

Assessment of Postpartum Depression and Coping Strategies among Women of Reproductive Age in Ado-Ekiti, Ekiti State

Oluwakemi Christie Ogidan^{*}; Oluwaseyi Abimbola Owoyomi; Blessing Oluwatosin Ojo; Desola Moyinoluwa Ogundana; Oluwabukola Ayo Gentry; Anuoluwa Deborah Odiru; Odunayo Christianah Olofintoye

Department of Nursing Science, Faculty of Basic Medical Sciences, Ekiti State University, Ado-Ekiti.

^{*}Corresponding Author's Email: kemiokimi@yahoo.co.uk

Abstract

Background: Postpartum depression (PPD) is a major public health issue affecting maternal and child health globally, particularly in low- and middle-income countries. Despite its high burden, the use of effective coping strategies for managing PPD remains limited. **Aim:** This study assessed the prevalence of PPD and the coping strategies among women of reproductive age in Ado-Ekiti, Ekiti State. **Methods:** A descriptive cross-sectional study was conducted among 150 pregnant women with previous childbirth experience in a selected primary Health Centre, Ado-Ekiti, Southwestern Nigeria, using consecutive sampling. Data were collected using a structured questionnaire, the Edinburgh Postnatal Depression Scale (EPDS) developed by Cox et al, and the Ways of Coping Questionnaire developed by Lazarus and Folkway. Data were analyzed using descriptive statistics and interpretive analysis of coping patterns. **Results:** Participants were predominantly aged 25-29 years (34.9%) and married (76.0%), with most having a tertiary education (78.7%). The mean EPDS score was 16.4, indicating that a substantial proportion of respondents experienced moderate to severe postpartum depressive symptoms. High prevalence includes self-blame (62.6%), sleep disturbances (60.0%), sadness (60.0%), frequent crying (64.0%), and, notably, self-harm ideation (80.0%), representing a critical clinical concern. Coping strategies were predominantly emotion-focused, with high use of escape-avoidance (54.7%), distancing (52.0%), self-controlling (51.3%), and accepting responsibility (self-blame: 63.3%), showing a reliance on internalized, potentially maladaptive coping mechanisms. However, seeking social support (60.0%) and positive reappraisal (52.0%) reflected some adaptive coping capacity. **Conclusion:** The study reveals a high burden of postpartum depression alongside a mixed coping profile dominated by maladaptive strategies. The presence of self-harm ideas and avoidance-based coping underscore the need for urgent routine screening, early identification, and integration of mental health services into maternal care.

Keywords: Coping Strategies; EPDS; Maternal Mental Health Postpartum Depression

How to Cite: Ogidan, O. C., Owoyomi, O. A., Ojo, B. O., Ogundana, D. M., Gentry, O. A., Odiru, A. D., & Olofintoye, O. C. (2026). Assessment of Postpartum Depression and Coping Strategies among Women of Reproductive Age in Ado-Ekiti, Ekiti State. *African Journal of Health, Nursing and Midwifery*, 9(4), 49–61. <https://doi.org/10.52589/AJHNM-MQKLXCXH>

INTRODUCTION

Postpartum depression (PPD) is a significant public health concern and a leading contributor to maternal morbidity worldwide. Approximately 10% of women in high-income countries and 20–30% in low- and middle-income countries experience mental health disorders during pregnancy or the postnatal period, including depression and anxiety (1). Women with a prior history of depression are at significantly higher risk of developing PPD, making early identification and intervention essential (2). Despite its burden, PPD remains underdiagnosed and undertreated, particularly in low-resource settings, where limited access to mental health services persists (3). Untreated PPD is associated with severe consequences, including suicide, which constitutes a significant proportion of maternal deaths in the postpartum period (4).

The burden of PPD varies widely across regions. In sub-Saharan Africa and other low- and middle-income countries, prevalence rates are generally higher than global averages due to socioeconomic challenges and limited access to mental health services (5). In Nigeria, a study conducted in southwestern Nigeria reported a moderate prevalence rate (6). In contrast higher rates have been observed in northern Nigeria, particularly among women with increased stress and limited social support (7).

Beyond its impact on mothers, PPD adversely affects infant outcomes. Maternal depression has been linked to poor health behaviours, including inadequate nutrition and self-care, which may negatively influence infant growth and development (8). Furthermore, children of mothers with untreated depression are at increased risk of impaired cognitive, emotional, and behavioural development (9).

The etiology of PPD is multifactorial, involving interactions among biological, psychological, and social determinants. Key risk factors include prenatal depression, low self-esteem, high stress levels, inadequate social support, and a prior history of mental illness (3). Socio-demographic factors such as maternal age, low educational attainment, and low socioeconomic status have been consistently associated with increased risk of PPD (8). Additionally, contextual, obstetric and environmental factors including pregnancy complications, preterm birth, prolonged stay in the hospital, stillbirth, neonatal illness or death marital conflict, and poor sleep quality further contribute to the development of depressive symptoms (10). Relationship dynamics also play a critical role, as lack of spousal support, negative partner reactions, and cultural misconceptions about PPD may exacerbate psychological distress and delay help-seeking behavior (9).

Cultural and contextual factors in Nigeria may both mitigate and exacerbate the risk of postpartum depression. While traditional communal living and extended family systems historically provided emotional and practical support to postpartum women, these support structures are gradually declining due to urbanization and changing family dynamics (11–13). Many women normalize depressive symptoms or conceal emotional distress, contributing to underdiagnosis and delayed treatment (6,14). Furthermore, stigma and poor mental health literacy often prevent women from seeking professional help.

Clinically, PPD presents with a range of emotional and behavioural symptoms, including persistent sadness, irritability, mood swings, anxiety, insomnia, loss of appetite, and poor concentration. While some symptoms may initially appear transient, they can progress to severe depression if left untreated (7,15). Women experiencing PPD often report difficulty performing daily activities and caring for their infants, underscoring the profound impact of the condition on maternal well-being and family functioning (9).

Despite its high prevalence and serious consequences, postpartum depression remains under-recognized in many settings, including Nigeria. There is limited research on PPD and coping strategies in Ekiti State, including Ado-Ekiti. This study, therefore, aims to assess the prevalence and coping strategies of postpartum depression among women of reproductive age in Ado-Ekiti, Ekiti State.

METHOD

Study Design and Setting

This study employed a facility-based cross-sectional design among reproductive-age women in Ado-Ekiti, Ekiti State, Nigeria, collecting data at a single point in time without follow-up.

Participants and Sample Size

The respondents for this study were pregnant women attending the antenatal clinic at Okeyinmi Comprehensive Health Centre, Ado-Ekiti, who had previously experienced childbirth and had passed through the postpartum period before their current pregnancy. A total of 150 eligible women were recruited consecutively over a one-month period based on the average monthly antenatal clinic attendance. Following written informed consent, trained interviewers administered the study questionnaire to all participants.

Inclusion criteria

- Pregnant women with previous childbirth experience (multiparous) aged 18–45 years
- Attending the antenatal clinic during the study period
- Any gestational age
- Able to communicate in English or Yoruba
- Provided written informed consent

Exclusion criteria

- Women previously diagnosed with severe psychiatric disorders (e.g., schizophrenia or bipolar disorder)
- Women receiving treatment for major depressive disorder
- Women with severe medical illness requiring emergency care
- Women unable to complete the interview because of cognitive or physical impairment

Data Collection

Data collection was conducted over one month at the antenatal clinic of Okeyinmi Comprehensive Health Centre, Ado-Ekiti, Nigeria. Eligible pregnant women attending the antenatal clinic during the study period were recruited consecutively until the required sample size of 150 respondents was attained. Consecutive sampling was adopted to minimize selection bias by ensuring that every eligible attendee had an equal opportunity to participate throughout the data collection period.

Prior to commencement of the study, two research assistants with healthcare backgrounds were recruited and trained by the principal investigator on the study objectives, participant recruitment procedures, ethical principles, administration of the study instruments, and maintenance of confidentiality, and techniques for minimizing interviewer bias.

Respondents were approached individually after completing their routine antenatal consultation in a private area within the clinic. Written informed consent was obtained. Women who met the eligibility criteria and consented to participate were enrolled in the study. Data were collected through interviewer-administered structured questionnaires to minimize missing responses and accommodate participants with varying literacy levels. The structured questionnaire consisted of respondents' socio-demographic characteristics. In addition, the Edinburgh Postnatal Depression Scale (EPDS) and the Ways of Coping Questionnaire were used to screen for depression and assess coping strategies. The Edinburgh Postnatal Depression Scale (EPDS) was developed for screening postpartum women for symptoms of emotional distress during pregnancy and the postnatal period. Responses are scored 0, 1, 2, or 3 according to the increased severity of the symptom. Items marked with an asterisk (*) are reverse scored (i.e., 3, 2, 1, and 0). The total score is determined by adding together the scores for each of the 10 items. The maximum obtainable score is 30, and possible depression can be identified at a score of 10 or above. (16).

The instrument was pilot-tested in a setting different from the main study area to assess its psychometric properties. Analysis of the pilot data demonstrated high internal consistency, with a Cronbach's alpha coefficient of 0.912.

The Ways of Coping Questionnaire (WAYS) was developed by Folkman and Lazarus and is grounded in a cognitive-phenomenological theory of stress and coping; it is used to explore the role of coping in the relationship between stress and adaptational outcomes. The instrument assesses the thoughts and actions individuals use to manage the stressful encounters of everyday life. The WAYS measures eight coping factors: Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving, and Positive Reappraisal (17). Each item was rated on a four-point Likert scale (1 = not used, 2 = somewhat used, 3 = used quite a bit, 4 = used a great deal). The total score for each of the eight domains was obtained by summing the Likert-scale responses of the items comprising each subscale. Higher scores indicate more frequent use of a particular coping strategy, and lower scores indicate less frequent use. The total scores for each domain were further dichotomized into "most used" (coded as 1) if the score was greater than or equal to 50% of the maximum possible score for that domain, and "less used" (coded as 0).

Study Variables

The dependent variable in this study was the level of coping, measured as a composite variable. The main independent variables included postpartum depression; other variables comprised socio-demographic characteristics such as age, sex, ethnicity, religion, income level, marital status, number of children, and occupation.

Data Analysis

Data from the completed questionnaires were entered into Microsoft Excel and subsequently imported into SPSS version 27 for analysis. Descriptive statistics were used to summarize the data, with frequencies and percentages reported for categorical variables. The prevalence of

postpartum depression (PPD) and coping strategies was expressed as percentages along with their corresponding 95% confidence intervals.

Ethical Considerations

Administrative permission was obtained from the management of the health centre before commencement of the study. Written informed consent was obtained from all participants after providing detailed information about the study, and participation was entirely voluntary. Confidentiality and anonymity were maintained by using coded questionnaires and excluding personal identifiers from the dataset.

Because the study assessed depressive symptoms and self-harm ideation using the Edinburgh Postnatal Depression Scale (EPDS), a predefined safety protocol was implemented. Participants who screened positive for severe depressive symptoms or endorsed thoughts of self-harm were interviewed privately by the principal investigator, provided with immediate psychological support, and referred to the attending physician and the facility's mental health service for further assessment and appropriate management.

RESULTS

Table 1. Socio-Demographic Characteristics of Respondents (n=150)

Variables	Category	Frequency (f)	Percentage (%)
Age Group	18-24	39	26.2
	25-29	52	34.9
	30-34	29	19.5
	35-44	17	11.4
	45 and above	12	8.1
Religion	Christianity	127	84.6
	Islam	13	8.0
	Traditional	4	2.7
	Others	6	4.0
Tribe	Yoruba	127	84.6
	Hausa	15	10.0
	Igbo	8	5.4
Marital Status	Married	114	76.0
	Single	26	17.3
	Divorced	5	3.3
	Widowed	5	3.3
Educational qualification	No formal education	12	8.0
	Primary	5	3.3
	Secondary	15	10.0
	Tertiary	118	78.7

Occupation	Unemployed	20	13.3
	Student	11	7.3
	Trading	13	8.7
	Farming	2	1.3
	Self-employed	65	43.3
	Civil servant	39	26
Number of children	1	29	19.3
	2	33	22.0
	3	42	28.0
	4	38	25.3
	5 and above	8	5.3
Level of monthly fee	Less than #10,000	2	1.3
	#10,000- 30,000	5	3.3
	#40,000-60,000	6	4.0
	#70,000 - 100,000	11	7.3
	#101,000 and above	126	84

Table 1 presents the socio-demographic characteristics of the 150 respondents. The largest proportion of participants was aged 25–29 years (52, 34.9%), followed by those aged 18–24 years (39, 26.2%), while participants aged 45 years and above constituted the smallest group (12, 8.1%). Most respondents were Christians (127, 84.6%), whereas 13 (8.7%) were Muslims, four (2.7%) practiced traditional religion, and six (4.0%) reported other religions. The majority belonged to the Yoruba ethnic group (127, 84.6%), while Hausa and Igbo respondents accounted for 15 (10.0%) and eight (5.4%), respectively.

Regarding marital status, 114 (76.0%) respondents were married, while 118 (78.7%) had tertiary education, 15 (10.0%) had secondary education, 12 (8.0%) had no formal education, and five (3.3%) had primary education. Occupation varied among respondents, with 65 (43.3%) being self-employed, 39 (26.0%) civil servants, 20 (13.3%) unemployed, 13 (8.7%) traders, 11 (7.3%) students, and two (1.3%) farmers. Regarding parity, 42 (28.0%) respondents had three children, 38 (25.3%) had four children, 33 (22.0%) had two children, 29 (19.3%) had one child, and eight (5.3%) had five or more children. Most respondents (126, 84.0%) reported a monthly income of ₦101,000 or above, while 11 (7.3%) earned ₦70,000–₦100,000, six (4.0%) earned ₦40,000–₦60,000, five (3.3%) earned ₦10,000–₦30,000, and two (1.3%) earned less than ₦10,000.

Table 2: The Edinburgh Postnatal Depression Scale

Characteristics	Options	Frequency (f)	Percentage (%)	Estimated Score	Mean
I have been able to laugh and see the funny side of things	As much as I ever did	80	53.3		
	Rather less than I used to	35	23.3		
	Definitely less than I used to	20	13.3		
	Not at all	15	10		0.80
I have looked forward with enjoyment to things:	As much as I ever did	80	53.3		
	Rather less than I used to	47	31.3		
	Definitely less than I used to	14	9.3		
	Hardly at all	9	6.0		0.68

I have blamed myself unnecessarily when things went wrong	Yes, most of the time	53	35.3	1.84
	Yes, some of the time	41	27.3	
	Not very often	35	23.3	
	No, never	21	14.0	
I have been anxious or worried for no good reason	No, not at all	69	46.0	1.01
	Hardly ever	33	22.0	
	Yes, sometimes	25	16.7	
	Yes, very often	23	15.3	
I have felt scared or panicky for no very good reason	Yes, quite a lot	50	33.3	1.77
	Yes, sometimes	43	28.7	
	No, not much	30	20.0	
	No, not at all	27	18.0	
Things have been getting on top of me:	Yes, most of the time I haven't been able to cope at all	48	32.0	1.70
	Yes, sometimes I haven't been coping as well as usual	38	25.3	
	No, most of the time I have coped quite well	36	24.0	
	No, I have been coping as well as ever	29	19.3	
I have been so unhappy that I have had difficulty sleeping:	Yes, most of the time	50	33.3	1.74
	Yes, sometimes	40	26.7	
	Not very often	32	21.3	
	No, not at all	28	18.7	
I have felt sad or miserable:	Yes, most of the time	48	32.0	1.73
	Yes, quite often	42	28.0	
	Not very often	31	20.7	
	No, not at all	29	19.3	
I have been so unhappy that I have been crying:	Yes, most of the time	62	41.3	1.89
	Yes, quite often	34	22.7	
	Only occasionally	30	20.0	
	No, never	24	16.0	
The thought of harming myself has occurred to me:	Yes, quite often	100	66.7	2.36
	Sometimes	20	13.3	
	Hardly ever	14	9.3	
	Never	16	10.7	

Table 2 summarizes respondents' responses to the Edinburgh Postnatal Depression Scale (EPDS). The estimated overall mean EPDS score was 16.4.

For the positively worded items, 80 (53.3%) respondents reported that they had been able to laugh and see the funny side of things as much as they ever did, while 80 (53.3%) also reported looking forward to things with enjoyment as much as they previously had.

Regarding depressive symptoms, 53 (35.3%) respondents reported blaming themselves most of the time when things went wrong, while 41 (27.3%) reported doing so some of the time.

Sixty-nine (46.0%) respondents reported not feeling anxious or worried without good reason, whereas 25 (16.7%) and 23 (15.3%) reported feeling anxious sometimes and very often, respectively.

For panic-related symptoms, 50 (33.3%) respondents reported feeling scared or panicky quite a lot, while 43 (28.7%) experienced these feelings sometimes. Forty-eight (32.0%) respondents indicated that they had not been able to cope most of the time, whereas 38 (25.3%) reported not coping as well as usual.

Difficulty sleeping was reported by 50 (33.3%) respondents most of the time and by 40 (26.7%) sometimes. Similarly, 48 (32.0%) respondents reported feeling sad or miserable most of the time, while 42 (28.0%) experienced these feelings quite often. Sixty-two (41.3%) respondents reported crying most of the time, whereas 34 (22.7%) reported crying quite often.

Table 3: Coping Strategies

Characteristics	Options	Frequency (f)	Percentage (%)
Confrontive Coping	I stood my ground and fought for what I wanted.	80	53.3
	I expressed anger to the person(s) who caused the problem.	70	46.7
Distancing	I went on as if nothing had happened.	78	52.0
	I tried to forget the whole thing.	72	48.0
Self-Controlling	I tried to keep my feelings to myself.	77	51.3
	I kept others from knowing how bad things were.	73	48.7
Seeking Social Support	I talked to someone about how I was feeling.	90	60.0
	I asked a relative or friend I respected for advice.	60	40.0
Positive Reappraisal	I changed or grew as a person in a good way.	78	52.0
	I found new faith.	72	48.0
Escape-Avoidance	I wished that the situation would go away or somehow be over with.	82	54.7
	I hoped a miracle would happen.	68	45.3
Accepting Responsibility	I criticized or lectured myself	95	63.3
	I made a promise to myself that things would be different next time	55	36.7

The findings showed a mixed coping pattern with both adaptive and maladaptive strategies.

Adaptive coping was most evident in seeking social support (60%) and positive reappraisal (52%), indicating reliance on interpersonal help and some ability to reframe stressful situations positively.

However, maladaptive coping strategies were also prominent. Escape-avoidance (54.7%), distancing (52%), and self-controlling (51.3%) suggest a tendency toward emotional suppression and avoidance of stressors rather than active resolution.

Accepting responsibility, was highly reported, with 63.3% of respondents engaging in self-criticism and 36.7% making self-directed promises for change. This reflects a strong tendency toward self-blame and internal attribution of stress, which may increase psychological vulnerability if excessive.

Overall, the coping profile indicates a combination of adaptive support-seeking and maladaptive self-blame/avoidance strategies, suggesting partial resilience but continued psychological strain. These findings highlight the need for interventions that strengthen adaptive coping while reducing excessive self-criticism and avoidance behaviours.

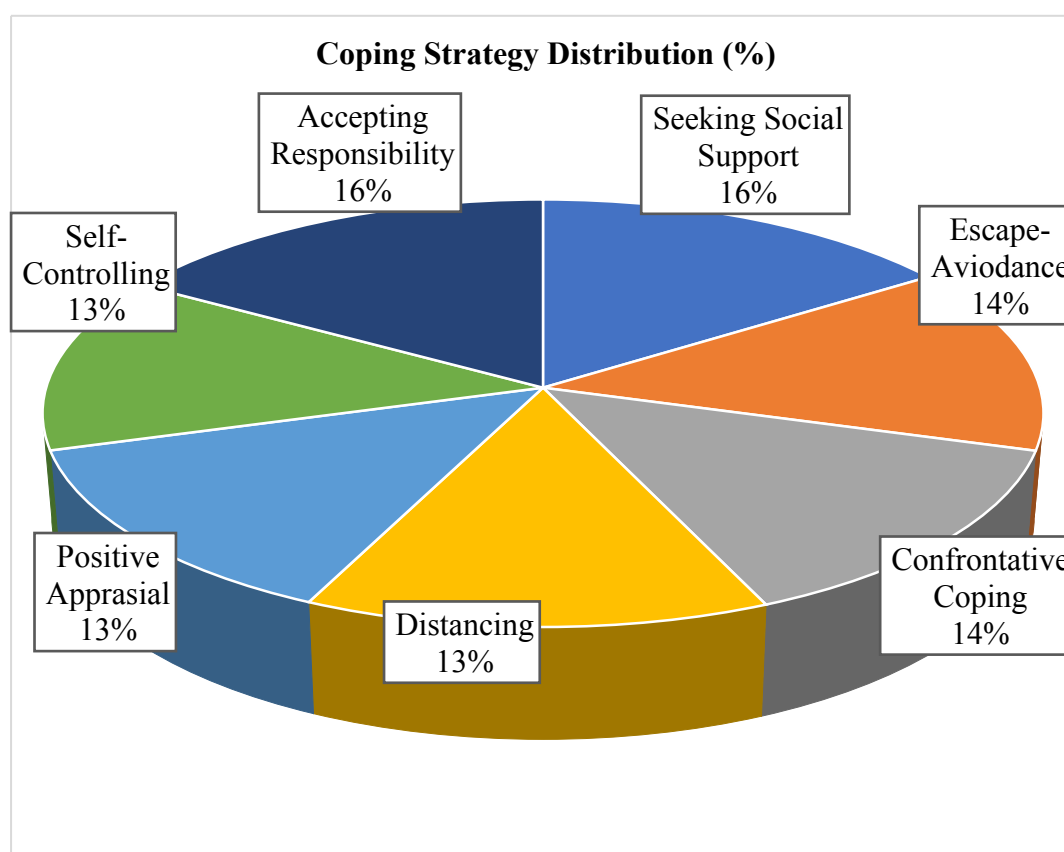


Fig 1: Coping Strategy Distribution

DISCUSSION

Findings from this study reveal a high burden of postpartum depressive symptoms among respondents. The estimated EPDS mean score of 16.4 indicates that a substantial proportion of women are experiencing moderate to severe postpartum depression, characterized by emotional distress, anxiety, impaired coping, and notably high levels of self-harm ideation. This pattern is consistent with recent global evidence indicating that postpartum depression remains a significant mental health challenge, particularly in low- and middle-income countries where access to care is limited (1,5)

The high prevalence of symptoms such as persistent sadness, frequent crying, anxiety, sleep disturbances, and reduced positive affect (anhedonia) observed in this study reflects the typical clinical presentation of postpartum depression. Similar findings have been reported in recent studies, where women commonly experience persistent emotional distress and difficulty coping with daily responsibilities (18). Within the Nigerian context, these findings align with reports across different regions, suggesting that postpartum depression is a widespread public health concern rather than a localized issue (19,20)

A particularly concerning finding in this study is the high proportion of respondents reporting thoughts of self-harm. This supports existing literature identifying postpartum depression as a major contributor to maternal morbidity and mortality. Suicide has been identified as one of the leading causes of death in the postpartum period, particularly when depression is untreated (4). In Nigeria, this burden may be exacerbated by poor mental health literacy, stigma, and limited access to mental health services, which often prevent women from seeking help or expressing psychological distress (14).

Regarding coping strategies, findings from the WAYS analysis indicate that respondents predominantly relied on emotion-focused coping mechanisms, including escape-avoidance, distancing, emotional suppression, and self-blame (accepting responsibility). The high prevalence of self-critical tendencies further reflects internalized distress, which may intensify depressive symptoms when excessive. These patterns are consistent with recent research indicating that women in low-resource settings often adopt internalized coping strategies due to limited access to formal mental health care (19,21). However, these strategies are generally considered maladaptive, as they may prolong or intensify depressive symptoms.

Conversely, the relatively high use of social support as a coping strategy is an important protective factor. Evidence shows that social support plays a protective role in reducing postpartum psychological distress and improving maternal well-being (22). In the Nigerian context, strong family ties and communal living structures can provide emotional and practical support to postpartum women. In contrast, a research shows that lack of support, particularly from partners increases the risk of PPD (Adeyemo et al., 2020). However, while beneficial, these informal support systems may not be sufficient to address moderate to severe depression in the absence of professional care. Additionally, the moderate use of positive reappraisal, including reliance on faith and personal growth, reflects culturally embedded coping mechanisms that may enhance resilience (23), while such adaptive strategies can enhance resilience, their effectiveness may be limited when used without appropriate clinical intervention.

Importantly, the combined analysis of EPDS and WAYS findings suggests a clear association between coping style and depressive symptom severity. The dominance of maladaptive coping strategies, particularly avoidance, emotional suppression, and excessive self-blame appears to

be linked to the high levels of depressive symptoms observed. This aligns with existing evidence that coping significantly influences the severity and progression of postpartum depression, with maladaptive coping increasing vulnerability, while adaptive strategies such as social support and cognitive reframing reduce risk (24)

Overall, the findings highlight that postpartum depression in Nigeria is shaped by a complex interaction of socioeconomic challenges, cultural beliefs, and gaps in mental health service delivery. While social support remains a key protective factor, the persistence of stigma, reliance on maladaptive coping strategies, and limited access to care contribute to the high burden observed.

These results underscore the urgent need for routine screening for postpartum depression, improved mental health awareness, and integration of mental health services into maternal healthcare systems. Interventions should also focus on promoting adaptive coping strategies and strengthening both formal and informal support systems to improve maternal mental health outcomes.

Strengths and Limitations

Several limitations should be considered when interpreting these findings. The cross-sectional design limits the establishment of causality and longitudinal analysis of depressive symptoms. Data were self-reported and may be subject to recall and social desirability bias particularly on sensitive issues such as emotional distress and self-harm.

Furthermore, the study was conducted in a primary health setting within an urbanising city, which may limit generalisability to rural or socioeconomically diverse settings.

Despite these limitations, the study provides a valuable and context-specific insights into prevalence of postpartum depression and coping strategies among women in Ado-Ekiti. The use of validated instruments and a reliable data collection process strengthens the credibility of the findings and highlights the gaps in maternal mental health care for further investigation.

CONCLUSION

This study on postpartum depression and coping strategies among women of reproductive age in Ado-Ekiti, Ekiti State, reveals a significant prevalence of postpartum depressive symptoms and notable self-harm ideation, which calls for prompt attention and intervention. The findings further reveal the high use of emotion-focused coping strategies, including distancing, self-control, escape avoidance, and positive appraisal through faith and social support.

While social support may be a protective factor, the predominance of avoidance and emotional suppression may contribute to the worsening of depressive symptoms. Therefore, there is need for routine screening, early identification and intervention, and integration of mental health into maternal healthcare in the promotion of maternal well-being.

Overall, the study contributes to the growing body of evidence emphasizing the importance of prioritizing maternal mental health in Nigeria and highlights the need for targeted interventions that promote adaptive coping strategies, strengthen support systems, and enhance emotional resilience among postpartum women.

REFERENCES

- Racine N, Devereaux C, Cooke JE, Eirich R, Zhu J, Madigan S. Adverse childhood experiences and maternal anxiety and depression: a meta-analysis. *BMC Psychiatry*. 2021 Dec;21(1):28. doi:10.1186/s12888-020-03017-w
- Lewis BA, Schuver K, Dunsiger S, Samson L, Frayeh AL, Terrell CA, et al. Randomized trial examining the effect of exercise and wellness interventions on preventing postpartum depression and perceived stress. *BMC Pregnancy Childbirth*. 2021 Dec;21(1):785. doi:10.1186/s12884-021-04257-8
- Amer SA, Zaitoun NA, Abdelsalam HA, Abbas A, Ramadan MS, Ayal HM, et al. Exploring predictors and prevalence of postpartum depression among mothers: Multinational study. *BMC Public Health*. 2024 May 14;24(1):1308. doi:10.1186/s12889-024-18502-0
- Howard LM, Khalifeh H. Perinatal mental health: a review of progress and challenges. *World Psychiatry*. 2020 Oct;19(3):313–27. doi:10.1002/wps.20769
- Atewologun F, Adigun OA, Okesanya OJ, Hassan HK, Olabode ON, Micheal AS, et al. A comprehensive review of mental health services across selected countries in sub-Saharan Africa: assessing progress, challenges, and future direction. *Discov Ment Health*. 2025 Apr 7;5(1):49. doi:10.1007/s44192-025-00177-7
- Okunola TO, Awoleke JO, Olofinbiyi B, Rosiji B, Olubiyi AO, Omoya S. Predictors of postpartum depression among an obstetric population in South-Western Nigeria. *J Reprod Infant Psychol*. 2022 Jul 4;40(4):420–32. doi:10.1080/02646838.2021.1886259
- Tsiga-Ahmed FI, Umar MU, Adamu AL, Sulaiman SK, Gboluwaga AT, Jalo RI, et al. Incidence of postpartum depression among women with postpartum haemorrhage in Kano, northern Nigeria. *Npj Womens Health*. 2024 Sep 10;2(1):32. doi:10.1038/s44294-024-00031-1
- Qin Z, Pan Y, Yang H, Luan L, Zhang X, Zhu C. Prevalence and risk factors of postpartum depression, anxiety, and comorbidity of both disorders: a cross-sectional study. *BMC Pregnancy Childbirth*. 2025 Dec 30;25(1):1352. doi:10.1186/s12884-025-08512-0
- Khamidullina Z, Marat A, Muratbekova S, Mustapayeva NM, Chingayeva GN, Shepetov AM, et al. Postpartum Depression Epidemiology, Risk Factors, Diagnosis, and Management: An Appraisal of the Current Knowledge and Future Perspectives. *J Clin Med*. 2025 Apr 1;14(7):2418. doi:10.3390/jcm14072418
- Qi W, Huang S, Zhao J, Cui X, Wei Z, Cui G, et al. The preventive effect of psychological and psychosocial interventions on postpartum depression: An overview of systematic reviews. *J Psychiatr Res*. 2025 Feb;182:21–33. doi:10.1016/j.jpsychires.2024.11.050
- Muliyani N, Suryaningsih EK. The Effect Of Family Support On Postpartum Depression : Scoping Review. *Indig J Ilm Psikol*. 2023 Nov 30;8(3):337–51. doi:10.23917/indigenous.v8i3.2165
- Qi W, Liu Y, Lv H, Ge J, Meng Y, Zhao N, et al. Effects of family relationship and social support on the mental health of Chinese postpartum women. *BMC Pregnancy Childbirth*. 2022 Jan 25;22(1):65. doi:10.1186/s12884-022-04392-w
- White LK, Kornfield SL, Himes MM, Forkpa M, Waller R, Njoroge WFM, et al. The impact of postpartum social support on postpartum mental health outcomes during the COVID-19 pandemic. *Arch Womens Ment Health*. 2023 Aug;26(4):531–41. doi:10.1007/s00737-023-01330-3
- Isah A, Aluh DO, Ugwoke MO, Anene-Okeke CG. Mental health literacy on postpartum depression among university staff in Nigeria. *Discov Ment Health*. 2025 Sep 2;5(1):135. doi:10.1007/s44192-025-00249-8

- Adeoye IA, Sogbesan A, Esan O. Prevalence, associated factors and perinatal outcomes of antepartum depression in Ibadan Nigeria. *BMC Pregnancy Childbirth*. 2022 Mar 18;22(1):219. doi:10.1186/s12884-022-04549-7
- Cox JL, Holden JM, Sagovsky R. Detection of Postnatal Depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *Br J Psychiatry*. 1987 Jun;150(6):782–6. doi:10.1192/bjp.150.6.782
- Folkman S, Lazarus RS. Ways of Coping Questionnaire [Internet]. 2012 [cited 2026 Apr 21]. Available from: <https://doi.apa.org/doi/10.1037/t06501-000> doi:10.1037/t06501-000
- Jiaming W, Xin G, Jiajia D, Junjie P, Xue H, Yunchuan L, et al. Psychological experience of patients with postpartum depression: A qualitative meta-synthesis. Botero Carvajal A., editor. *PLOS ONE*. 2024 Nov 6;19(11):e0312996. doi:10.1371/journal.pone.0312996
- Adeyemo E, Oluwole E, Kanma-Okafor O, Izuka O, Odeyemi K. Prevalence and predictors of postpartum depression among postnatal women in Lagos, Nigeria. *Afr Health Sci*. 2020 Dec 16;20(4):1943–54. doi:10.4314/ahs.v20i4.53
- Arinze Queen U, Swetha M, Onu Stella N, Ujam .C. G, Darlyn .C. O, Obasi Fortune . A, et al. Prevalence of Postpartum Anxiety and Depression among Postpartum Mothers: A Study at Postnatal Clinics in Enugu and Delta States, Nigeria. *Int Neuropsychiatr Dis J*. 2025 Aug 1;22(4):176–97. doi:10.9734/indj/2025/v22i4505
- Alshowkan A, Shdaifat E, Alnass FA, Alqahtani FM, AlOtaibi NG, AlSaleh NS. Coping strategies in postpartum women: exploring the influence of demographic and maternity factors. *BMC Womens Health*. 2023 Nov 8;23(1):582. doi:10.1186/s12905-023-02751-z
- Khademi K, Kaveh MH. Social support as a coping resource for psychosocial conditions in postpartum period: a systematic review and logic framework. *BMC Psychol*. 2024 May 28;12(1):301. doi:10.1186/s40359-024-01814-6
- Motofelea N, Galis R, Szasz FA, Motofelea AC, Hoinoiu T, Trinc S, et al. Coping Styles, Postpartum Depression, and Anxiety in Romanian Women: A Cross-Sectional Study Using the Brief COPE Inventory. *J Clin Med*. 2026 Jan 27;15(3):1029. doi:10.3390/jcm15031029
- Deng J, Chen J, Tan Y, Guo X, Liu F. Exploring the role of different coping styles in mediating the relationship between dyadic adjustment status and postpartum depression among postnatal women: a single-centre, cross-sectional study. *BMJ Open*. 2025 Jan;15(1):e088699. doi:10.1136/bmjopen-2024-088699