infant, timely diagnosis and therapy of postpartum depression are crucial. Because of their frequent interactions with postpartum women, nurses and midwives are ideally suited to play a key role in the early detection and treatment of postpartum depression. All reproductive health-care workers, including frontline nurses and midwives, need to be informed of PPD in order to provide patients with appropriate services, especially in resource-poor countries like Nigeria, where, there is a dearth of knowledge among nurse-midwives. Initiating therapy with the assistance of other health care workers, nurses and midwives can play a significant role in identifying depressive symptoms (Owolabi & Aluko, 2019).

Given that women are typically asked to return for a follow-up appointment or screening six weeks after giving birth, it is noteworthy that a number of screening tools have been validated through use during this time. Edinburgh Postnatal Depression Scale (EPDS) and Beck Depression Inventory (BDI), with 10 and 21 items respectively, are the most commonly used assessment tools worldwide for detecting PPD. Commonly used in clinical practice, the DSM-IV-based PHQ-9 (Patient Health Questionnaire-9) is a nine-item screening tool for depression (Earls, 2019).

Midwives have an information gap regarding PPD, according to ACOG (2019). Furthermore, studies have shown that PPD has contributed to a rise in maternal mortality rates attributable to suicide, which is greater than that attributable to haemorrhage or hypertension individually. Therefore, it is advised that during the postpartum period, midwives, obstetrician/gynecologists, and other pregnancy/childbirth care providers screen patients at least once for depression and anxiety symptoms using a standardized, validated tool, and that during the comprehensive postpartum visit, each mother undergo a full assessment of mood



and emotional well-being, including screening for postpartum depression and anxiety with a validated instrument (Stone et al., 2018).

Postpartum depression is a common complication of pregnancy, and if left untreated, it can have devastating effects on both the mother and the baby (Earls, 2019). There is evidence that screening alone can have clinical benefits, but the best outcomes occur when management is initiated by midwives or referral is made to midwifery mental health care providers (WHO, 2019). Nurses and midwives need consistent opportunities to learn new information about PPD so that they can better serve their patients during pregnancy and the postpartum period. As a result, it is crucial that nurses and midwives have up-to-date understanding of PPD screening and management techniques, as this can aid in the early identification of mothers who are at risk for developing PPD (World Health Organization [WHO], 2018). To ensure that clinical practise maintains up with innovations, the development of new knowledge and technologies necessitates deliberate efforts. Providing health care professionals with opportunities for ongoing, continuing education and professional development is crucial to honing their skills and ensuring the safety and quality of the treatment they deliver (WHO, 2019).

It is particularly important for nurses, midwives, and other health care providers to demonstrate evidence-informed knowledge, and attitude when dealing with postpartum care for women and their infants, as many conditions can have life-threatening consequences.

Inadequate PPD knowledge, limited abilities in identifying mothers with PPD, no formal PPD evaluation, and barriers to PPD management, such as patients failing to reveal symptoms and preferences for complementary medicine to treat PPD, have all been documented in studies among nurses in Malaysia. However, quantitative assessments of nurses' knowledge, beliefs, and practises were lacking in these investigations. As a result, the goal of this research was to assess the nurses' levels of knowledge regarding postpartum depression (PPD).

Many researchers have addressed the issue of nurses and midwives lacking key knowledge about the assessment and treatment of PPD (Adeyemo et al., 2020; Jones et al., 2020). In a study of 815 members of the Australian College of Midwives, Jones et al. (2016) found that many midwives failed to identify risk factors (70.6%), the prevalence of antenatal depression (49.6%), the frequency (44.4%), the onset (71%) and the treatment options (32%). Nurses and midwives also lack knowledge on the definition, prevalence, symptoms, risk factors, screening tools and treatment of PPD (Noonan et al., 2018).

In Ireland, researchers looked at midwives' familiarity with perinatal mental health issues and their belief in their ability to recognise and treat these conditions. Seventy-one percent of midwives are very knowledgeable about depression and anxiety during pregnancy, and 72 percent are very confident in their ability to recognise and treat perinatal mental health issues in women who are depressed or anxious. Nonetheless, the writers note that 44.1% of midwives feel less confident in their ability to care for women. While only 15.3% of midwives said they had all the knowledge they needed, only 17.8% felt confident in their ability to help women (Noonan et al., 2018).

The knowledge of midwives regarding perinatal mental health was also evaluated by a different group of researchers in Ireland (Carroll et al., 2018). They discovered that midwives have generally excellent knowledge of perinatal depression, anxiety, and risk factors for



perinatal mental health issues. One-third of the midwives in the country did not have any training in perinatal mental health. Nearly 20% of the learned population has participated in some form of ongoing education, with many holding credentials as midwives or nurses. There was a statistically significant difference between those who had and those who did not have perinatal mental health education in terms of skill, confidence, and knowledge (Carroll et al., 2018).

However, only 37.6% of midwives in Western Australia felt well prepared to assist women, and 50% reported a lack of information, according to a survey that looked at midwives' knowledge and attitudes towards mental health problems in women at birth. This research looked into claims that midwives require more education in maternal mental health. Research shows that there is a significant need for instruction concerning personality disorders (77.8%), the impact of childbirth on mental disorders (74.2%), and the development of coping mechanisms for stress and hostility (57.8%). (Jones et al., 2016) Numerous studies have addressed the issue of nurses and midwives lacking essential knowledge regarding the assessment and treatment of PPD. (Jones et al., 2020).

Carroll et al (2018) discovered that the majority of Slovenian midwives had a negative outlook on postpartum depression services and did not see its management as part of their job description (Logson et al., 2019). In an effort to better understand midwives' perspectives on providing comprehensive postpartum care, a research was conducted. This study's results shed light on the attitudes and perspectives of midwives towards postpartum treatment (Milgrom & Gemmill, 2020). Carroll et al (2018) found that 70% of registered nurses had a negative mindset towards PPD screening and management skills, based on their interviews with midwives who had cared for mothers at risk for PPD.

Safe, modern, evidence-based practise and high-quality health care for people and families are the focus of this educational programme. The public is safer from potential health risks and outmoded practises are reduced thanks to CEU programmes geared towards professional development (Earls, 2019). The study therefore assessed knowledge, attitude and practice of postpartum depression screening and management skills among midwives in selected hospitals in Ondo State, Nigeria.

The specific objectives were to;

1. assess the nurse-midwives' level of knowledge of PPD screening and management skills in selected hospitals in Ondo State;
2. examine the attitude of the nurse-midwives towards PPD screening and management skills in selected hospitals in Ondo State;
3. assess the nurse-midwives' willingness to practice PPD screening and management skills in selected hospitals in Ondo State; and
4. identify the anticipated barriers to the practice PPD screening and management skills in selected hospitals in Ondo State.

### **Research Questions**

1. What is the level of nurse-midwives' knowledge of PPD screening and management skills in selected hospitals in Ondo State?
2. What is the attitude of the nurse-midwives towards PPD screening and management skills in selected hospitals in Ondo State?



3. What is the level of the nurse-midwives' willingness to practice PPD screening and management skills among the in healthcare facilities?
4. What are the anticipated barriers to the practice PPD screening and management skills in the respective hospitals?

### **Hypothesis**

**H<sub>0</sub>1:** There is no significant association between the level of knowledge of and attitude towards of PPD screening and management skills.

**H<sub>0</sub>2:** There is no significant association between nurse-midwives' the level of knowledge of and their willingness to practice PPD screening and management skills.

### **Methods and Materials**

The descriptive research design of the survey type was adopted in the study. The population targeted for the study were nurse-midwives working in post-natal wards and child welfare clinic, this is as a result of the direct contact the participants have with postpartum women.

The sample size was calculated based on the findings from previous study the prevalence of PPD in Ondo State was 30.2% by Owolabi and Aluko (2019) using Leslie Kish, 1965 sample size formula which yielded sample size of 200.

### **Inclusion criteria**

- i. Nurses with midwifery as speciality and with more than Five (5) years of working experience
- ii. Nurse-midwives that work in the child welfare clinics
- iii. Nurse-midwives that work in the postnatal wards
- iv. Nurse-midwives that are on duty during the study

### **Exclusion criteria**

- i. Nurse-midwives that are working outside the aforementioned units and wards
- ii. Nurse-midwives that are not willing to participate in the study
- iii. Nurse-midwives that are not on duty during the study

Sample size was selected through multi-stage sampling procedure.

**Stage 1:** Since Ondo state has three senatorial districts, namely: Ondo North, Ondo Central, and Ondo South. Ondo North, and Ondo Central senatorial districts were selected purposively because of the existence of secondary/teaching and tertiary health facilities with sizeable rate of nurse-midwife population in the two senatorial districts.

**Stage 2:** A total of manageable twelve (12) health facilities were selected from the selected two senatorial districts. Thus, seven (7) health facilities viable for midwifery/obstetric services were selected from Ondo North senatorial district, while five (5) health facilities viable for midwifery/obstetric services were selected from Ondo Central senatorial district using simple random sampling technique.

**Stage 3:** selection of the nurse-midwife participants was done with the aid of purposive sampling technique, nurse-midwives who work in child welfare clinics and post- natal wards were recruited for the study, the reason for this is that it is better to choose participants who directly have contact with the postpartum women. Thus, a total of one hundred and eighty eight (188) nurse-midwives will be selected as shown under sample size determination.



A self-structured questionnaire that focuses on assessing knowledge and attitude of PPD screening and management skills among the nurse-midwives was used for data collection. The questionnaire consisted of four (4) sections - section A – D. Section A is a 10-items scale that assessed the socio-demographic characteristics of the nurse-midwives.

Section B is an 18-item scale that assessed the Knowledge of Nurse-Midwives about Postpartum Depression, Screening and Management. The entire section contains questions with 5 point Likert scale 'Strongly Disagree' 'Disagree' 'Neutral' 'Agree' 'Strongly Agree' options.

Section C, the section will assess the attitude of nurse-midwives towards PPD screening using 'Yes' and 'No' options while Section D will also assess the level Practice of Nurse-Midwives in PPD Screening and Management skills.

The questionnaire was given to experienced researchers in nursing and midwifery to assess the relevance of the items to the subject matter, its scope and coverage so as to determine the face and content validity. All questions in each section of the questionnaire were examined critically for lexical content, clarity, accuracy, representativeness, user-friendliness and relevance to the phenomenon of interest. The Cronbach alpha score for sections B and C of the questionnaire were calculated to determine the reliability of the instrument. The obtained Cronbach alpha values for section B and C of the instrument were 0.866 and 0.883 hence the instrument was adjudged reliable.

Participants' recruitment was done by the researcher and the research assistants recruited for the study. During the meeting, purpose, benefits and stages of the study were explained in detail and answers were provided to all the questions raised. Preliminary checking of the questionnaires for error and completeness was done. The quantitative data obtained from the study were fed into a computer software analysed using the statistical package for social sciences (SPSS), version 25. Descriptive and inferential statistics were used in analysing the data collected. The hypothesis was tested at 0.05 level of significance.

## Results

**Research Question One:** What is the level of nurse-midwives' knowledge of PPD screening and management skills in selected hospitals in Ondo State?

**Table 1: Knowledge of Nurses-Midwives on PPD Screening and Management (N = 200)**

Knowledge items	SD		D		N		A		SA	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Postpartum depression is one of the major complication of childbirth	15	7.5	9	4.5	21	10.5	76	38	79	39.5
I am very knowledgeable about postpartum depression because I have attended seminars and workshop on PPD	30	15	22	11	49	24.5	74	37	25	12.5
I am knowledgeable about the importance of routine screening during six-week visits	23	11.5	22	11	21	10.5	80	40	54	27

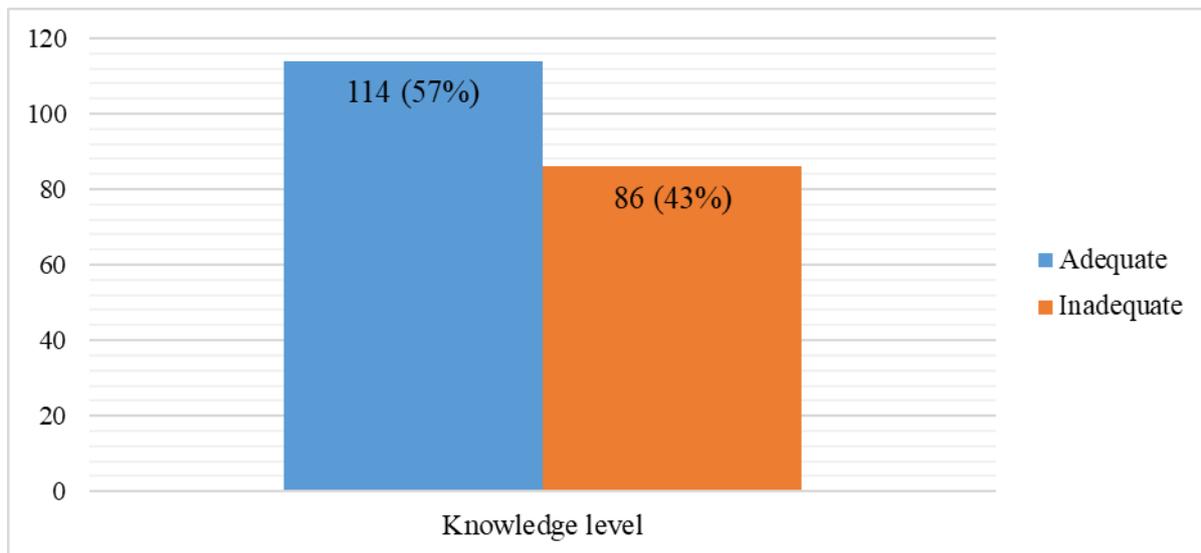


I have attended to a woman with PPD before	20	10	30	15	43	21.5	79	39.5	28	14
I am able to identify various assessment tools for PPD	38	19	20	10	44	22	74	37	24	12
I am comfortable in administering and interpreting the various assessment tools for PPD	39	19.5	21	10.5	40	20	69	34.5	31	15.5
I am aware of available resources for women with postpartum depression	36	18	36	18	39	19.5	60	30	29	14.5
I can identify women with PPD easily because I am aware of the signs and symptoms.	35	17.5	20	10	21	10.5	80	40	44	22
Untreated PPD is not a problem for the mother only but can affect the wellbeing of the baby and the family as a whole	17	8.5	6	3	16	8	44	22	117	58.5
A women can experience PPD till her baby is one year and above according to recent research.	18	9	5	2.5	45	22.5	60	30	72	36
I believe it is possible for PPD to reoccur in a woman if not properly identified and treated	10	5	12	6	22	11	54	27	102	51

**Keys: SD – Strongly disagree; D – Disagree; N – Neutral; A – Agree; SA – Strongly agree**

Table 1 assesses the knowledge of nurse-midwives' on PPD screening and management skills. Result shows that a total of 79 (39.5%) participants strongly agreed that 'Postpartum depression is one of the major complication of childbirth', 74 (37%) respondents each agreed that 'they were very knowledgeable about postpartum depression because they had attended seminars and workshop on PPD' and that 'they were able to identify various assessment tools for PPD', 80 (40%) respondents each agreed to the knowledge item which state that "I am knowledgeable about the importance of routine screening during six-week visits" and "I can identify women with PPD easily because I am aware of the signs and symptoms". Also, the knowledge assessment items which state that "I am aware of available resources for women with postpartum depression" and "A women can experience PPD till her baby is one year and above according to recent research" were each indicated to be agreed upon by 60 participants and 79 (39.5%) agreed that they had attended to a woman with PPD before. Other responses were also indicated by participants as well.





**Figure 1: Summary of level of knowledge of participants on PPD screening and management (N = 200)**

Figure 1 above shows that 114 (57%) of the respondents had adequate knowledge while the remaining 86 (43%) had inadequate knowledge as regarding PPD screening and management skills.

**Research Question Two:** What is the attitude of the nurse-midwives towards PPD screening and management skills in selected hospitals in Ondo State?

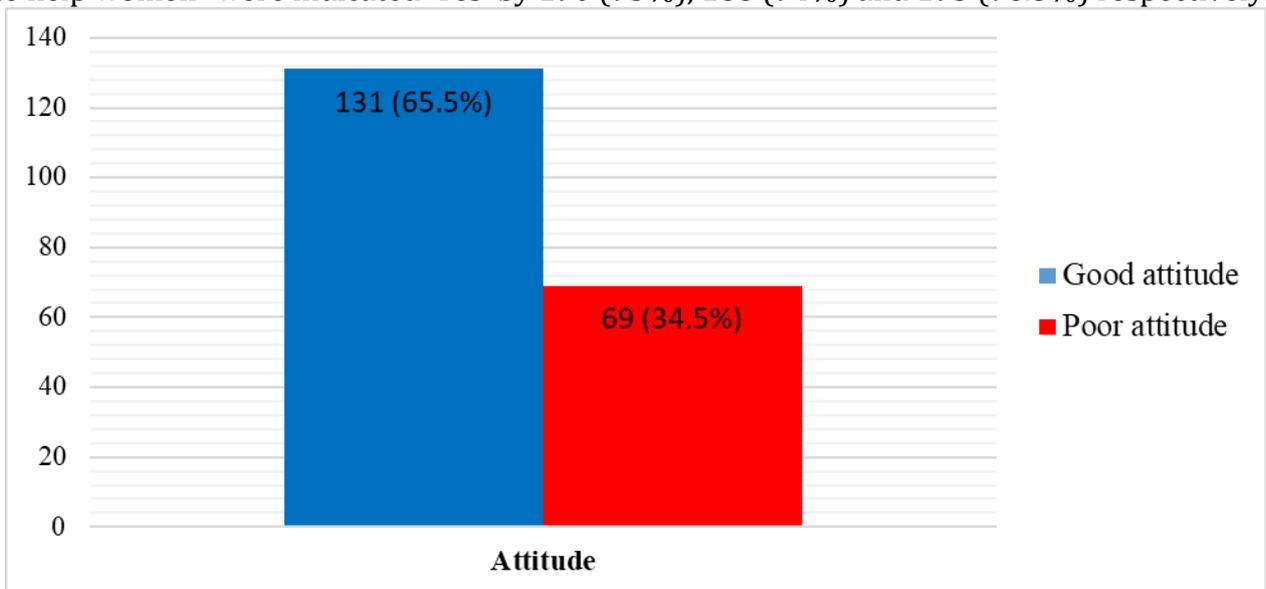
**Table 2: Attitude of Nurse-Midwives towards PPD Screening and Management Skills (N = 200)**

Attitude	Yes		No	
	Freq.	%	Freq.	%
Do you feel comfortable attending to a PPD mother during visit to infant welfare clinic	155	77.5	45	22.5
Do you feel there is a need to screen and manage postpartum women for PPD	172	86.0	28	14.0
Since there is no standard protocol guiding appointment of Postpartum women I believe there is no point screening	38	19.0	162	81.0
I do not have that available time to begin screening women for PPD	55	27.5	145	72.5
It is not so important to screen and manage women for PPD because they will get over it as time goes on	41	20.5	159	79.5
It is my sole responsibility to screen and to identify women at risk for PPD	164	82.0	36	18.0
Supporting women with PPD can be so time consuming	134	67.0	66	33.0
Women are held up in cultures and belief that are germane influence to PPD which will prevent them from getting help	177	88.5	23	11.5
I can greatly be of help to this group of women to propagate their well-being	190	95.0	10	5.0
I do not really feel it is necessary to screen and manage women for PPD	39	19.5	161	80.5



PPD women will not be able to open up due to my behavior to them	60	30.0	140	70.0
Provision of timely, prompt and adequate PPD screening and management can combat the public health menace	188	94.0	12	6.0
I will support if there are basic protocols in my facility to help women	193	96.5	7	3.5

Table 2 assesses the attitude of nurse-midwives towards PPD screening and management skills. Findings shows that 155 (77.5%) participants indicated that they ‘felt comfortable attending to PPD mother during their visit to infant welfare clinic’, 172 (86%) indicated that they ‘felt there is a need to screen and manage postpartum women for PPD’, 164 (82%) participants indicated ‘Yes’ to “it is my sole responsibility to identify women at risk of PPD. The attitude items “I can greatly be of help to this group of women to propagate their well-being”, “Provision of timely, prompt and adequate PPD screening and management can combat the public health menace” and “I will support if there are basic protocols in my facility to help women” were indicated ‘Yes’ by 190 (95%), 188 (94%) and 193 (96.5%) respectively.



**Figure 2: Summary of participants' attitude towards PPD screening and management (N = 200)**  
 Figure 2 above is the summary participants' attitude (table 4.3). Result shows that 131 (65.5%) of the participants had good attitude while the remaining 69 (34.5%) had poor attitude toward PPD screening and management skills.

**Research Question Three:** What is the level of the nurse-midwives' willingness to practice PPD screening and management skills among the in healthcare facilities?



**Table 3: Willingness of Nurse-Midwives to Practice PPD Screening and Management Skills (N = 200)**

Willingness	SD		D		N		A		SA	
	Freq.	%								
The health facility where I work has developed effective communication strategies and guidelines to work with postpartum mothers for adequate screening and management of PPD	52	26	44	22	45	22.5	36	18	23	11.5
I do not feel comfortable assessing a woman for postpartum depression	62	31	88	44	19	9.5	16	8	15	7.5
I do not acknowledge the process of administering assessment tool for screening a woman for PPD	72	36	70	35	26	13	19	9.5	13	6.5
I am not encouraged to practice within my full professional scope, by assessing and screening patients for postpartum depression.	34	17	61	30.5	27	13.5	43	21.5	35	17.5
I do not have the responsibility to communicate and provide expertise in assessing women during PPD	38	19	69	34.5	26	13	26	13	41	20.5
Postpartum women are given appointment /follow up after six weeks in my facility	46	23	36	18	26	13	60	30	32	16
There are various screening tools that should be given to a postpartum mother during appointment	35	17.5	17	8.5	18	9	73	36.5	57	28.5
BDI and EPDS are the most available screening tools for PPD	34	17	16	8	66	33	62	31	22	11
I don't think I can add this skill to what my work load	56	28	50	25	44	22	34	17	16	8
Screening should be done by administering questionnaire and identifying women at risk	3	1.5	16	8	36	18	83	41.5	62	31
Women should be allowed to verbalise their care and concern through informed consent and confidentiality	5	2.5	6	3	11	5.5	67	33.5	111	55.5
Women with severe PPD are introduced to referral service using specialized personnel	4	2	12	6	25	12.5	81	40.5	78	39
There is no guideline or policy backing PPD screening and management in my	15	7.5	24	12	46	23	62	31	53	26.5



facility

**Keys: SD – Strongly disagree; D – Disagree; N – Neutral; A – Agree; SA – Strongly agree**

Table 3 assesses the willingness of participants to practice PPD screening and management. Findings show that 62 (31%) ‘strongly disagreed’ to the item “I do not feel comfortable assessing a woman for postpartum depression” 72 (36%) ‘strongly disagreed’ to “I do not acknowledge the process of administering assessment tool for screening a woman for PPD”, 56 (28%) ‘strongly disagreed’ to “I don’t think I can add this skill to what my work load”, 61 (30.5 %) ‘disagreed’ to “I am not encouraged to practice within my full professional scope, by assessing and screening patients for postpartum depression”, 52 (26%) ‘Strongly disagreed’ to “The health facility where I work has developed effective communication strategies and guidelines to work with postpartum mothers for adequate screening and management of PPD” 60 (30%) ‘agreed’ to “Postpartum women are given appointment /follow up after six weeks in my facility”, 67 (33.5%) ‘agreed’ to “Women should be allowed to verbalise their care and concern through informed consent and confidentiality”, 83 (41.5%) ‘agreed’ that “Screening should be done by administering questionnaire and identifying women at risk” 81 (45.5%) ‘agreed’ that “Women with severe PPD are introduced to referral service using specialized personnel”, 67 (33.5%) ‘agreed’ to “There is no guideline or policy backing PPD screening and management in my facility” while other indicated various option.

**Research Question Four:** What are the anticipated barriers to the practice PPD screening and management skills in the respective hospitals?

**Table 4: Anticipated barriers Nurse-Midwives to the practice PPD screening and management skills (N = 200)**

Anticipated barriers	SD		D		N		A		SA	
	Freq.	%								
The workload in my unit would not give me the opportunity to screen mothers for PPD	29	14.5	47	23.5	41	20.5	55	27.5	28	14
Time constraint is particularly a germane factor that prevent screening and management	23	11.5	27	13.5	28	14	77	38.5	45	22.5
There is no proper knowledge and update on the PPD as a subject except the one I learnt during nursing training	3	1.5	23	11.5	20	10	77	38.5	77	38.5
There is need for remuneration by the government	24	12	16	8	18	9	75	37.5	67	33.5
Hierarchy in health care team and autonomy can be a problem	12	6	30	15	50	25	58	29	50	25
Difficulty in separating PPD symptoms and normal	12	6	31	15.5	44	22	75	37.5	38	19



adjustment to womanhood

Postpartum women

unwillingness to screen due to some barriers such as cultural belief, stigma etc.	12	6	9	4.5	28	14	70	35	81	40.5
There is an existing image of nursing the postpartum women have that can prevent them from opening up	15	7.5	22	11	35	17.5	70	35	58	29
Un-availability of updated training, continuous education and program on PPD	9	4.5	12	6	25	12.5	77	38.5	77	38.5
Structural factors such as congestion and meeting place	10	5	32	16	22	11	76	38	60	30
Acceptance of this service by the public	8	4	6	3	40	20	75	37.5	71	35.5

**Keys: SD – Strongly disagree; D – Disagree; N – Neutral; A – Agree; SA – Strongly agree**

Table 4 assesses the anticipated barriers of nurse-midwives towards the practice of PPD screening and management. From the table, 55 (27.5%) participants 'agreed' that "The workload in my unit would not give me the opportunity to screen mothers for PPD", 77 (38.5%) participants each 'agreed' that "Time constraint is particularly a germane factor that prevent screening and management", "There is no proper knowledge and update on the PPD as a subject except the one I learnt during nursing training" and "Un-availability of updated training, continuous education and program on PPD" respectively were anticipated barriers, also 75 (37.5%) each 'agreed' that "There is need for remuneration by the government", "Difficulty in separating PPD symptoms and normal adjustment to womanhood" and "Acceptance of this service by the public" were barriers, 70 (35%) each 'agreed' that "Postpartum women unwillingness to screen due to some barriers such as cultural belief, stigma etc." and "There is an existing image of nursing the postpartum women have that can prevent them from opening up" respectively were anticipated barriers to practice of PPD screening and management skills.

### Research Hypotheses

**Ho1:** There is no significant association between the level of knowledge of and attitude towards of PPD screening and management skills.

**Table 5: Association between knowledge and attitude of respondents towards PPD screening and management skills (N = 200)**

Attitude group	Knowledge group		Chi-Sq.	df	Pv	R
	Inadequate Knowledge	Adequate Knowledge				
Poor attitude	47	22	27.112	1	0.001	S



	(54.70%)	(19.30%)
	39	92
Good attitude	(45.30%)	(80.70%)

**Keys: R – Remark; S – Significant**

Table 5 is a cross tabulation of attitude against knowledge of participants as regarding screening and managements of PPD. From result of findings, it was observed that out of 86 (100%) respondents who had inadequate knowledge, 47 (54.7%) had poor attitude. Meanwhile, 114 (100%) respondents had adequate knowledge among which 92 (80.7%) had good attitude towards PPD screening and management. This implies that the level of knowledge of respondents had influence on their attitude. In concordance, the result of the cross tabulation was found to be statistically significant (Chi-sq. = 27.112; df = 1; pv = 0.001). The null hypothesis one was therefore rejected.

**Ho 2:** There is no significant association between nurse-midwives' the level of knowledge of and their willingness to practice PPD screening and management skills.

**Table 6: Association between knowledge and willingness of respondents towards PPD screening and management skills (N = 200)**

Willingness group	Knowledge group		Chi-Sq.	df	Pv	R
	Poor knowledge	Good knowledge				
Less willing	58 (67.40%)	44 (38.60%)	16.321	1	0.001	S
More willing	28 (32.60%)	70 (61.40%)				

**Keys: R – Remark; S – Significant**

The result of cross tabulation of knowledge against willingness is presented in table 6 above. Result shows that 58 (67.4%) out the respondents with poor knowledge were less willing to practice PPD screening and management while 70 (61.4%) of respondents with good knowledge were willing to practice it. This means that respondent willingness was influenced by their level of knowledge of PPD screening and management. Statistically, the result was found to be significant (Chi-sq. = 16.321; df = 1; pv = 0.001). Therefore, the null hypothesis two was therefore rejected.

**Discussion**

The knowledge of nurse-midwives on PPD screening and management skills was assessed and the overall result shows that shows that 114 (57%) of the respondents had adequate knowledge while the remaining 86 (43%) had inadequate knowledge as regarding PPD screening and management skills. The study showed there was a gap in the knowledge of nurse midwives on PPD screening and management because the margin between the two is not wide. This may be attributed to the fact that majority of the participants in this study had never been educated on the screening and management tools on PPD except from the Nursing and Midwifery curriculum which was taught in school. Though the literature replete with findings that education/training is essential to improve knowledge and practice of nurse-midwives, but none of such training had been reported in Ondo State.



However, majority of the participants strongly agreed that 'Postpartum depression is one of the major complication of childbirth' and few participants agreed that 'they were very knowledgeable about postpartum depression because they had attended seminars and workshop on PPD' and that 'they were able to identify various assessment tools for PPD', this is encouraging though the response rate is low but this can be traced to the seminar conducted by the researcher in 2020 during the Mandatory Continuing Professional Development Program (MCDPD) held at the state for nurses and midwives, it was a session where all misconceptions and myths about PPD was analyzed and an avenue for the participants to relearn and unlearn.

The findings of knowledge deficit among nurses and midwives is similar to a study by Bayrampour et al., (2019) as it was found out that nurses and midwives lack knowledge on various aspects of PPD, such as definition, prevalence, symptoms, risk factors, screening tools, and treatment but prompt evaluation and trainings by stake holders could awaken this menace. The findings from this work also supports a study on the knowledge level of 815 members of the Australian College of Midwives and found that many midwives failed to identify risk factors (70.6%), the prevalence of antenatal depression (49.6%); incorrectly detected frequency (44.4%), onset (71%), and treatment options (32%) are associated with postpartum depression (Jones et al., 2016).

It is worthy to note that almost half of the participants have a high confidence level of screening women if they were adequately informed about the importance of screening and management skills for PPD that a nurse or midwife must possess which is in accordance with a study was conducted in Ireland on the awareness and confidence of midwives in identifying and resolving perinatal mental health problems. It was found that 71.1% of midwives have a high level of knowledge about depression and anxiety during pregnancy, and 72% are confident in identifying and resolving perinatal mental health problems in women experiencing depression and anxiety. However, the authors indicate that 43.9% of midwives reported less confidence in caring for women. Only 17.8% of midwives felt ready to support women, while 15.3% said they had access to sufficient information (Noonan et al., 2018).

However, the report from this work is not in accordance with a study conducted by another group of researchers in the Republic of Ireland who also assessed the knowledge of midwives about perinatal mental health as they found that midwives report relatively good knowledge of perinatal depression, perinatal anxiety, and risk factors for perinatal mental health problems, surprisingly about a third of midwives never received education in perinatal mental health but many of those educated have trained as midwives/nurses and approximately 20% have attended continuing education courses and those who received some perinatal mental health education had statistically significant higher skills and confidence and had higher self-esteem of knowledge in all subjects than those who did not have perinatal mental health education (Carroll et al., 2018).

Studies around the world are consistent with the findings from this work (Carroll et al. 2018; Makhmutova, 2020) have been conducted to examine the knowledge of midwives/nurses, as well as their practical knowledge, competencies and practices regarding PPD. A study conducted on Perinatal Nurses' and Midwives' knowledge about assessment and management of postpartum depression revealed a significant lack of knowledge about



assessment and management of postpartum depression (PPD) among nurses and midwives in Saudi Arabia. In the study, conducted by Elshatarat et al., (2018) nurses and midwives were said to lack knowledge about various aspects of PPD, including its definition, prevalence, symptoms, risk factors, screening tools, and treatments. Only one third of participants were confident in their ability to provide education for women about PPD. In another study conducted by Jones et al., (2011), it was reported that on average, participants correctly answered 62.9 percent of questions assessing antenatal depression (SD = 14.0) and 70.7% of questions assessing PPD (SD = 14.3). The majority of respondents (86.9%; n = 708) were aware of the comorbid relationship between depression and anxiety in that both can occur during the antenatal and postpartum periods.

The lack of knowledge or a gap among nurses and midwives about PPD competencies and practice in screening and management tool is a new normal across the globe despite the high rate of morbidity and mortality this menace has caused in our society as much as there is a reflection of SDG to combat the issue little or nothing has been done in respect to training health workers to rise up to the task. Bewley (2016) carried out his survey with the purpose of providing an overview of the present state of knowledge of midwives about PPD competency level. His study established that screening a woman postpartum is essential but due to time constraints, and few clear recommendations for assessment, many pre-natal providers do not routinely inquire about PPD, His study recommended that additional education, training and seminars are required to assist health care providers especially midwives in identifying and managing pregnancy PPD.

The knowledge of PPD screening and management skills is important to enable nurse-midwives to have confidence at screening at important period of a woman's life using specific assessment tools in a well-defined environment. For effective screening nurse-midwives is required to communicate well and identify women using appropriate tools and referral (WHO, 2018).

Attitude of the nurses and midwives is also an important factor in the willingness of the women to disclose their condition, in a situation where the nurse/ midwife does not connect emotionally with the mother and does not offer any emotional support, this can cause the woman to be unresponsive. From the findings in this study, the attitude of nurse-midwives towards PPD screening and management skills was assessed and findings show that majority of the participants indicated that they 'felt comfortable attending to PPD mother during their visit to infant welfare clinic and the need to screen and manage postpartum women for PPD , this is so encouraging and worth applauding as majority indicated that it is their sole responsibility to identify women at risk of from the report of this work majority of the participants had a good attitude towards the screening and management skill on PPD. This response rate can also be attributed to the researcher's previous sessions with nurses and midwives in the state during an episode of MCPDP in 2020 on the contrary, there were lots of researched that had been carried out globally which showed a poor attitude of nurses and midwives. This report also reflects the good behavior of the people of Ondo State in general as carried out by an observational report in 2021 (Ojo, et al., 2021). The study moreover is not in tandem with a study conducted by Logsdon et al (2019) which found that majority of participants had poor attitude on post-natal depression services and did not consider its



management to be their role. Sanders (2019), believes as nurses and midwives fail to utilize depression screening among postpartum mothers, it results in clients not receiving adequate and timely intervention.

The willingness of participants to practice PPD screening and management was assessed and discovered that a good percentage of the participants are not willing to practice because of various reasons discussed below while the others who indicated interested to practice also complained about the reasons highlighted by the participants who are not willing to practice. Findings show that majority of the participants do not feel comfortable assessing a woman for postpartum depression also majority do not acknowledge the process of administering assessment tool for screening a woman for PPD and do not think they can add the skill to what my work load. It is also reported that majority are not encouraged to practice within their full professional scope, by assessing and screening patients for postpartum depression. This is in relationship with a study conducted by Jones et al. (2017) who studied the practice level of 815 members of the Australian College of Midwives. They found that many midwives failed to identify risk factors (70.6%), the prevalence of antenatal depression (49.6%); incorrectly detected frequency (44.4%), onset (71%), and treatment options (32%) are associated with postpartum depression (Jones et al. 2017).

On the other hand, half of the participants do not support the notion that the health facility where they work has developed effective communication strategies and guidelines to work with postpartum mothers for adequate screening and management of PPD. Half of the participants agreed that Postpartum women are given appointment /follow up after six weeks in their facility but unattended to while they also opined that women should be allowed to verbalise their care and concern through informed consent and confidentiality which is in contrast with a study by Clement et al. (2015) which studied the knowledge and skills of Polish midwives on the early detection of antenatal and postpartum depression. The vast majority of midwives (80%) reported that they were not adequately prepared for screening and caring for women with antenatal depression and/or PPD. On utilization of screening tools all the participants had never used any screening tool to identify women at risk of PPD. On referral of PPD cases, very few participants claimed to link clients up with agency for support after screening with available tool.

Anticipated barriers of nurse-midwives towards the practice of PPD screening and management skills was assessed and findings from this study shows that more than half of the participants agreed and strongly agreed on the following variables :The workload in their unit would not give them the opportunity to screen mothers for PPD, Time constraint is particularly a germane factor that prevent screening and management, There is no proper knowledge and update on the PPD as a subject except the one I learnt during nursing training and Un-availability of updated training, continuous education and program on PPD respectively were anticipated barriers, also There is need for remuneration by the government, Difficulty in separating PPD symptoms and normal adjustment to womanhood and Acceptance of this service by the public were barriers.

Postpartum women unwillingness to screen due to some barriers such as cultural belief, stigma etc. There is an existing image of nursing the postpartum women have that can prevent them from opening up. These barriers are not uncommon in these part of the world



where the Government and stakeholders are not providing adequate support and funding to health workers, the structure and the entirety of the system however, in the United State, two barriers to adequate prevention and treatment were identified, it was reported in one program that produced positive psychological health outcomes, midwifery visits were tailored to individual need and extend to at least ten to twelve weeks postpartum, encouraging developments in the US include an effective program that screens new mothers with or without signs of PPD and provided telephone follow-up and rapid treatment referral and a proposed legislation to fund organizations working to reduce the incidence of PPD (Sobey, 2018) This also corroborates the findings from the work of Arefadib et al., (2022) on the barriers and facilitators to supporting women with postnatal depression and anxiety noted that the complex system within which nurses operate presents barriers that can impede their ability to respond to women with PPD issues and opined that there is a need for service delivery frameworks that better support nurses and facilitates equitable success to mental health care and midwifery practice. This findings is also similar to a previous research done by Barbra (2017) on PPD in primary care practices which identified three general types of barriers to effective depression diagnosis and treatment: patient-centered, physician-centered, and systems barriers.

Patient-centered variables include cost and lack of insurance coverage, time constraints, social stigma, non-adherence to depression treatment, lack of follow-through with mental health referrals, and lack of access to care for various reasons. Physician centered variables include lack of time, managed care policies, competing demands, insufficient training/knowledge, insurance or payment problems, and fear of legal repercussions. Systems based variables also play a role and include infrequent follow-up visits for mothers, lack of objective, proactive monitoring of recovery, and separation of primary care and mental health services. In addition, mothers of infants may experience barriers that are unique to the postpartum or early child-rearing period, such as need for childcare during mental health visits, concern about medication effects on nursing infants, and fear of judgment and referral to child protection.

The findings is also in accordance with a comprehensive qualitative study conducted by Dadi et al., (2021) where barriers are identified in the study as: (i) At the individual level, health administrators have little knowledge about PPD risk factors, symptoms, optimal time for screening, treatment options, and the potential consequences of depression. (ii) At the socio-cultural level, there is low awareness about PPD in the community, reduced health-seeking behaviours and prohibitive cultural norms; (iii) Organizational level barriers include lack of government capacity, readiness, and priority to screen and manage PPD; (iv) Structural level barriers include lack of PPD mental health policies and strategies, and transparency in the healthcare system. In addition, the study found that health professionals' commitment, and simplicity of screening program could represent opportunities for or enablers of implementation of PPD mental health services. Health administrators' low knowledge about PPD risk factors, signs and symptoms, time of screening, health consequences and interventions are identified as individual level barriers for PPD service implementation. Consistent with the findings from this study, health administrators' low level of knowledge in



defining and conceptualizing PPD emerged as one of the barrier to diagnosis and treatment of PPD in other studies (Place et al., 2015).

In view of these findings, it may be thought that nurses and midwives' are not being given the responsibility to screen for depression due to the inadequacy of information on the subject matter, which is evident by the lack of training. This cements the hypothesis that a lack of knowledge on the PPD screening and its management among nurses and midwives' contributes to their attitude towards PPD screening and its management. Unlike a study conducted by Kang et al. (2019) which revealed there is no association between knowledge and practice, this study observed there was a significant relationship between the two domains ( $p < 0.01$ ) which suggested that knowledge has a moderate to strong effect on practice habits (Chi-sq. = 16.321; df = 1; pv = 0.001). These results indicated that practice habits are dependent on knowledge level. Therefore, the null hypothesis was rejected. Efforts to minimize this theory-practice gap is crucial, as midwifery training focusing on both theory and clinical practice is lacking (Kang et al., 2019).

### Conclusion

This study has shown the knowledge level, attitude level, level of practice and factors influencing the practice of PPD screening and management skills, nurses and midwives should ensure adequate compliances to policy, precautions and implementation of PPD screening and management skills to reduce prevalence of postpartum depression and prevent its complications like poor antenatal care, potential self-harm, poor obstetric outcomes, neglect to the infant, poor mother-infant bonding, and poor emotional development of the child in future. Although the majority of the midwives' had a positive attitude and perception towards PPD screening and its management, their practices and knowledge in terms of depression screening remained poor. The predictors of having a positive attitude were their perceptions and perceived behavioral control. The results of this study highlighted that nurses and midwives' are not practicing at their expected level due to their lack of knowledge and resources. Therefore, relevant training programs on Postpartum Depression (PPD) and depression screening, should be developed for nurses and midwives' to assess mothers for early warning signs and risk of PPD, and enable them to take the necessary action to ensure treatment.

The deficit in knowledge hinders the nurses and midwives' ability to provide holistic care to postpartum mothers appropriately, effectively and efficiently, subsequently proving detrimental to SDG 3, which states, ensure health lives and promote wellbeing for all at all ages.

### Recommendations

The following recommendations were made:

1. Government/appropriate authorities should provide education, training programs and seminar on PPD screening and management skills for nurses and midwives.
2. Government/appropriate authorities should employ more competent nurses and midwives to reduce the workload influencing the practice of PPD screening and management skills.
3. Upon entry into the Nursing and Midwifery program, more emphasis should be placed on postpartum depression and its management via use of depression screening tools.



4. All primary and secondary health care institutions should be mandated to have at least three seminars/training workshops per year on depression screening and its importance among postpartum mothers.
5. Revision of institutional policy and guidelines regarding the management of postpartum mothers should integrate the use of depression screening tools.

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