

Maternal depression and associated factors in a rural population in Kenya: a mixed methods study

Caroline Wainaina^{1,2*}, Emmy Igonya¹, Joyce Browne², Stephen Maina¹, Estelle Sidze¹, John De Witt², Kitty Bloemenkamp², Manasi Kumar³

¹ African Population and Health Research Center, Nairobi, Kenya

² University Medical Center Utrecht, Netherlands

³ University of Nairobi

Abstract

Background: Maternal depression is a common mood disorder significantly contributing to major depressive disorder (MDD). It occurs during the perinatal period and is a significant contributor to maternal and child morbidity and mortality. Data on the incidence of maternal depression is limited, reflecting a lack of [routine and] early screening [capacity] in many low- and middle-income countries.

Objectives: The objective of this study is to estimate the prevalence of maternal depression in rural Kakamega in Kenya and describe the associated protective and risk factors in the context of the COVID-19 pandemic.

Methods: This study evaluated maternal health in Khwisero, Kakamega and identified factors associated with maternal depression from October 2019 to May 2021. Perinatal women were screened monthly for depression using the Edinburgh Postnatal Depression Scale (EPDS) cut-off >13. Bivariate and multivariate logistic regression analyses were used to determine the association between depression and covariate characteristics, perceived general health status, and clinical and psychosocial life events. The study included a qualitative component with 20 eligible women in March-July 2022 that provided in-depth descriptions of the risk and protective factors.

Results: 135 perinatal women were recruited into the sub-study. For analysis, the repeated observations were used to calculate the prevalence. The cumulative prevalence of maternal depression (MD) was 11%. Antepartum depression (APD) occurred in 8% of pregnant women vs 13% of postpartum women. APD during covid

was 8%. Postpartum depression was 12% and 14% pre-covid and during covid period, respectively. Employment AOR 2.74 (CI: 0.23-33.06) vs AOR 24.69(CI: 4.09-148.91), maternal complications AOR 3.71(CI: 0.29- 48.26) vs AOR 19.06(CI: 3.96-91.68), financial stress AOR 1.32(CI: 0.42-4.40) and controlling relationships AOR 8.27(CI: 1.66-41.08) during Covid period were associated with maternal depression. Various themes were identified as triggers to maternal mental stress: health challenges during the perinatal period, lack/inadequate spousal support, intimate partner violence, poor relationships with in-laws, and financial challenges. Protective factors identified included spousal support, social support, and employment/financial independence.

Table 1: Odds ratios of factors associated with perinatal depression.

Characteristics	Unadjusted Odds Ratio(CI:95%)		Adjusted Odds Ratio (CI: 95%)	
	Pre-COVID	COVID	Pre-COVID	COVID
Age categories				
15-24 years	Reference		Reference	
25-34 years	11.13(1.97 62.79)	1.56(0.65 3.77)	1.42 (0.151 13.34)	1.47(0.46 4.72)
35+ years	3.94(0.44 35.41)	2.95(0.74 11.79)	0.49(0.02 10.83)	1.78(0.37 8.56)
Marital Status				
Never married	Reference		Reference	
Married	1.41(0.30 6.55)	1.31(0.50 3.45)	0.38(0.04 3.62)	0.1(0.02 0.43)**
Education				
Primary	Reference		Reference	
Secondary/Tertiary	0.18(0.03 1.19)*	0.87(0.32 2.35)	0.17(0.02 1.78)	0.24(0.07 0.77)**
Employment				
Not employed	Reference		Reference	
Employed(casual/business)	2.80 (0.56 14.00)	1.85 (0.72 4.74)	2.74 (0.23 33.06)	24.69(4.09 148.91)**
Maternal complications				
No	Reference		Reference	
Yes	3.3(0.62 17.50)	3.89(1.26 12.05)	3.71(0.29 48.26)	19.06(3.96 91.68)**
Neonatal complications				
No				
Yes	9.70(0.92 101.95)*	1.52 (0.11 20.39)	4.28 (0.34 54.47)	0.51(0.06 4.38)
Controlling behaviour				
Least to moderate controlling	Reference		Reference	
Most controlling	1.06(0.20 5.57)	2.15(0.77 5.96)	2.38(0.15 36.69)	8.27(1.66 41.08)**
Financial stress				
No				
Yes*		1.36(0.69 2.68)		1.32(0.40 4.40)

Table 2: Identified themes on associated factors.

Themes	Findings
Pregnancy and motherhood journey	Unexpected pregnancy makes the pregnancy journey more difficult/ low excitement. There is lack of trust/worry about family planning methods Health challenges compounded by the environment increases the risk for mental health stress
Social and spousal support	Spousal support depended on his financial ability and his support for her economic ventures. Poor relationships with extended family and especially in-laws including abuse and mistreatment
Financial stress	Women were stressed because of the high cost of living, low-profit margins in their business, and loss of livelihood for those who were near giving birth or immediately after childbirth.

A pregnant woman who participated in the ethnographic study describes the mistreatment by in-laws.

“There was a day he caned me on my stomach and this is a taboo in the Luhya community for a father-in-law to do such an act to his daughter-in-law. I am very worried ...I might die during delivery or the baby I am carrying in this womb might die during delivery”

Another participant narrates her experience with an unsupportive spouse.

“Given a chance, I can never get married again. What I have seen is enough. Our child was chased away from school the other day because we have not paid for her exams [...]. My husband is just relaxed at home doing nothing. I told my mother-in-law about the fees, and she told me I chose a stupid husband, so I should bear with that”.

Conclusion:

One in seven women experienced symptoms of depression. This highlights the importance of integrating depression screening into maternal health services. The pandemic increased the risk of perinatal depression, emphasizing the need to prioritize quality healthcare, financial and social support for perinatal women during extreme events like pandemics. The risk factors associated with maternal depression underscore the need for community awareness and support for perinatal women. It is important to establish confidential channels or pathways where women can seek psychosocial support, counselling, or report intimate partner violence.