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MIDWIVES' KNOWLEDGE AND PRACTICE OF POSTPARTUM DEPRESSION SCREENING IN ALEX EKWUEME FEDERAL UNIVERSITY TEACHING HOSPITAL, ABAKALIKI

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Abstract

Background: Postpartum depression (PPD) is a significant public health concern affecting maternal and child health outcomes. Midwives play a crucial role in early detection through systematic screening, yet evidence suggests substantial gaps in knowledge and practice, particularly in resource-limited settings. This study assessed midwives' knowledge and practice of postpartum depression screening at Alex Ekwueme Federal University Teaching Hospital Abakaliki (AEFUTHA), Nigeria, and identified factors influencing both knowledge and practice. **Methods:** A descriptive cross-sectional survey was conducted among 150 registered midwives working in obstetrics and gynecology units at AEFUTHA. Data were collected using a validated, self-administered questionnaire (Cronbach's alpha = 0.77) covering socio-demographic characteristics, knowledge of PPD screening, screening practices, and influencing factors. Data were analyzed using descriptive statistics, chi-square test, and binary logistic regression. **Results:** The majority of participants (62.0%) were aged 31–35 years, with 73.3% holding bachelor's degrees. While 74.7% were aware of PPD screening, only 49.3% engaged in actual screening practice. Chi-square analysis revealed a significant association between knowledge and practice ($\chi^2 = 8.62$, $p = 0.003$). Logistic regression identified good knowledge (OR = 4.12, $p = 0.009$), availability of screening tools (OR = 3.95, $p = 0.001$), and ≥10 years' experience (OR = 2.08, $p = 0.047$) as significant predictors of good practice, while heavy workload significantly reduced practice likelihood (OR = 0.42, $p = 0.021$). Educational qualification (OR = 2.32, $p = 0.002$), years of experience (OR = 1.43, $p = 0.017$), and previous training on PPD (OR = 3.09, $p = 0.005$) significantly predicted knowledge levels. **Conclusion:** Despite moderate awareness, substantial knowledge-practice gaps exist in PPD screening among midwives at AEFUTHA. Targeted interventions including structured training programs, provision of validated screening tools, and workload optimization are essential to enhance routine PPD screening and improve maternal mental health outcomes.

Keywords: postpartum depression, screening, midwives, knowledge, practice, maternal mental health, Nigeria

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Introduction

Postpartum depression (PPD) is one of the most prevalent postpartum complications with an estimated prevalence rate of 10-15% among women globally with higher rates of 14-23% indicated in low- and middle-income countries (LMCI) (Adewuya et al., 2005). PPD is defined by a chronic sadness, anxiety, irritability, sleeping problems, and disruption of mother-infant bonding, and usually occurs during the first year of postpartum. Unrecognized and unmanaged, PPD has severe implications on maternal health, infant growth, family dynamics, and the overall population health (Stewart & Vigod, 2016).

The timely intervention and prevention of adverse outcomes depend on the early identification of the disease through systematic screening. Guidelines by international organizations, including the American College of Obstetricians and Gynecologists (ACOG) and the National Institute for Health and Care Excellence (NICE), suggest screening perinatal depression with validated tools on a routine basis during pregnancy and postpartum (ACOG, 2018; NICE, 2014). Midwives are the direct healthcare providers of the maternal health care system with close contact with women during all the stages of the perinatal continuum and, therefore, they are perfectly suited to organize PPD screening and refer to the right professionals.

Although the role of PPD screening has been established, PPD screening has been shown to be affected by knowledge and practice gaps among health care providers in sub-Saharan Africa. Low screening rates, poor knowledge of proven screening instruments, and a significant number of barriers such as heavy workload, insufficient training, and institutional support have been reported in studies that were implemented in Nigeria, Ghana, and other African environments (Edet et al., 2021; Osam et al., 2023). These loopholes are especially worrying in tertiary healthcare institutions which act as referral centers to high-risk groups in obstetrics.

Alex Ekwueme Federal University Teaching Hospital Abakaliki (AEFUTHA) is a tertiary referral hospital in Ebonyi State, southeastern Nigeria which has a wide catchment population with a high use of maternal healthcare services. The obstetrics and gynecology departments of the hospital have large volumes of patients and hence high demands on the midwifery staff. The existing level of knowledge and practice of PPD screening among midwives in AEFUTHA is also critical to understand and implement specific interventions to enhance maternal mental health services.

Although past investigations have explored the PPD screening practices in other Nigerian contexts, little has been researched to study the knowledge-practice relationship and determinants of midwives in the tertiary teaching hospitals in southeastern Nigeria. The current study fills this gap by thoroughly evaluating the knowledge and practice of midwives in PPD screening at AEFUTHA and determining the variables that can be modified to impact both areas.

Methodology

Study Design and Setting

A descriptive cross-sectional survey design was utilised in this study but it was carried out at Alex Ekwueme Federal University Teaching Hospital Abakaliki (AEFUTHA), Ebonyi State, Nigeria. AEFUTHA is a tertiary referral hospital situated in the capital city of Ebonyi State, Abakaliki in southeastern Nigeria. The hospital has two campuses, the first of which is mainly focused on the provision of maternal and child health care. The units of obstetrics and gynecology are at full capacity, with 24-hour cover in terms of rotating the shifts, and as a referral center to the public and private healthcare facilities in the Ebonyi State and beyond.

Study Population and Sampling

The population of the study included all registered midwives (RM) who were in the obstetrics and gynecology units, obstetric emergency unit, of AEFUTHA, which is 162 midwives. Participants who fulfilled the inclusion criteria were selected using purposive sampling. The criteria used to include the registered midwives were those in obstetrics units and

the obstetric emergency unit who were willing to take part in the research. The exclusion criteria were midwives who were unavailable or not well during the data collection period. Midwives (n=150) were involved in the study, with a 92.6 percent response rate.

Data Collection Instrument

A self-administered questionnaire called Midwives Knowledge and Practice of Postpartum Depression screening in AEFUTHA was used to gather data. The instrument included five parts; Section A included socio-demographic traits; Section B measured the knowledge about postpartum depression and screening; Section C measured screening practices; Section D measured factors that affected the practice; and Section E measured factors that affected the knowledge. The questions in the questionnaire were closed ended questions which aimed at producing quantitative and categorical information.

Validity and Reliability

The researcher had the instrument validated by a mental health specialist and an obstetrics expert who is also the supervisor of the researcher. They evaluated the clarity, relevance, and sufficiency of the questionnaire concerning the objective of the study. According to their recommendations, some of the questions were reworded, some irrelevant ones deleted, and new questions added. The reliability was determined in a pilot study that included 18 registered midwives that were not part of the main study. Cronach alpha was obtained as 0.77 which is an acceptable reliability.

Ethical Considerations and Data Collection Procedure

Ethical approval was taken at the University of Port Harcourt Research and Ethics Committee and the Health Research Ethics Committee of AEFUTHA. The study was explained to eligible midwives, with written consent being taken. Participation was voluntary, and the confidentiality was kept. Questionnaires were administered face to face to the eligible respondents during duty times and filled during their breaks or after work.

Data Analysis

Data were analyzed using IBM SPSS version 27. Frequencies and percentages summarized variables, while chi-square and binary logistic regression were used to test associations and predictors at $p < 0.05$.

Results

Socio-Demographic Characteristics of Respondents

One hundred and fifty midwives were involved in the study. The average age of the respondents was about 33.4 (SD ± 5.8 years). The majority of participants (93, 62.0%) were aged 31–35 years, followed by those aged 25–30 years (44, 29.3%), and a smaller proportion (13, 8.7%) were aged 36 years and above. In terms of education, the highest number (110, 73.3%) was the Bachelor of Science in Nursing (BSc/BNSc) degree, 34 (22.7%) had RN/RM qualifications, and 6 (4.0) had a Master's degree. In terms of professional experience, 45 midwives (30.0%) had 6–10 years of experience, 38 (25.3%) had 11–15 years, 23 (15.3%) had 20 years or more, 22 (14.7%) had less than 5 years, and another 22 (14.7%) had 16–20 years of experience. These demographic characteristics are summarized in Table 1.

Practice of Postpartum Depression Screening

In terms of awareness and practice of PPD screening, 112 midwives (74.7% responded that they were aware of postpartum depression screening. But real screening practice was much less. Regarding their screening practice, 76 midwives (50.7%) said they do not screen mothers on PPD. Of individuals who reported said they engaged in some screening activity, 32 (21.3%) said they sometimes screened mothers on PPD with 24 (16.0) saying they rarely screened. It is interesting to note that 72 midwives (48.0%) said that they had never screened mothers with PPD. Table 2 shows these findings.

Table 1: Socio-Demographic Characteristics of Respondents

Variable	Frequency (f)	Percentage (%)
Age (Mean ≈ 33.4 ± 5.8 years)		
25–30 years	44	29.3
31–35 years	93	62.0
≥36 years	13	8.7
Total	**150**	**100**
Educational qualification		
RN/RM	34	22.7
BSc/BNSc	110	73.3
MSc	6	4.0
Years of experience		
<5 years	22	14.7
6–10 years	45	30.0
11–15 years	38	25.3
16–20 years	22	14.7
≥20 years	23	15.3

(n = 150)

Table 2: Practice of Postpartum Depression Screening

Practice Variable	Frequency	Percentage
Midwives Aware of PPD screening	112	74.7
Midwives who Do not practice PPD screening on mothers	76	50.7
Sometimes screened mothers for PPD	32	21.3
Rarely screened mothers for PPD	24	16.0
Never screened mothers for PPD	72	48.0

(n = 150)

Association Between Knowledge and Practice of PPD Screening

A chi-square test of association was conducted to analyze the relationship between knowledge level and screening practice. The respondents were divided into good-knowledge and poor-knowledge, good-practice and poor-practice groups. Of the 128 midwives who were good in their knowledge, 70 of them (54.7%) practiced well, and 58 of them (45.3%) practiced poorly. On the other hand, only 4 midwives (18.2%) out of the 22 with poor knowledge demonstrated good practice, the rest were 18 (81.8%) with poor practice. The chi-square test resulted in a statistically significant relationship between the level of knowledge and practice (2 = 8.62, 1df, p = 0.003), which showed that midwives who had good knowledge were much more likely to practice good screening. These results are shown in Table 3.

Table 3: Chi-Square Test of Association Between Knowledge and Practice (n = 150)

Knowledge Level	Good Practice	Poor Practice	Total
Good Knowledge	70	58	128
Poor Knowledge	4	18	22
Total	**74**	**76**	**150**

Chi-Square Result: $\chi^2(1) = 8.62, p = 0.003$ (Significance level = 0.05)

Predictors of Good Practice of PPD Screening

Binary logistic regression found predictors of good PPD screening practice in midwives. Good knowledge was a strong predictor of good practice (OR = 4.12, p = 0.009), and availability of screening tools was also a likely predictor of good practice (OR = 3.95, p = 0.001). The midwives who had 10 years or above experience were more likely to practice screening effectively (OR = 2.08, p = 0.047). There was a great decrease in the chances of good practice with heavy workload (OR = 0.42, p = 0.021). Higher education qualification was also found to have a positive effect (OR = 1.76) but it was not statistically significant (p = 0.15).

Predictors of Knowledge of PPD Screening

An independent logistic regression model was developed to determine variables that affected the knowledge about PPD screening. Knowledge level (good knowledge = 1, poor knowledge = 0) was the dependent variable and the variables in the independent variable were age, educational qualification, years of experience and previous training on PPD. The findings showed that educational qualification was a significant predictor of knowledge (B = 0.842, SE = 0.276, Wald = 9.29, OR = 2.32, p = 0.002), whereby, the higher the educational qualification, the higher the likelihood of good knowledge among midwives. The strongest predictor (B = 1.127, SE = 0.401, Wald = 7.9, OR = 3.09, p = 0.005) was previous training on PPD as it revealed that midwives who had obtained previous training were about three times more likely to have good knowledge. Experience in years also had a significant predictive value of knowledge (B = 0.356, SE = 0.149, Wald = 5.71, OR = 1.43, p = 0.017) with each extra category of experience raising the chances of good knowledge by 43 percent. Age showed a marginal positive association (B = 0.214, SE = 0.108, Wald = 3.91, OR = 1.24, p = 0.048). Table 5 shows these findings.

Factors Affecting Knowledge of PPD Screening

The respondents were requested to name certain factors that influenced their awareness regarding the screening of postpartum depression. Lack of training on postpartum depression screening was the most common reason with 96 midwives reporting (64.0%). The absence of continuing professional education on PPD screening followed (reported by 88 midwives or 58.7%), and insufficient knowledge of screening instruments (reported by 82 midwives or 54.7%). On top of this, 79 midwives (52.7%), 74 (49.3%), and 68 (45.3) reported a shortage of

Table 4: Binary Logistic Regression Predicting Good Practice of PPD Screening (n = 150)

Variable	Odds Ratio (OR)	95% CI	*p*-value
Good Knowledge	4.12	1.42–11.94	0.009*
≥10 Years' Experience	2.08	1.01–4.31	0.047*
BSc/BNSc and above	1.76	0.81–3.82	0.15
Availability of tools	3.95	1.88–8.31	0.001*
Heavy workload	0.42	0.20–0.88	0.021*

Note. $p < 0.05$ indicates statistical significance. Dependent Variable: Practice of PPD Screening (Good = 1, Poor = 0).

(n = 150)

Table 5: Logistic Regression Predicting Knowledge of PPD Screening

Variable	B	S.E	Wald	df	Exp(B)	*p*-value
Age	0.214	0.108	3.91	1	1.24	0.048
Educational qualification	0.842	0.276	9.29	1	2.32	0.002*
Years of experience	0.356	0.149	5.71	1	1.43	0.017*
Previous training on PPD	1.127	0.401	7.90	1	3.09	0.005*
Constant	-2.014	0.665	9.16	1	—	0.002

Note. $p < 0.05$ indicates statistical significance.

Table 6: Frequency and Percentage Distribution of Factors Affecting Knowledge of PPD Screening

Factors Affecting Knowledge of PPD	Frequency (n)	Percentage (%)
Lack of training on postpartum depression screening	96	64.0
Inadequate knowledge of screening tools	82	54.7
Nonexistence of continuing professional education on PPD screening	88	58.7
Heavy workload in maternity units	74	49.3
Dearth of institutional guidelines on PPD screening	79	52.7
Inadequate exposure to PPD screening during professional training	68	45.3

(n = 150)

institutional guidelines regarding PPD screening, heavy workloads in the maternity units, and inadequate exposure to PPD screening in their professional training, respectively. Table 6 is a description of these factors.

Discussion

The sample size used in the research was mainly midwives of mid-level (mean age 33.4 years) and bachelor level (73.3%), which represented the professional make-up of tertiary teaching hospitals in Nigeria. Most of them were aged 6-15 years of experience and this implies that the workforce was highly exposed to clinical experience. This demographic is in line with the staffing trends in other tertiary healthcare institutions in Nigeria and indicates that the sample is comprised of experienced midwives, who should theoretically have competence to perform PPD screening (Edet et al., 2021).

One of the most interesting results of this study is the significant disparity between the awareness and the practice of PPD screening. Although 74.7% of the midwives said they were aware of PPD screening, only 49.3% said they practiced the screening, and 48.0% said they never screened mothers for PPD. Such a gap between knowledge and action is in line with the results of recent research in sub-Saharan Africa. Osam et al. (2023) conducted a study that identified that 91.1% of healthcare workers in Kaduna, Nigeria, either sometimes or never screened for PPD, and only 8.9% of the workers screened regularly. Likewise, a survey of nurse-midwives in Ondo State, Nigeria, reported that even though over half of the participants had good knowledge and positive attitudes, most of them were not aware of the specific risk factors and screening protocols, and only a half of them were ready to engage in screening activities (Adeyemo et al., 2020).

The knowledge-practice gap as manifested in this study could be explained by a number of factors. First, the knowledge of PPD as a clinical entity does not necessarily correspond to the skills in the utilization of validated screening instruments or incorporating screening into the regular care. Second, barriers at organizational and systemic levels can impede the translation of knowledge into practice by midwives, which would include the presence of heavy workload, the absence of screening tools and institutional protocols. Third, lack of further professional education and on-the-job training can lead to theoretical, but not practical knowledge.

The chi-square analysis showed that the level of knowledge and practice were significantly correlated (2 = 8.62, p = 0.003), with the midwives who had good knowledge being much more inclined to practice good screening. The logistic regression result also serves as evidence of this finding with good knowledge being a strong predictor of good practice (OR = 4.12, p = 0.009). These findings are consistent with the Health Belief Model and the Theory of Planned Behavior in which knowledge and perceived competence are deemed to be the key determinants of health-related behaviors (Rosenstock, 1974; Ajzen, 1991).

The importance of evidence-based educational interventions is emphasized by the large knowledge-practice association. But knowledge is not enough, the regression analysis revealed other facilitators and barriers that should be overcome to maximize screening practice.

The binary logistic regression model established four important predictors of good practice. First, there was a strong predictive value of availability of screening tools (OR = 3.95, p = 0.001) and therefore midwives who had access to validated instruments were almost four times more inclined to practice screening. The present result aligns with the evidence gathered in Ghana, where the lack of screening instruments and the lack of awareness about such instruments like the PHQ-9 and GAD-7 were revealed to be predominant obstacles to regular screening (Osam et al., 2023). In Ghana, a training needs assessment concluded that more than half of midwives did not know how to use commonly used tools, and almost 40% of midwives did not know how to assess before the training (Osam et al., 2023). Provision of validated and culturally adapted screening tools, training on their use, is hence the key to enhancing practice.

Second, 10 or more years of professional experience was a significant predictor of good practice (OR = 2.08, p = 0.047). This indicates that clinical maturity and experience improve confidence and competence of midwives when performing PPD screening. Seasoned midwives might be better equipped to identify the signs of depression that can be overlooked, the screening process can be incorporated into the routine, and time limitations can be overcome. The impact of experience, however, can be mediated by exposure to training and institutional support since experience is not enough to ensure competence in the absence of formal education.

Third, the workload was a strong negative predictor of good practice (OR = 0.42, p = 0.021), lowering the chances of screening by 58%. This observation is in line with the qualitative and quantitative research in Africa that has found time pressures and understaffing to be major obstacles to PPD screening. Midwives in Ghana and Lesotho said that the biggest barriers to the implementation of perinatal mental health care were workload and time (Osam et al., 2023; Mphuthi et al., 2021). With AEFUTHA functioning at full capacity as a tertiary referral center, midwives are exposed to large volumes of patients and conflicting clinical priorities, and they have limited time to adequately screen patients mentally. Optimization of workforce, task-sharing, and introduction of screening as part of the daily workflow are important issues that need to be addressed to enhance practice.

Fourth, the educational qualification (BSc/BNSc and above) had a positive trend, but it was not statistically significant (OR = 1.76, p = 0.15). This implies that, although higher education can add to improved practice, it is probably mediated by other variables like training, experience, and institutional support. The non-significant result could also be due to the relatively homogenous education profile of the sample, where 73.3% have bachelor degrees.

The knowledge logistic regression analysis showed that educational qualification, years of experience as well as past training on PPD were all significant predictors. The educational qualification was also a good predictor (OR = 2.32, p = 0.002), which implies that more educated midwives had more than twice higher chances of good knowledge. This result highlights the significance of incorporating perinatal mental health material in pre-service nursing and midwifery programs. Nevertheless, the fact that 64.0 percent of those who were surveyed said that they had poor exposure to PPD screening in their professional training indicates that existing curriculums might not sufficiently cover this issue.

Knowledge was also strongly predicted by years of experience (OR = 1.43, p = 0.017), indicating that years of clinical exposure and on the job learning are also important in knowledge acquisition. But the small effect size suggests that experience by itself cannot be effective and should be supplemented with some formal training.

Past training on PPD was the best predictor of knowledge (OR = 3.09, p = 0.005) with trained midwives being about three times more likely to possess good knowledge. The observation is also supported by data in Ghana, where a specific training session significantly enhanced the confidence of midwives in administering PHQ-9 and GAD-7, and over 97% of respondents note that their post-training confidence was high (Osam et al., 2023). Likewise, research conducted in Namibia and Nigeria has suggested that professional education should be an ongoing process as a facilitator of screening (Adeyemo et al., 2020; Mphuthi et al., 2021). The high impact of training underscores the necessity of providing evidence-based training programs that are well structured and inclusive of PPD epidemiology, risk factors, screening instruments, and referral pathways.

Conclusion

The importance of specific interventions to improve PPD screening in the tertiary healthcare environment is highlighted by the study. The knowledge-practice gap should be addressed with a multi-faceted approach, which involves organised training schemes, the delivery of proven screening tools, the creation of institutional guidelines and optimisation of workload. With enhanced ability of midwives to

perform regular PPD screening, healthcare institutions will be able to achieve better early diagnosis, prompt intervention, and eventually achieve better maternal mental outcomes.

Authors Contribution

All authors were involved in Data Curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Project Administration, Resources, Supervision, Validation, Visualization, Original Draft, as well as Review & Editing.

Conflict of Interest

The authors declare no conflict of interest.

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References

Adewuya, A. O., Ola, B. A., Aloba, O. O., Mapayi, B. M., & Okeniyi, J. A. O. (2005). Impact of postnatal depression on infants' growth in Nigeria. *Journal of Affective Disorders*, *88*(2), 199–201. https://doi.org/10.1016/j.jad.2005.07.005

Adeyemo, E. O., Oluwole, E. O., Kanma-Okafor, O. J., Izuka, O. M., & Odeyemi, K. A. (2020). Awareness and knowledge of post-partum depression among mothers attending immunisation clinic at a primary health centre, Lagos, Nigeria. *BMC Public Health*, *20*(1), Article 1346. https://doi.org/10.1186/s12889-020-09461-1

Ajzen, I. (1991). The theory of planned behaviour. Organizational Behavior and Human Decision Processes, 50(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T

American College of Obstetricians and Gynecologists. (2018). ACOG Committee Opinion No. 757: Screening for perinatal depression. Obstetrics & Gynecology, 132(5), e208 e212. https://doi.org/10.1097/AOG.0000000000002927

Edet, O. B., Mgbekem, M. A., & Etowa, J. B. (2021). Postpartum depression screening practices among nurses in tertiary health institutions in Cross River State, Nigeria. *Journal of Nursing Education andPractice*, *11*(8),19. https://doi.org/10.5430/jnep.v11n8p1

Mphuthi, D. D., Mabaso, M., & Mntambo, N. (2021). Knowledge and attitudes of midwives towards perinatal mental health in Lesotho. *African Journal of Midwifery and Women's Health*, *15*(2), 1–10. https://doi.org/10.12968/ajmw.2020.0027

National Institute for Health and Care Excellence. (2014). *Antenatal and postnatal mental health: Clinical management and service guidance* (Clinical guideline CG192). https://www.nice.org.uk/guidance/cg192

Osam, C. S., Ankobea-Kokroe, F., Kretchy, I. A., Agyabeng, K., Appiah, B., Danquah, S. A., & Ae-Ngibise, K. A. (2023). Training needs assessment for perinatal depression screening among midwives in Ghana. *BMC Pregnancy and Childbirth*, *23*(1), Article 123. https://doi.org/10.1186/s12884-023-05445-w

Rosenstock, I. M. (1974). Historical origins of the health belief model. *Health Education Monographs*, *2*(4), 328-335. https://doi.org/10.1177/109019817400200403

Stewart, D. E., & Vigod, S. (2016). Postpartum depression. New England Journal of Medicine, 375(22), 2177-2186. https://doi.org/10.1056/NEJMcp1607649