

Prevalence and Determinants of Depression in HIV-Positive and HIV-Negative Pregnant and Postpartum Women in Kampala and Wakiso, Uganda: A Cross-Sectional Study

Clare Kyomuhendo¹, Stephen Owusu Kwankye¹, Faustina Frempong-Ainguah^{1,2} & Lily N. A. Kpobi¹

¹University of Ghana, Regional institute for Population Studies, P.O. Box 96, Legon, Accra, Ghana

²Ghana Statistical Services

Email: clare.kyomuhendo@gmail.com

Abstract

Although depression exists in prenatal and postpartum mothers regardless of HIV status, being HIV positive during these periods exposes women to double burden experiences, as they have to deal with an HIV diagnosis, which causes depression itself at the same time dealing with stress that comes with pregnancy and childbirth. This study investigated the prevalence and determinants of depression in HIV-positive and HIV-negative pregnant and postpartum women in Kampala and Wakiso, Uganda. Using mixed method research design, quantitative data was collected from 497 prenatal and postpartum women in two urban Ugandan communities. Qualitative data to understand the women's prenatal and postpartum experiences was collected from thirty-seven (37) women and key informants. Generally, the findings show a higher depression prevalence (64.4%), with a greater depression rate (65.8%) reported in pregnant women than those who had recently given birth (63.2%). Nonetheless, women living with HIV displayed pronounced depressive symptoms compared to HIV-negative counterparts. Factors associated with prenatal and postpartum depression included HIV positive status, being aged 15–24 years, lack of social support, food insecurity, having no dependents, multigravida status, complications after delivery, currently working, violence and abuse, and family alcohol use. There is an urgent need to integrate routine screening for depression into prenatal and postpartum women in HIV care.

Keywords: Depression; Prenatal; Postpartum; Pregnancy; after giving birth; HIV; Uganda

INTRODUCTION

Uganda has seen the growing incidence of pregnancy among women on HIV care, with prevalence of 5.5 percent almost comparable to that in the general population (5.8%) (Masereka et al., 2019). Moreover, Uganda's depression rate stands at 30.2 percent in the general population and 26.9 percent in pregnant and postpartum mothers (Kaggwa et al., 2022). This presents a double burden for women living with HIV in reproductive age groups. Although depressive disorder during prenatal and postpartum period in Women Living with HIV is increasing in Uganda, determining the actual prevalence remains problematic due to limited/ lack of screening, diagnosis, and under-reporting. Again, there are limited studies in the subject area as most studies have focused on adolescents, youth, and the adult population living with HIV. Other studies look at either one aspect of prenatal or postpartum depression mainly focused on Ugandan rural areas (Ashaba et al., 2017; Atuhaire et al., 2021; Kinyanda et al., 2019, 2020). Thus, motivating this study.

METHODOLOGY

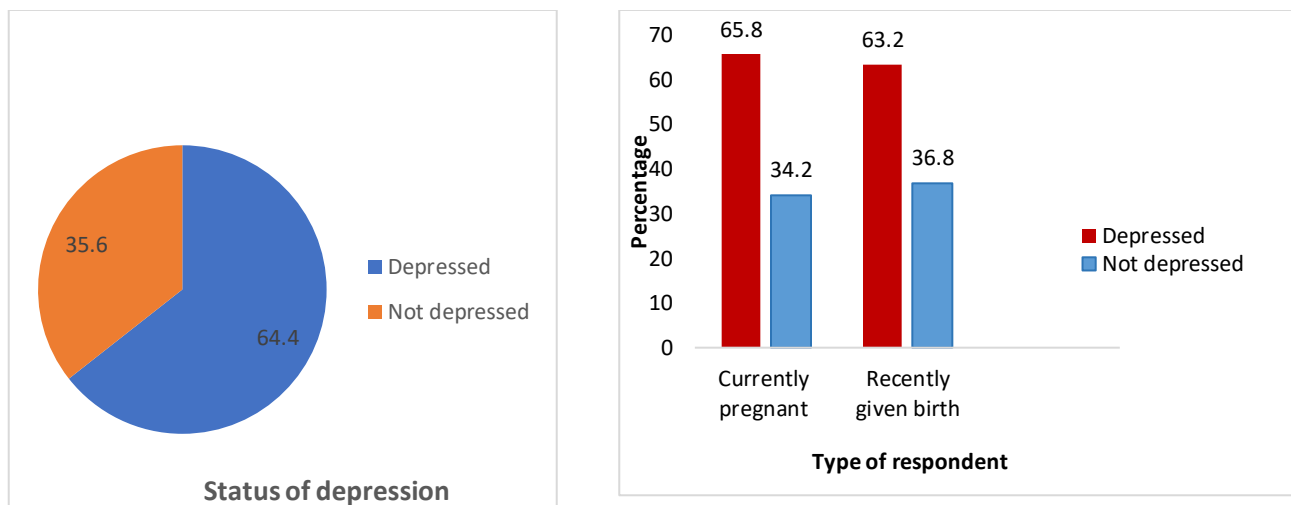
A mixed quantitative and qualitative research method using primary sources of data collection embedded in the epidemiological transition theory, the biopsychosocial model, and the vulnerability-stress model was employed. This was to provide a more holistic understanding of the women's experiences during these

critical stages. For the quantitative part of the study, a survey employing computer-assisted personal interviewing (CAPI) was used to recruit 497 women aged 15- 49 years who were currently pregnant and those who had currently given birth from The AIDS Support Organization (TASO) Mulago, Mildmay Uganda, and Mulago Specialised Women and Neonatal Hospital. Again, qualitative data were obtained from ten (10) pregnant women, eleven (11) women who had recently given birth, and six-teen (16) key informants. Quantitative data was analysed using Statistical Programme for Social Sciences (SPSS) version 23.0, whereas qualitative data were analysed following Attride-Stirling's (2001) thematic analysis concept using ATLAS.ti.

FINDINGS

Prevalence of Prenatal and Postpartum Depression

Figure 1 shows that generally, majority of the women surveyed showed depressive symptoms (64.4%). On the other hand, the least of the respondents (35.6%) did not show depressive symptoms. However, higher depressive symptoms (65.8%) were found among women who were currently pregnant as compared to those who had recently given birth (63.2%).



A: General depression status

B: Prenatal and postpartum depression status

Fig. 1 Percentage Distribution of Respondents by Depression among Women on the Edinburgh Postnatal Depression Scale

HIV Status and Depression Prevalence

Table 1 indicates that depression was higher (81.9%) in HIV positive pregnant women as compared to HIV negative pregnant women (56.9%) who were the control group. Additionally, a higher proportion (69.9%) of depression was observed in HIV positive women who had recently given birth as compared to the control group (53.5%).

Table 1: Association between depression prevalence, and type of respondent, and HIV status on the Edinburgh Postnatal Depression Scale

Variable	Depression Percentage (%)		Number (n=472)
	Depressed	Not depressed	
HIV positive pregnant women	81.9	18.1	83
HIV negative pregnant women	56.9	43.1	137

	$\chi^2 = 14.4640$	$p\text{-value} = 0.000$	
HIV positive women who have recently given birth	69.9	30.1	153
HIV negative women who have recently given birth	53.5	46.4	99
	$\chi^2 = 6.9738$	$p\text{-value} = 0.008$	

From the interview narratives, fear of disclosing HIV status, having health complications, among others heightened depression symptoms among women living with HIV. Fear of disclosing to partners and family made the women take the medicines in secrecy and limited their social support.

The participants noted on fear of disclosing HIV status:

"Disclosing to my husband is one of the challenges I face. He may leave me" (38- year- old HIV positive pregnant woman)

"... I mean this is someone who should be supporting you in the course of your pregnancy, in the course of your treatment as your medical companion. But you know this is someone now you are scared to reveal to because they might stigmatize you, they might leave you; it takes a toll on them." (Key informant 005, TASO- Mulago)

Again, a mother lamented on how living with multiple health conditions affected her mental health:

"I am epileptic, I have hormonal imbalance, meaning I have menstrual disorder where I bleed nonstop unless the doctor injects me like for a span of six month. This is the same me who is having asthma sinus... Now in all these, I end up with HIV. So I have gone through a lot and I have gone through enough." (38- year- old HIV positive pregnant woman).

Determinants of Depression at the Prenatal and Postpartum Period

Table 2 shows results of the binary regression model of the overall likelihood of depression experienced by women living with HIV during their prenatal and postpartum periods. From the table, HIV status, social support, food security, age, employment status, number of dependents, violence and abuse, and family alcohol use were determinants of prenatal and postpartum depression among women in Kampala and Wakiso districts, as the variables had a statistically significant relationship with depression.

Table 2: Results of Binary Logistic Regression showing the Determinants of Depression at the Prenatal and Postpartum Period

EPDS	Odds Ratio	S.E.	t-value (Z)	95% CI
HIV Status				
Positive (RC)				
Negative	0.375***	.111	-3.32	0.21 – 0.67
Social Support				
Had no support (RC)				
Had social support	0.236***	.079	-4.30	0.123 – 0.456
Food Security				
Food secure (RC)				
Food insecure	1.846**	.461	2.46	1.132 - 3.013
Marital Status				

Otherwise (RC)				
Married/living together	0.443	.227	-1.59	0.162 -1.21
Level of education				
Primary or less (RC)				
Secondary	0.92	.302	-0.25	0.484 - 1.75
Higher	0.628	.244	-1.19	0.293 - 1.347
Age Groups				
15-24 (RC)				
25-34	0.489**	.173	-2.02	0.245 - 0.978
35+	0.514	.217	-1.57	0.224 - 1.177
Employment status				
Not currently working (RC)				
Currently working	2.089***	.592	2.60	1.199 - 3.64
Monthly average income (UGX)				
<=300,000 (RC)				
>=300,001	0.746	.25	-0.88	0.387 - 1.438
Undisclosed amount	1.015	.5	0.03	0.387 - 2.667
Number of dependents				
No dependent (RC)				
1 or more dependents	0.18***	.059	-5.25	0.095 - 0.341
Chronic diseases				
No (RC)				
Yes	1.403	.49	0.97	0.708 - 2.784
Violence and abuse				
No (RC)				
Yes	1.562	.551	1.27	0.783 - 3.117
Can't mention	0.337***	.1	-3.68	0.189 - 0.602
Family Alcohol Use				
No (RC)				
Yes	1.94***	.457	2.81	1.223 - 3.079
When HIV status was first known				
Before getting pregnant (RC)				
During pregnancy/ after giving birth	1.083	.268	0.32	0.666 - 1.759
Constant	72.531***	51.027	6.09	18.267 - 287.982

*** $p < .01$, ** $p < .05$, * $p < .1$

CONCLUSIONS

The study has demonstrated that even though the burden of prenatal and postpartum depression was high in both women living with HIV and HIV negative women, a significantly increased risk of these prenatal and postpartum depressive symptoms was more pronounced in women living with HIV, who knew their status during pregnancy and after giving birth. There is an urgent need to integrate routine screening for depression into prenatal and postpartum women in HIV care.