POSTPARTUM DEPRESSION AND ASSOCIATED FACTORS AMONG WOMEN ATTENDING POSTNATAL CLINIC AT TIRUNESH BEIJING HOSPITAL, ADDIS ABABA ETHIOPIA

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ABSTRACT

BACKGROUND: Postpartum depression (PPD) is a significant clinical and public health problem in Sub-Saharan Africa (SSA). Despite the magnitude of PPD, early detection, treatment, and prevention of PPD remain a challenge in Ethiopia. This study aims to assess the magnitude and associated factors of PPD among women visiting the postnatal clinic at Tirunesh Beijing Hospital, Addis Ababa, Ethiopia.

METHOD: A hospital-based, cross-sectional study was conducted among 396 women attending the postnatal clinic at the hospital. Depressive symptoms were assessed using a locally pre-validated Edinburgh Postnatal Depression Scale (EPDS). Data were analyzed using SPSS version 26. Descriptive analysis was employed for socio-demographic characteristics and to determine the magnitude of PPD. Bivariable and multivariable logistic regression analyses were used to identify factors associated with PPD. Odds ratios (OR) with 95% confidence intervals (CI) were computed, and a p-value cut-off <0.05 was used to consider the significance of associations.

RESULT: In this study, 24% of women experienced postpartum depression. Mothers aged 25–30 years were less likely to develop PPD (AOR=0.07, 95% CI: 0.02, 0.24). Women who were illiterate (AOR=4.8, 95% CI: 1.92, 14.52), those who experienced intimate partner violence (AOR=7.1, 95% CI: 2.76, 16.12), had unwanted or unplanned pregnancies (AOR=6.1, 95% CI: 2.01, 13.25), had low-birth-weight babies (AOR=3.2, 95% CI: 1.29, 12.84), and those with poor family support (AOR=3.4, 95% CI: 1.40, 10.92) were significantly associated with postpartum depression.

CONCLUSION: The magnitude of postpartum depression was higher among mothers visiting the postnatal clinic. This highlights the need for targeted interventions addressing the needs of postpartum women who experience various risk factors. Further well-designed and representative studies are recommended to inform policy and devise targeted strategies to address PPD.

KEYWORDS: Postpartum depression, postpartum mothers, Tirunesh Beijing General Hospital, Ethiopia

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INTRODUCTION

Postpartum depression (PPD) is the onset of depressive episodes after childbirth, within 6–12 weeks, and can continue for more than a year[1]. It is the most frequent psychiatric disorder following childbirth and can have adverse consequences for the mother's well-being, child development, and family functioning[2]. Worldwide, about 10% of pregnant women and 13% of women who have just given birth experience a mental disorder, primarily depression[3]. In developing countries, this is even higher, at 15.6% during pregnancy and 19.8% after childbirth[4]. In Sub-Saharan Africa, varying prevalence rates of PPD have been reported, with the highest prevalence in Western Africa (20.2%), followed by Eastern Africa (18.6%) and Southern Africa (18.3%)[5]. Within a country, prevalence estimates vary significantly. For example, the prevalence rate in Ethiopia ranges from 12.2% to 37% [6–7]. The wide variation in reported estimates of PPD in Sub-Saharan Africa may hinder strategies aimed at lowering PPD in the region[5].

In the global progress toward universal health coverage (Sustainable Development Goals (SDGs) target 3.8) by 2030 and the African Union Agenda 2063, there is a need for valid and dependable estimates of the PPD burden in Sub-Saharan Africa, including Ethiopia[5].

PPD has been proven to have an unfavorable impact on maternal health and child development[8]. Maternal consequences of PPD may include physical health issues, psychological challenges, relationship difficulties, and risky behaviors, while infant-related impacts encompass anthropometry, physical health, sleep, and motor, cognitive, language, emotional, social, and behavioral development. PPD can also affect mother–child interactions, including bonding, breastfeeding, and the maternal role[5].

Recently, maternal mental health has caught the attention of local and international researchers as maternal health issues have been recognized as integral components of the bundle needed to achieve the SDGs of reducing maternal mortality and under-five mortality rates[9].

The occurrence of PPD is influenced by various factors, including age, education, income, marital dissatisfaction, and intimate partner violence[7,10–16]. Obstetric-related factors such as unplanned pregnancy, history of miscarriage/stillbirth, and being a first-time mother are also associated with PPD[17–19]. Social and behavioral factors such as a history of substance use, poor social support, previous depression, and the death of infants are additional contributors[12, 18, 20–21].

In resource-constrained countries like Ethiopia, PPD is often neglected in the healthcare system. Postnatal care primarily focuses on obstetric problems and the baby's health, while the social and psychological well-being of the mother is given little attention. This includes the absence of screening during postnatal follow-ups and inadequate referral of PPD cases for appropriate mental health services[22].

Recognizing universal health coverage and the SDGs, there is a need for valid and reliable estimates of the PPD burden in Sub-Saharan Africa, including Ethiopia. This information is crucial for advising policymakers, who must consider the socio-economic implications of PPD. Addressing these issues could catalyze adequate provisions for early detection and treatment. Therefore, this study aims to assess the magnitude and associated factors of postpartum depression among mothers visiting the postnatal clinic at Tirunesh Beijing Hospital in Addis Ababa, Ethiopia.

METHOD AND MATERIALS

Study Area and Period

Tirunesh Beijing General Hospital (TBGH) is located in the capital of Ethiopia, Addis Ababa. It was established in 2011. There are five gynecologists and one psychiatrist currently employed at the hospital. An estimated 900 deliveries take place monthly. The postnatal services provided include basic and comprehensive essential postpartum care needed for the management of the mother and child. The quarterly report showed that, on average, about 450 women visit the postnatal clinic monthly. This study was conducted from December 2023 to February 2024.

Study Design

A hospital-based cross-sectional study design was employed.

Population

Source Population

All women who gave birth and were attending the postnatal clinic at Tirunesh Beijing Hospital, Addis Ababa, Ethiopia.

Study Population

All women who gave birth and were attending postnatal clinics at Tirunesh Beijing Hospital during the study period and met the inclusion criteria.

Eligibility Criteria

Inclusion Criteria

- Women who delivered in the study hospital or attended postnatal care at the clinic.
- Women who were within the postpartum period (within six weeks of delivery).
- Women who were willing to participate in the study and provided informed consent.

Exclusion Criteria

- Women who were in an acute psychiatric or other clinical problem in the postpartum period and had serious communication disorders due to medical conditions.
- Women who experienced complications during childbirth that required immediate medical attention or interfered with participation.

Sample Size Determination

The sample size was determined using a single population proportion formula with the assumptions of a 37.4% PPD prevalence from a previous study in Ethiopia (23), a 95% confidence level, and a 5% margin of error. The minimum sample size was 360. A final sample of 396 mothers was considered after allowing for a 10% non-response rate.

Sampling Procedure

During the study period, approximately 1,350 mothers attended the postnatal clinic at the study hospital. To select the required sample of 396 participants, a systematic random sampling technique was employed. The first participant was randomly chosen using a lottery method. Subsequently, every third patient was selected based on a calculated sampling interval (k = 3.5, approximately 1,350/396).

Data Collection Tools and Techniques

Data were collected via face-to-face interviews using a structured, pre-tested data collection questionnaire. The questionnaire was prepared in English and then translated into local languages (Amharic and Afan Oromo) and back to English to maintain consistency. The tool contained both closed and open-ended questions specifically designed for the study and was adopted from previous similar studies[24–29].

Importantly, it contained the Edinburgh Postnatal Depression Scale (EPDS), the most commonly used depression screening tool in perinatal care (30–31). The EPDS is a ten-item self-report questionnaire in which each question is scored 0 through 3, with raw scores ranging from 0 to 30. Items 1, 2, and 4 are scored 0, 1, 2, or 3, with the top answer proposal scored as 0 and the bottom answer proposal scored as 3. On the other hand, items 3 and 5–10 are reverse scored, with the top answer proposal scored as 3 and the bottom answer proposal scored as 0 (30–31). A cut-off score of 8 is suggested in the literature for "possible depression" in the Ethiopian context and was thus chosen for this study[6, 32–33]. Three professional healthcare workers (two nurses and one health officer) were recruited, and two-day training was provided by the investigator to familiarize them with the data collection tool, interview techniques, eligible study subjects, sampling techniques, and ethical concerns. Data were collected after obtaining written informed consent from the study participants.

Study Variables

Dependent Variable

Postpartum depression (PPD) was measured by EPDS. PPD was categorized as depressed (women who scored 8 or above) or non-depressed (women who scored below 8)[32].

Independent Variables

- Socio-demographic characteristics: age, marital status, education level, employment status, and monthly income.
- Behavioral factors: work-family conflict within the last year, satisfaction with the current marital relationship, death of a family member or close relative in the past three months, and desired sex of the baby.
- Health-related characteristics: presence of medical illnesses and pregnancy-related illnesses.
- Obstetric-related factors: breastfeeding, intention of the pregnancy (whether the pregnancy was wanted or not at conception), history of miscarriage, parity, mode of delivery, sex of the infant, birth weight, and gestational age at birth.
- Psychosocial factors: intimate partner violence (IPV) and social support (emotional and practical support).

Operational Definition

- Postpartum period: The first six weeks following the delivery of the baby.
- Social support: A psychosocial resource accessible in the context of interpersonal contacts and one's social network, measured by the 14-point Oslo Social Support Scale. Patients were categorized as having poor social support if they scored 3–8, moderate social support if they scored 9–11, and strong social support if their score ranged from 12 to 14[34].

Data Quality Management

Close supervision was maintained during data collection, and all questionnaires were double-checked daily for consistency and completeness. The questionnaire was pretested on 5% of the calculated sample size at Abebech Gobena Maternal and Child Health Hospital. Feedback from the pretest was used to modify and finalize the tool.

Methods of Data Analysis

Data entry, coding, and cleaning were performed using Microsoft Excel (version 2016), and statistical analysis was done using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics (frequency and cross-tabulation) were used to check for missing values and variables. The baseline characteristics and the level of PPD among participants were computed using descriptive statistics such as mean, percentage, frequencies, and standard deviation. Binary and multiple logistic regressions were used to identify factors contributing to the outcome variable. Variables yielding a p-value ≤0.25 in binary regression analysis were then exported into multiple logistic regression models for further analysis to compute odds ratios with corresponding 95% confidence intervals. Multi-collinearity tests were conducted to rule out correlations among independent variables. The Hosmer-Lemeshow goodness-of-fit test was used to assess model fitness.

Ethical Considerations

Ethical approval was obtained from St. Paul's Hospital Millennium Medical College Institutional Review Board. A support letter was submitted to the study health facility. Before interviewing clients, the purpose of the study was explained in plain language, and written consent was obtained. Participants were informed that the information collected would be kept anonymous and confidential and that the data would be used only for the purpose of the study.

RESULT

Socio-demographic characteristics of the study participants

In this study 381 mothers participated making a response rate of 96.2%. About 43% of the study participants were in the age group of 25-30 years with mean 26.6 years (±SD 4.28). Of whom, 47.5% of the study participants were Orthodox in religion, 45.4% were able to read and write, 29.7% were farmer in occupation and majority of the study participants were living in a household monthly income of 5000-10000 Ethiopian birr (**Table 1**).

Table 1. Socio-demographic characteristics of the study participants who visited postnatal clinic at TBH, Ethiopia, 2023/4 (N=381).

Variable	Sub-group	N (%)
Age in years	18-24	130 (34.1)
	25-30	163 (42.8)
	31-34	69 (18.1)
	≥35	19 (5.0)
Marital status	Single	23 (6.0)
	Married	331 (86.9)
	Divorced	10 (2.6)
	Widowed	17 (4.5)
Religion	Muslim	104 (27.3)
	Orthodox	181 (47.5)
	Protestant	96 (25.2)
Education level[a]	Unable to read and write	77 (20.2)
	Can read and write	173 (45.4)
	Primary	9 (2.4)
	Secondary school	38 (10.0)
	Collage and above	84 (22.0)
Occupation	Farmer	113 (29.7)
	Merchant	39 (10.2)
	Civil servant	52 (13.6)
	Private employee	24 (6.3)
	Unemployed	2 (0.5.)
	Housewife	71 (18.6)
	Student	38 (10.0)
	Daily laborer	42 (11.0)
Household monthly income (ETB)[b]		
	<5000	81 (21.3)
	5000-10000	269 (70.6)
	>10000	31 (8.1)

N.B: a=Primary education indicates 1–8th grades; secondary education indicates 9–12th grades; b=ETB, Ethiopian currency.

Behavioral characteristic of the study participants

About 18.9% of the study participants had work-family conflict in the last 1 year and 21.8% were not satisfied with their marital relationship. Almost 9% of the study mothers had a history of IPV and 10.5% had a history of family member or close family death in the last 3 months. More than three quarters (80%) of the candidate had the desired sex of their baby and 87.9% breast fed their baby for the last 7 days of post-partum **(Table 2)**.

Table 2. The behavioral characteristic of the study participants at TBH, Ethiopia 2023/4 (N=381).

Variable	Sub-group	N (%)
Work-family conflict within the last 1 year		
	Yes	72 (18.9)
	No	309 (81.1)
Do you think you are satisfied with your current marital relationship		
	Yes	298 (78.2)
	No	83 (21.8)
History of intimate partner violence		
	Yes	33 (8.7)
	No	348 (91.3)
Death of family member or close relative in the past 3 months		
	Yes	40 (10.5)
	No	341 (89.5)
Desired sex of the baby[c]		
	Yes	305 (80.1)
	No	76 (19.9)
Breast feeding[d]		
	Yes	335 (87.9)
	No	46 (12.1)

Note: c=desired sex of the baby is which gender that she wishes to have;
d= breastfeeding is for those for the last 7 postpartum day.

Medical illness related characteristics of the study participants

Almost 11% of the study participants had medical illness and from those having medical illness, Diabetes Mellitus (DM) accounts 10 (24.4%) followed by Hypertension 8 (HTN) (19.5%), and Asthma 7 (17.1%). About 21% of the study participants had developed pregnancy related illness and from which, preeclampsia (PE) accounts 40 (50%) followed by post-term and Pre-rupture of membrane (PROM) with (13.8%) each. Using a social support assessing score, 47% of the study participants had strong social support **(Table 3)**.

Table 3. Health related characteristics of the study participants at TBH, Ethiopia 2023/4 (N=381).

Variable	Sub-group	N (%)
Presence of medical illness		
	Yes	41 (10.8)
	No	340 (89.2)
Types of chronic medical illness (n=41)		
	DM	10 (24.4)
	HTN	8 (19.5)
	MDD	6 (14.6)
	Asthma	7 (17.1)
	Cardiac	6 (14.6)
	Renal	2 (4.9)
	Epilepsy	2 (4.9)
Presence of pregnancy related illness		
	Yes	80 (21)
	No	301 (79)
Current pregnancy related illness(n=80)		
	APH	6 (7.5)
	GHTN	4 (5)
	GDM	5 (6.25)
	IUGR	3 (3.8)
	PE	40 (50)
	Post-term	11 (13.8)
	PROM	11 (13.8)
Social support assessing score		
	Poor	32 (8.4)
	Moderate	170 (44.6)
	Strong	179 (47)

NB. APH=Anti-partum Hemorrhage;
GHTN=Gestational Hypertension;
GDM=Gestational Diabetes Mellitus;
IUGR= Inter-uterine Growth Retardation;
MDD=Major depressive Disorder.

Table 4. Obstetric related characteristics of the study participants at TBH, Ethiopia 2023/4 (N=381

Variable	Sub-group	N (%)
Intention of the pregnancy		
	Wanted and planned	240 (63.0)
	Unwanted and unplanned	51 (13.4)
	Wanted but unplanned	90 (23.6)
History of abortion or miscarriage		
	Yes	135 (35.4)
	No	246 (64.6)
Parity		
	1	140 (36.7)
	2	140 (36.7)
	>2	101 (26.5)
Mode of delivery		
	Spontaneous	256 (67.2)
	Instrumental	25 (6.6)
	Cesarean-section (CS)	100 (26.2)
Sex of the infant		
	Male	175 (45.9)
	Female	206 (54.1)
Baby birth weight at birth		
	<2500	27 (7.1)
	2500-3999	327 (85.8)
	≥4000	27 (7.1)
Gestational age at delivery		
	<37	21 (5.5)
	37-41+6	329 (86.4)
	≥42	31 (8.1)

Obstetric characteristics of the study participants

The majority 63% (240) of the pregnancy were wanted and planned at the time of conception, 135 (35.4%) of the participants had a history of abortion and 140 (36.7%) were on first pregnancy. 67.2% of the study participants gave birth in spontaneous labour, 327 (85.8%) of the participants delivered normal birth weight baby and 329 (86.4%) were delivered at a gestational age of 37-41+6 weeks **(Table 4)**.

3.5 Postpartum depression characteristics of the study participants

The finding of the study showed that the magnitude of postnatal depression found to be 24% (91/381) as shown in **Figure 1**.

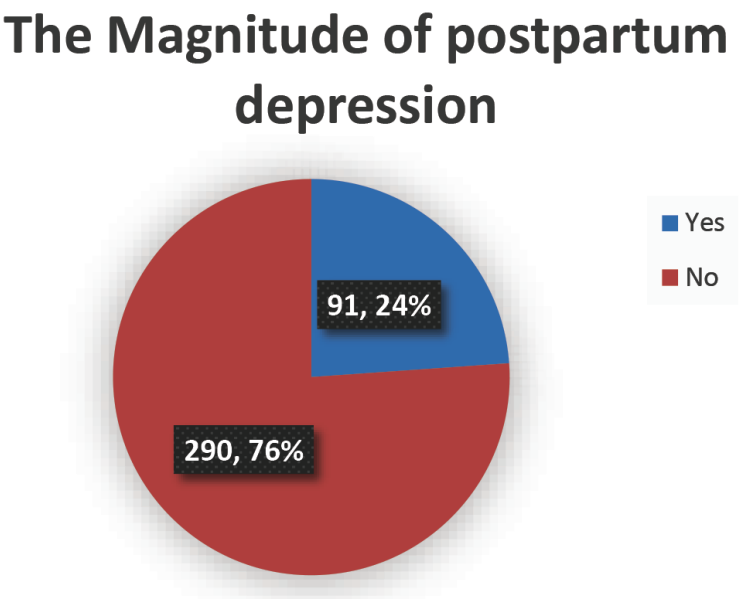

Figure 1. The Magnitude of postpartum depression among postnatal women in Tirunesh Beijing hospital, Addis Ababa, Ethiopia, 2023/24 (n=381).

The specific depression measurement tools indicted that majority 253 (66.4%) of the study participants not laugh and see the funny side of the things (results not shown).

Factors associated with postpartum depression

Our study showed that, study participant whose age of 25-30 years were 93% less likely (AOR=0.07, (95%CI: 0.02, 0.24)), to have PPD compared to age of 18-24 years and postpartum women who were unable to read and write had 4.8 folds increase (AOR=4.8, (95%CI: 1.92, 14.52)), of PPD compared to those of highly educated women (college level and above). Postpartum mothers who experienced intimate partner violence had higher odds of developing PPD compared to those who did not experience IPV (AOR=7.1, (95%CI: 2.76, 16.12)). Postpartum women whose pregnancy was unwanted and unplanned had 6 folds increase (AOR=6.1, (95%CI: 2.01, 13.25)), and when wanted but unplanned, 4 folds increase (AOR=4.1, (95%CI: 1.79, 11.86)), in PPD compared to those of wanted and planned pregnancy. Postpartum women with low-birth-weight baby had 3.2 folds increase (AOR=3.2, (95%CI:1.29, 12.84)), in PPD compared to those of delivered normal birth weight and study participant with poor support had 3.4 (AOR=3.4, (95%CI:1.40, 10.92)), and moderate social support with 2.5 folds (AOR=2.5, (95%CI:1.96, 11.61)), increase its PPD compared to those of having strong social support **(Table 5)**.

Table 5. Bivariate and multivariate logistic regression of association between independent variable and postpartum depression among postnatal women in TBH, Ethiopia 2023/24

Variable	Postpartum depression		COR with 95%CI	P-value	AOR with 95%CI
	Yes	No			
Age in years					
18-24 (ref)	39	91		1	
25-30	26	137	0.44(0.25, 0.78)	0.000	0.07(0.02, 0.24)
31-34	18	51	0.82(0.43, 1.59)	0.748	0.79(0.20, 3.14)
≥35	8	11	1.7(0.63, 4.54)	0.473	2.1(0.29, 14.25)
Education status					
Illiterate	29	48	1.8(0.92, 3.56)	0.001	4.8(1.92, 11.52)
can read and write	31	142	0.66(0.35, 1.23)	0.135	0.29(0.06, 1.47)
primary	2	7	0.86(0.17, 4.45)	0.405	0.21(0.01, 40.73)
high school	8	30	0.80(0.32, 2.01)	0.062	0.45(0.14, 4.26)
college and above (ref)	21	63		1	
Intimate partner violence					
Yes	27	6	19.9(7.92, 50.37)	0.000	7.1(2.76, 16.12)
No (ref)	64	284		1	
Breast feeding					
Yes (ref)	74	261		1	
No	17	29	2.1(1.08, 3.97)	0.458	1.6(0.44, 6.13)
Intention of the pregnancy					
wanted and planned	17	223		1	
unwanted and unplanned	41	10	13.8(2.30, 35.72)	0.000	6.1(2.01, 13.25)
wanted but unplanned	33	57	7.6(3.95, 14.59)	0.000	4.1(1.79, 11.86)
Baby birth weight					
<2500	18	9	7.0(2.09, 23.47)	0.038	3.2(1.29, 12.84)
2500-3999 (ref)	67	260		1	
≥4000	6	21	0.9(0.35, 2.32)	0.985	0.96(0.03, 8.58)
Gestational status					
<37	9	12	3.1(0.90, 10.81)	0.132	5.4(1.00, 18.46)
37-41+6	76	253	1.3(0.49, 3.16)	0.418	4.1(0.13, 14.85)
≥42	6	25		1	
Social support					
Poor	11	21	3.4(1.45, 7.89)	0.000	3.4(1.40, 10.92)
Moderate	56	114	3.2(1.86, 5.42)	0.003	2.5(1.96, 11.61)
Strong	24	155		1	

NB: Ref= reference; COR= Crude Odd Rations; AOR=Adjusted Odd Ratios.

DISCUSSION

The study found that 24% of the mothers experienced postpartum depression. This was similar to the studies conducted in India (26.3%), Lao People's Democratic Republic (28.1%), South Africa (22%), Uganda (27.1%), and North-West Ethiopia (23.7% to 25%)[35–40]. The result was lower than the studies conducted in Nigeria (34.6%)[25], Cameroon (45.8%) (41), and in public health facilities in North-East Ethiopia (37.4%)[42]. Our result is higher than the studies conducted in Malawi (9.6%)[24], Khartoum (9.2%)[43], and central Eritrea (7.4%)[44]. The discrepancy could be due to differences in methodologies, such as varying diagnostic criteria, assessment tools, sampling methods, and time frames for assessing PPD, leading to variations in reported prevalence rates. Demographic factors like age, socio-economic status, cultural background, and access to healthcare can influence the prevalence of PPD[3]. The timing of PPD assessment can also impact prevalence rates. Some studies assess PPD shortly after childbirth, while others assess it at later time points. PPD prevalence tends to decrease over time, so studies conducted at different time points may report different rates[24]. Cultural attitudes toward mental health, societal support structures, and healthcare accessibility can vary by region, influencing PPD prevalence rates[35, 45].

In this study, women aged 25–30 years were 93% less likely to report postpartum depression compared to those aged 18–24 years. This finding was supported by a study conducted in Nigeria[25]. This may be due to maternal age often correlating with various psychosocial factors that can influence the risk of PPD. Cultural and societal values regarding young mothers in various countries could be a reason for this difference[46–47]. Study participants who were unable to read and write had a 4.8-fold increase in PPD compared to those with education levels of college and above. The finding aligns with studies conducted in Malawi[24] and previously published research in Ethiopia[42]. This may be due to higher levels of education often being associated with greater access to resources, including healthcare services, social support networks, and information about maternal mental health. Women with higher levels of education may have fulfilling careers and greater financial independence, providing a sense of purpose beyond motherhood. In contrast, individuals with lower education levels may face limited job prospects and financial dependence, contributing to feelings of inadequacy, stress, and PPD[37].

This study demonstrated that women exposed to intimate partner violence (IPV) had a 7-fold increase in PPD compared to their counterparts. This finding aligns with studies conducted in South Africa[37] and Ethiopia[42]. This may be due to women experiencing IPV during pregnancy or the postpartum period often enduring significant psychological trauma. Participants whose pregnancies were unwanted and unplanned had a 6-fold increase in postpartum depression compared to those with wanted and supported pregnancies. This was supported by studies conducted in the Lao population[36], Eritrea[44], and Ethiopia[40, 45]. This may be due to unwanted or unplanned pregnancies evoking a range of emotions, including shock, disbelief, fear, anxiety, and uncertainty about the future. Coping with the emotional burden of an unwanted pregnancy, particularly if it conflicts with a woman's reproductive intentions or life plans, can increase the risk of developing PPD. Women who experience unwanted or unplanned pregnancies may feel a loss of control over their bodies, reproductive choices, and life trajectories. This loss of autonomy and agency can exacerbate feelings of powerlessness, helplessness, and distress, which are strongly associated with depression, including PPD. Unplanned pregnancies can place significant financial strain on individuals and families, particularly if they lack adequate resources or support systems. Concerns about providing for the needs of a newborn, including healthcare, childcare, and basic necessities, can heighten stress levels and contribute to the development of PPD.

Study participants having low-birth-weight babies

had a 3-fold increase in PPD compared to those who delivered normal-birth-weight babies. This finding aligns with studies conducted in the Lao population[36] and Northern Ethiopia[39]. This may be due to low birth weight often resulting from pregnancy complications such as maternal health issues, inadequate prenatal care, gestational diabetes, hypertension, or placental abnormalities[48]. Delivering a low-birth-weight baby may involve medical interventions, prolonged hospital stays, and uncertainty about the baby's health and prognosis. Witnessing their infant's medical challenges and vulnerability can be emotionally distressing for mothers, heightening feelings of anxiety, guilt, and helplessness, which are risk factors for PPD.

Study participants having poor social support had a 3.4-fold increase in PPD compared to those with strong social support. This finding was congruent with studies conducted in India[35], South Africa[37], and Ethiopia[20, 40]. Social relationships provide individuals with a general sense of self-worth and psychological well-being, as well as access to resources during stressful periods and transitions in life. Pregnancy is a time of significant life change for every woman. This may be due to the lack of social support leading to feelings of loneliness, isolation, and an inability to solve problems without external help, which are risk factors for depression. Without friends, family, or community support, new mothers may feel overwhelmed by the demands of caring for a newborn, leading to increased stress and depressive symptoms. Social support serves as a buffer against stress. Without a support system in place, women may experience heightened levels of stress during the postpartum period. Social support provides an avenue for new mothers to express their emotions and receive validation for their experiences. Without empathetic listeners or understanding individuals to turn to, women may feel invalidated or misunderstood, which can exacerbate feelings of depression[49].

Lastly, our study has some limitations. It was a single-institution study, and its conclusions may not be generalizable to hospitals across the country. The cross-sectional nature of the study design makes it difficult to infer the direction of causality, and some responses may not be accurate due to subjective responses, recall biases, and the use of interviewer-administered questions, which can lead to social desirability bias. One of the strengths of this study is the use of a standard measuring instrument for PPD (i.e., the EPDS tool), which has been previously validated in the Ethiopian context[32].

CONCLUSION

The magnitude of postpartum depression in this study was high. This highlights the need for targeted interventions addressing the needs of postpartum women with various risk factors for PPD, including low education, intimate partner violence, unwanted pregnancy, and poor social support. Further well-designed and representative studies are recommended to inform policy and devise targeted strategies to address PPD.

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Data Availability Statements:
All relevant underlying data that support the findings of this study can be accessed through the corresponding author.

Declaration of Conflicts of Interest:
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