

# Intimate partner violence, spouse extramarital affairs, and depression among women in rural Uganda

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## Research Article

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# Abstract

**Background** Depression is highly prevalent among women compared to men. Women in rural areas are more at risk of depression compared to their peers in urban areas. Some of the factors associated with depression among married women are spouse related factors including extramarital affairs and intimate partner violence (IPV).

**Objective** To determine the prevalence of depression and factors associated with depression among married women in rural Southwestern Uganda.

**Methods** This was a cross-sectional study in rural southwestern Uganda among married/cohabiting women aged 18 to 45 years. We used the Patient Health Questionnaire 9 (PHQ-9) to assess for depression, composite abuse scale (Revised) – Short Form (CASR-SF to measure IPV. Logistic regression was used to estimate the associations between depression and several factors including spouse extramarital affair, IPV, and sociodemographic factors.

**Results** We enrolled 153 women, mean (standard deviation) age of 33.3 (6.7) and the majority were unemployed. The mean number of children between the couple was 4.05 (2.17). More than half (65.4%) had depressive symptoms and 64.1% had experienced intimate spouse violence. The reported spouses' mean (SD) age was 43.4 (9.5). Almost half (49.65%) were known to be involved in an extramarital affair. There was a statically significant association between depression among women and spouse extramarital affairs (adjusted odds ratio (AOR) 24.93; 95% CI 1.25–498.34]; p-value = 0.04).

**Conclusion** There was a high prevalence of depression and intimate partner violence among women in rural Uganda. The high prevalence was associated with spouse extramarital affairs. There should be routine screening for depression and intimate partner violence among married women at lower-level health facilities in rural settings especially those whose husbands are involved in extramarital affairs to ensure early diagnosis and access to appropriate mental health care to maintain functionality in society and family level since women are the backbone of their families.

## Introduction

Globally, depressive disorders rank as one of the largest contributors to disabilities [1], and women have a higher prevalence of depression than men [2-4]. In addition women in rural areas experience higher rates of depression and its complications such as suicide, compared to women in the urban areas [5-10]. The high prevalence of depression among women in rural settings has been attributed to early marriages/reproductive age, low self-esteem, intimate spouse violence (IPV), gender-based discrimination, and low social-economic status [4, 10, 11]. With substandard mental health services and limited expertise among the available health workers in most rural settings; mental health problems including depression remain highly prevalent yet untreated, thus contributing to the functional decline of women in these settings [12].

Various factors have been associated with depression among married women including personal and spouse related factors. Personal factors include: the number of children (four or more), low levels of education, increasing number of years in marriage, use of substances of addiction, and mental illness history especially depression [4, 11, 13]. Spouse related factors include lack of support from spouses or in-laws, misuse of substances of addiction by the partner, mental illness, low level of education, and extramarital relationships [3, 4, 13]. Extramarital relationships also increase the risk of domestic violence, substance misuse, and family neglect which worsen depression among married women [13, 14].

Moreover, many studies have consistently reported the association between depression and intimate partner violence (IPV) [13-20]. Some studies have suggested a direct relationship between depression and IPV [15, 16], while others have suggested a reciprocal relationship [18, 19]. The relationship between IPV and depression has been linked to different factors including victim, perpetrator, and community related factors [21]. The factors include age of the woman in the relationship, age at marriage, age gap between the woman and her partner, duration of the relationship, low literacy levels, rural area of residence, polygamous relationships and extramarital affairs, alcohol consumption, and previous history of trauma such as adverse childhood events [15, 16, 20]. With sub-Saharan Africa having the highest level of IPV among women (44%) [22], IPV linked depression levels are most likely to consistently remain high especially among married women.

Depression among married women has detrimental effects including family dysfunctionality, depression and other mental health problems among children, worsening poverty since depression impairs productivity of these women yet they are the backbone of these rural families [23-25]. Despite various studies showing that married women in rural settings are at a high risk of depression; spouse related factors associated with depression among married women in rural Uganda have not been studied. In this study we aimed at determining spouse related factors associated with depression among married women in rural southwestern Uganda.

## Methods

### Study design and setting

This was a cross-sectional analytical-quantitative study involving married or cohabiting women in Isingiro Town council in Isingiro district in southwestern Uganda. Isingiro district is located 309.2 KM from the capital city Kampala, with a total estimated population of 18,045 women [26]. Data were collected from Mabona parish which was purposively selected because it had a group of married or cohabiting women who were organized in money generating group ("Bataka kweyamba group"). In addition, this group had a list of all married or cohabiting women. We enrolled women aged 18-45 years, who were part of a money generating group and consented to participate in the study. We excluded women who had a physical illness that could have impaired their ability to stand the length of the interview and those whose spouses did not give permission to participate to avoid misunderstandings in the family. Pregnant women, postpartum women, and those aged 45 years and above were excluded, due

to hormonal changes in these women associated with higher prevalence of depression [27]. Women above 45 years may be experiencing premenopausal or menopausal symptoms that may present as symptoms of depression hence overestimating the prevalence [28].

### **Sample size determination**

A pilot study involving 50 married women was done in a similar setting to determine the prevalence of depression among married women. The prevalence of depression among women in the pilot study was 23% and this was used to determine the sample size of the current study using the Kish-Leslie formula [29]. A sample of 153 participants was reached based on a 95% confidence interval, and margin of error 5%. Consecutive recruitment was done until the required sample size was reached.

### **Data collection**

Data were collected by women research assistants who were trained in data collection methods. They administered the questionnaire in the local language and each interview took about 30 minutes to complete. The questionnaire had four parts. 1) Participants sociodemographic characteristics such as age in years, level of education, monthly income, number of children, employment status, history of alcohol and substance use, and history of mental illness; 2) the spouse's reported characteristics (by participating women), such as age, level of education, employment status, extramarital relationship, history of mental illness, alcohol and substance use history; 3) intimate partner violence assessed using the Composite Abuse Scale (Revised) – Short Form (CASR-SF); and 4) depression among participants assessed using the Patient Health Questionnaire 9 (PHQ-9)

### **Measures**

#### **The Composite Abuse Scale (Revised) – Short Form (CASR-SF)**

CASR-SF is a 15 item self-administered scale that measures intensity of intimate partner violence in the past 12 months. It measures three types of violence; psychological, physical, and sexual violence by assessing their frequency on a 5-point Likert type scale (0 = not in the past 12 months, 1 = once, 2 = a few times, 3 = monthly, 4 = weekly). Total scores range from 0 to 75, and a score of 25 and above indicates severe domestic violence. The scale had an internal consistency of 0.94 in a Canadian study; whose reliability and validity estimates are comparable to those obtained for the original 30-item Composite Abuse Scale [30].

#### **The Patient Health Questionnaire 9 (PHQ-9)**

The PHQ-9 is a 9-item self-administered tool that may help identify depressive symptoms. A recent Cronbach's alpha of 0.71, a sensitivity, and specificity of 88% for major depressive disorder were obtained in a study by Carrol et al. 2020 [31] based on a score above 10. It uses a Likert type scale where for every answer, not at all = 0, several days = 1, more than half the days = 2, and nearly every day = 3. The PHQ-9

has become an international gold standard measurement tool for depressive symptoms. The PHQ has been used in Uganda with excellent psychometric properties [32-35].

### **Ethical considerations**

The study was conducted according to the ethical guidelines of the *Declarations of Helsinki*. It was approved by Mulago Hospital Research and ethics committee (MHREC 2044). Permission to collect data was obtained from the district, local councils of the parish, and villages.

The partners (head of the family) of the participants gave permission to the researchers to interview their wives about mental wellness. The spouses were not given the details of the study and what information may be asked. All participants were interviewed in a private place either within the home environment or away from home or any other place of their choice not accessed by another person to ensure privacy and confidentiality. Participants were informed about the study and they provided written informed consent before enrollment in the study. Counselling was provided to all the women who were found to have depression by the psychologist on the team (BN).

### **Data analysis**

Data were entered into Excel and exported to STATA version 16.0 for data analysis. Descriptive statistics were summarized using mean and standard deviations for continuous data and percentages for categorical variables. Bivariable and multivariable logistic regression analyses were used to determine association between depression and independent variables including participant and spouse sociodemographic characteristics, substance use, mental illness history, IPV, spouse extramarital relationships status. A p-value of less than 0.05 for the level of significance was considered.

## **Results**

We recruited 153 participants. The mean age (Standard Deviation (SD) of the participants was 33.3 (6.7). The majority (47.7%) of the participants had obtained primary level education. Majority of the participants were unemployed (81.1). Majority of the participants (64.1%) had experienced IPV based on CASR-SF. The prevalence of depression among the participant was 65.4% (Table 1).

Table 1  
Participants' characteristics

<b>Variable</b>	<b>n</b>	<b>%</b>
Age (participant) (mean, SD)	33.3	6.7
Education		
None	30	19.6
Primary	73	47.7
Secondary	42	27.5
Tertiary	8	5.2
Employment		
Unemployment	124	81.1
Employed	60	39.2
Number of children (mean, SD)	4.05	2.17
Substance use		
Yes	38	28.4
No	115	75.2
History of mental illness		
Yes	9	5.9
No	144	94.1
Participants' monthly income		
Below 50,000	64	41.8
50,000–200,000	72	47.1
Above 200,000	17	11.1
Intimate spouse violence		
No	55	35.9
Yes	98	64.1
Depression		
No	53	34.6
Yes	100	65.4

The mean age (SD) for their spouses was 43.4 (9.5) and 46.4% had achieved secondary level education. Nearly, half (49.7%) of the partner were involved in extramarital relationships (Table 2).

Table 2  
Spouse reported characteristics by the participants

Variable	N	%
Age (mean, SD)	43.4	9.5
Education		
None	23	13.0
Primary	46	30.1
Secondary	71	46.4
Tertiary	13	8.5
Employment		
Unemployment	63	41.2
Employed	90	58.8
Substance use		
Yes	85	55.6
No	68	44.4
History of mental illness		
Yes	20	13.1
No	133	87.0
Spouse extramarital relationship		
Yes	76	49.7
No	77	50.3

### Factors Associated With Depression Among Women In Rural Uganda

Factors with a p-value of less than 0.05 on bivariable analysis i.e., for participants (age, employment, number of children, history of substance use, and intimate partner violence) and their spouses (age, employment, history of substance use, and having an extramarital relationship); were considered for multivariable analysis because they had a significant association with depression. For details Table 3

Table 3  
Bivariable analysis for factors associated with depression among married women

<b>Variable</b>	<b>Crude's odds ratio (95% confidence interval (CI))</b>	<b>P-value</b>
Age	1.06(1.00–1.11)	<b>0.02</b>
Education		
None	1(ref)	
Primary	1.16 (0.47–2.88)	0.75
Secondary	0.67 (0.25–1.77)	0.42
Tertiary	0.83 (0.16–4.21)	0.83
Employment		
Unemployed	1(ref)	
Employed	0.33(0.16–0.66)	<b>0.01</b>
Number of children	1.47(1.21–1.79)	<b>&lt; 0.0001</b>
Substance		
No	1(ref)	
Yes	4.73(1.72–12.99)	<b>0.01</b>
History of mental illness		
No	1(ref)	
Yes	4.52(0.55–37.16)	0.16
Participant monthly income		
Below 50,0000	1(ref)	
50,000–200,000	0.61(0.30–1.27)	0.19
Above 200,000	0.56(0.18–1.69)	0.30
Intimate spouse violence		
No	1(ref)	
Yes	612(108.39–3455.61)	<b>&lt; 0.0001</b>
Spouse reported characteristics		
Age	1.05 (1.01–1.09)	<b>0.01</b>
Education		
None	1(ref)	



Variable	Crude's odds ratio (95% confidence interval (CI))	P-value
Primary	0.44(0.15–1.26)	0.13
Secondary	1.12(0.40–3.11)	0.84
Tertiary	1.46(0.30–6.98)	0.64
Employment		
Unemployed	1 (ref)	
Employed	0.37 (0.18–0.77)	<b>0.01</b>
Substance use		
No	1(ref)	
Yes	12.90(5.66–29.40)	<b>&lt; 0.0001</b>
Mental illness history		
No	1(ref)	
Yes	2.33(0.74–7.36)	0.15
Extramarital relationship		
No	1(ref)	
Yes	23.5 (8.50–65.00)	<b>&lt; 0.0001</b>

The identified factor associated with depression was spouse having an extramarital relationship at multivariable analysis. The likelihood of have depression was 24.93 times if their spouse was having an extramarital relationship (Table 4).

Table 4  
Multivariable analysis for factors associated with depression among married women

Variable	Adjusted odds ratio (95% CI)	p-value
Age	1.09 (0.85–1.40)	0.49
Employment		
Unemployed	1(ref)	
Employed	0.25(0.02–3.98)	0.33
Number of children	0.90(0.54–1.51)	0.69
Substance		
No	1(ref)	
Yes	11.95(0.08–1756.15)	0.33
Intimate spouse violence		
No	1(ref)	
Yes	8.81e10	0.99
<b>Spouse reported characteristics</b>		
Age	1.04(0.85–1.26)	0.73
Employment		
Unemployed	1(ref)	
Employed	1.54(0.10–23.61)	0.75
Substance use		
No	1(ref)	
Yes	1.23e-8	0.99
Extramarital relationship		
No	1(ref)	
Yes	24.93 (1.25–498.34)	<b>0.04</b>

## Discussion

Our study findings show a high prevalence of depression among the study participants and a statistically significant association between depression and spouse extra marital affairs. The prevalence of 65% was slightly lower than that documented in a study in Kisoro (75%) another rural district in southwestern Uganda among women aged 18 to 35 years based on the Self-Reporting Questionnaire (SRQ-20) [11]. The difference may be due to the study population recruited in the two studies. The study in Kisoro involved women recruited from a hospital setting who had presented for care with various medical conditions and somatic symptoms. As documented in previous research individuals with somatic symptoms may have ongoing depression, and this may explain the high prevalence of depression in the Kisoro study compared to the current study where women were recruited from the community [11, 36]. On the other hand, the prevalence of depression found in our study was much higher than that found in another study (38%) conducted in urban setting (Mbarara) using the Hopkins Symptom Checklist-Depression Subscale [37]. The difference may be due to the study settings where Mbarara is more developed with more economic opportunities for women to thrive than Isingiro which is more rural [35]. In addition, women in urban areas tend to be more educated, have well-formed structures to fight domestic violence [28], and are economically empowered which favors them mentally [4, 10]. The difference in the prevalence of depression may also be explained by variations in the study tools used with different psychometric properties, in terms of specificity and sensitivity [38]. However the prevalence of depression in our study was similar to that found in a study done among women in Pakistan, 65% [4]; and this is likely because both studies recruited women in reproductive age, excluding other possible etiologies such as menopausal related factors that have the ability to influence feelings and shifts in mood [39]. Additionally, in both communities, polygamy is highly practiced and polygamous men are highly respected, hence the similarities [40–42].

There was a statistically significant association between depression and spousal extra marital affairs among our study participants which echoes findings of previous studies done in LMICs [13, 14, 43]. Many men involved in extramarital relationships show inadequate love, offer no emotional support and care to their wives which increases the risk of separation and divorce, stress, and anxiety among couples [13, 44]. Culturally, divorce is not common in Uganda setting with only 7% of the population getting divorce [45]. As such, most women choose to stay in these relationships with increased exposure to stress and hence depression. Such relationships are characterized by reduced intimacy and increased risk of IPV, which comes in form of physical, psychological, and sexual violence, that increase the risk of depression.

However we did not a statistically significant association between depression and IPV in our study, contrary to what has been documented in many studies [13–20]. Moreover, high levels of IPV and depression have been consistently reported among rural women living with HIV [46–49] and this has been linked to rampant extramarital relationships common among HIV positive couples [49, 50]. Our results show extramarital relationship which reduces intimacy that may be an underlying cause of IPV and it is a common aspect not studies in many studies about IPV. In most Ugandan cultures extramarital relationships are accepted and polygamous relationships are a norm in most communities [51], which explains the high prevalence of extramarital affairs found in our study.

Additionally, depression, IPV, and stress among women, are aggravated by highly prevalent use of addictive substances among married men. Individuals who use substances are at high risk of being involved in IPV and extramarital relationships, leading to depression among married women [49, 52]. Depression, IPV, and substance use among married men, and extramarital relationships be creating an end loop cycle of traumatizing events to women and hence the high risk of depression. Unfortunately, depression in such communities goes undetected, and individuals may resist seeking mental health care due to cultural stigma for mental illness [11]. Coupled with reduced care from their spouse due to extramarital affairs, the symptoms are seen as a sign of attention-seeking and hence ignored by the spouse and hence many of the affected women don't seek care. The untreated depression is associated with reduced level of functioning among women who are the backbone of most families in rural settings [23]. Thus, this causes family deterioration in all aspects of social, psychological, economical, and lack of respect since most families in rural communities in Uganda thrive on the functionality and productivity of women [23].

## Limitations

Our cross-sectional study is bias-prone and confounding rich due to the inadequate sample size due to the very wide confidence intervals, thus the results should be interpreted with caution. We also did not separate cohabiting from married, yet they may have different reasons for their depression such as not being wedded or being a second wife to someone which is stressful to most women. IPV is a culturally sensitive subject, with associated stigma and discrimination where most women are not willing to talk about it, hence leading to issues of recall bias and social desirability where women could have chosen not disclose their issues of IPV which may affect generalizability of our findings. The CASR-SF has not been validated for use in a Ugandan population or a similar setting, hence the results should be interpreted with caution. Lastly, this being a cross sectional study we cannot confirm causality effect relationship between extramarital affairs and depression among our study participants.

## Conclusions

We found a high prevalence of depressive symptoms among married women in rural our study which was significantly associated with spouse extramarital affairs. This high prevalence of depression should be a cause for concern since most of these women are not treated yet depression carries a high risk of mortality through suicide and addition social and psychological effects on the family. In addition, depression causes functional impairment and when it affects women and impairs their functionality. It may have detrimental effects on the whole family since women are the backbone of the family in most rural settings in Uganda. Community mental health services should be strengthened to enable routine screening for depression among married women at lower-level health facilities so that they can be referred for appropriate care to maintain their functionality and stability of their families. Also, social support interventions should be formed for rural women to promote peer support which may reduce the

risk of depression despite the challenges of spousal extramarital affairs which are common in rural settings in Uganda.

## Declarations

**Author's contribution:** MMK drafted the initial draft, designed the study, analyzed the data, supervision, and involved in data curation. BN, RN, and MK were involved in study design, data collection, and revision of the subsequent drafts. SMN was involved in study design, data analysis, revision of the subsequent drafts, and coordinating the writing process. SA was involved in study design, revision of the subsequent drafts, and supervision of the team. All authors read and approved the final draft.

**Conflict of interest:** The authors declare that they have no conflict of interest.

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**Ethics approval and consent to participate:** The study was approved Mulago Hospital Research and ethics committee (MHREC 2044) and all participants provided the written informed consent to participate in the study. The consent form translated to the local language (Runyankole) was read out loud to individuals who could not read and write; signed in the presence of a participant trusted witness (fluent in reading and writing) who counter signed.

**Consent for publication:** Participants consented for publication of the information obtained from them.

**Availability of data and materials:** Data is available on request from the corresponding author

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