



# THE CENTRAL AFRICAN JOURNAL OF MEDICINE

Vol. 61, Nos. 1/4

CONTENTS

January/April 2015

## ORIGINAL ARTICLES

- |  |   |    |
|--|---|----|
| Prevalence and the correlates of postnatal depression in an urban high density suburb of Harare.....                 | J January, H Chivanhu, J Chiwara, T Denga, K Dera, T Dube, V Chikwasha, TM Chikwanha..... | 1  |
| Etiology and risk factors of meningitis in patients admitted at a Central Hospital in Harare.....                    | A Matubu, S Rusakaniko, V Robertson, L Gwanzura.....                                      | 5  |
| Effects of different frequencies of loading on healing in partial rupture of the Achilles tendon in a rat model..... | NS Mkumbuzi, HM Chinyanga, W Wood, SKT Mudambo, M Gova.....                               | 11 |
| An echocardiography audit to determine and characterise rheumatic heart disease lesions seen in 2012.....            | NT Munyandu.....  | 17 |

## CASE REPORT

- |   |                                 |    |
|---|---------------------------------|----|
| Bilharzioma of the fallopian tube: a case report..... | R Makunike-Mutasa, K Phiri..... | 21 |
|---|---------------------------------|----|

## NOTES AND NEWS

- |                              |  |    |
|------------------------------|--|----|
| Instructions to Authors..... | <i>Central African Journal of Medicine</i> ..... | 23 |
|------------------------------|--|----|

# THE CENTRAL AFRICAN JOURNAL OF MEDICINE

## ORIGINAL ARTICLES

### Prevalence and the correlates of postnatal depression in an urban high density suburb of Harare

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#### Abstract

**Introduction:** Postnatal depression is a common cause of morbidity but is rarely diagnosed or adequately managed in busy primary care settings in most resource limited countries like Zimbabwe.

**Objectives:** This study sought to determine the prevalence of postnatal depression and establish factors associated with postnatal depression.

**Methods:** The study utilized a cross-sectional descriptive design where 295 consenting women (mean age=25.4 years; SD= 5.6 years) attending post natal care services at Mbare Polyclinic were recruited. Data were collected using the validated Shona version of the Edinburgh Postnatal Depression Scale (EPDS) questionnaire. Associations between variables were computed using the chi-square test statistic and where appropriate the Fisher's exact statistic.

**Results:** Prevalence for postnatal depression was 34.2% among women in the study. Univariate analysis revealed that there were no statistically significant associations between mother's age ( $p=0.120$ ), parity ( $p=0.396$ ), marital status ( $p=0.523$ ), level of education ( $p=0.805$ ), and age of child ( $p=0.489$ ) and postnatal depression.

**Conclusion:** Findings from this study indicate that there is a high prevalence of postnatal depression in women in Mbare, Zimbabwe. This therefore calls for further studies to identify and address the causes of postnatal depression among women attending postnatal care in Zimbabwe.

*Cent Afr J Med 2015;61(1/4):1-4*

#### Introduction

Postnatal depression is a common complication of childbearing with a prevalence of 33% in Zimbabwe. Thus Zimbabwe has one of the highest prevalence of postnatal depression in the world and the situation is further compounded by the fact the country also ranks among those with the highest HIV prevalence globally.<sup>1,2</sup> Despite variations in symptomatic presentations in different settings, postnatal depression transcends cultural boundaries, a phenomenon which makes it imperative to tackle the disorder cross-

culturally. Understanding the risk factors for postnatal depression is therefore crucial in planning for effective interventions to curb the burden of psychiatric morbidity among vulnerable populations such as pregnant women in resource constrained settings.

Research evidence suggests that there are numerous negative personal, family and child developmental outcomes that are prevalent when a mother has postnatal depression.<sup>2,3</sup> The disorder can have lasting effects on a woman's confidence in herself as a mother and on her infant's social, emotional and cognitive development. It may also adversely affect child rearing

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practices and impacts negatively on breast feeding, sleep routines and post natal care including immunization and child safety practices and the child's physical health.<sup>4,5</sup> Despite the significant burden of Common Mental Disorders (CMD) among women in sub Saharan Africa, data on postnatal depression are limited, especially in settings with a high HIV prevalence.<sup>1</sup> There is continued need to explore risk factors associated with postnatal depression in these settings as such research help in early diagnosis of postnatal depression which makes it possible to implement preventive measures. Such interventions would assist in interrupting the progression of the disease into a more serious form.

Screening for postnatal depression has not yet been integrated into routine antenatal and postnatal care in Zimbabwe despite evidence which suggests that the prevalence of the disorder is high. We therefore set out to determine the prevalence of postnatal depression and to establish factors associated with the condition among women attending post natal services at Mbare Polyclinic.

## Materials and Methods

This study adopted a cross-sectional study design in an attempt to ascertain prevalence of postnatal depression as well as to explore and explicate the correlates of postnatal depression in a population of women attending postnatal care in an urban primary health care facility in Harare, Zimbabwe. This design also allowed for calculation of the prevalence of postnatal depression in the targeted population.

Mbare polyclinic is a primary health care setting located in the southern district of Harare Province in Zimbabwe. The initially ascribed catchment area of the polyclinic is Mbare high-density suburb. However due to its accessibility, the clinic caters for patients from other districts in Harare. The main outcome variable in the study was postnatal depression as defined by the Edinburgh Postnatal Depression Scale (EPDS). Scores on this screening test range between 0 to 30 with those scoring 0-11 being classified as not having postnatal depression and those scoring 12-30 being classified as having postnatal depression. Independent variables explored in this study were mainly maternal age, age of the child, parity, marital status, employment status and level of education.

Using a prevalence of postnatal depression in Zimbabwe of 33% from a recent study by Chibanda *et al*,<sup>1</sup> and assuming 80% response rate, the calculated the sample size was 313. Women who were attending postnatal care services at the polyclinic were selected using simple random sampling with the postnatal register serving as the sampling frame. To be included in this study women had to be aged above 16 years and should have been receiving post natal care up to 1 year post-delivery at Mbare Poly clinic. We excluded those women who had already been diagnosed of postnatal depression.

The Edinburgh Postnatal Depression Scale (EPDS) is a brief 10-item screening tool for postnatal depression that is used globally and has been validated in numerous settings including sub-Saharan Africa.<sup>6</sup> It is the most well-known and evaluated instrument for postnatal depression. The validated Shona version of the Edinburgh Postnatal Depression Scale (EPDS) was used for data collection. The Shona version of the EPDS is a simple, valid and effective screening tool for detection of postnatal depression amongst HIV infected and uninfected postnatal mothers in Zimbabwe.<sup>7</sup>

### Data collection

All the women who were recruited for the study were interviewed by five fourth year medical students who had been trained in the administration and scoring of the EPDS. All the women were interviewed at the poly clinic.

### Data analysis

Univariate analysis was employed where the chi square-tests and Fisher's exact tests were performed to assess significant associations between the outcome and independent variables. The level of significance for all tests conducted was set at 5%. The data were entered in EPI-INFO and then exported to Stata v13 for cleaning and analysis.

### Ethics

The study protocol was reviewed and approved by the Institutional Review Board of the University of Zimbabwe, College of Health Sciences. All the women enrolled into the study gave informed written consent and confidentiality was maintained throughout. Those women who were found to have severe depression, suicidal or psychotic during the study period were referred for specialist psychiatric management at Harare Central Hospital's Psychiatric Unit.

## Results

A total of 313 women were invited to take part in the study and 18 (5.8%) refused to participate for various reasons giving a response rate of 94.2%. The mean age of the group was 25.4 years (SD=5.6 years). The majority (95.6%) of the women were married and 276 (94%) had attained secondary school education. A total of 115 (39%) mothers were primiparous.

Table I summarizes the demographic details of the women in our study.

**Table 1: Distribution of demographic characteristics.**

Characteristics	Depressed EPDS-Score (12-30)	Not Depressed EPDS -Score (0-11)	$\chi^2$ p value
<b>Maternal age group</b>			
<24 years	44	103	0.120
>24 years	57	91	
<b>Marital status</b>			
Married/Cohabiting	97	185	0.523 <sup>†</sup>
Not married	4	9	
<b>Education</b>			
Primary	7	12	0.805
Secondary	94	182	
<b>Residence</b>			
Mbare	83	153	0.500
Outside Mbare	18	41	
<b>Parity</b>			
Primiparous	36	79	0.396
Multiparous	65	115	
<b>Child age group</b>			
≤6 months	53	110	0.489
>6 months	48	84	

<sup>†</sup> Fishers's Exact p value

**Prevalence of postnatal depression.**

Using a cut-off point of 12 on the EPDS, 101 (34.2%) women were classified as having postnatal depression. Of those mothers who were aged 24 years and below (n=147), 29.9% had post natal depression and for those aged above 24 years, the prevalence was 38.5%. Univariate analysis revealed that there was no statistically significant difference between the postnatal depression and women's age (p=0.120). Primiparous women had a prevalence of PPD of 31.3% whilst multiparous women had a prevalence of 36.1% and the difference was not statistically different (p=0.396).

Results showed that although married women had a higher prevalence of postnatal depression (34.4%) as compared to their not married counterparts (30.8%), the difference was not statistically significant (p=0.523). Similarly, results also did not show any significant differences (p=0.805) in the occurrence of postnatal depression between those who had attained primary school education and secondary school education with the prevalence of 36.8% and 34.1% respectively. Those women with children aged 6months or less, the prevalence was 32.5%%, and those whose children were aged above 6months had a prevalence of 36.4% and the difference was not statistically significant (p=0.489). Women who reported that they resided in the Mbare area had a prevalence of 35.2% and those from outside Mbare had

a prevalence of 30.5% and the difference was not significant (p=0.500).

**Discussion**

Although this study was conducted in an urban setting in a high density suburb in Zimbabwe, the results appear valid in that they are congruent with findings from other settings. Our results thus confirm findings previously obtained in other developing countries where high prevalence of postnatal depression was also reported.<sup>1,8</sup> The prevalence of postnatal depression in this study was 34.2% which is comparable to the 33% reported previously in Zimbabwe and is furthermore analogous to the 36% reported by Husain *et al.* in Pakistan although it is slightly higher than the 27.37% reported recently in China.<sup>8,9</sup> It should be noted though that the prevalence established in this study was however much higher than the 16% reported almost 20 years ago in Zimbabwe.<sup>10</sup> These discrepancies could be partly due to the changing patterns of postnatal depression in Zimbabwe especially given the advent of the HIV/AIDS pandemic and the worsening economic challenges the country has been facing over the past few years. These differences could also be attributed the fact that Nhiwatiwa *et al.* in 1998 used the Shona Symptom Questionnaire which was developed to screen common mental disorders and not specifically depression. In light of the findings presented in this paper, it is therefore imperative to integrate screening for depression among pregnant women and those attending antenatal care so that prompt interventions can be instituted in time.

Mental health and physical health are interwoven. The high prevalence of postnatal depression in primary care settings calls for greater need to integrate mental health services into primary care. As demonstrated by a plethora of previous research, perinatal mental illness has adverse effects on both maternal and child health which contributes substantially to the public health burden.<sup>2,5</sup> Thus it is imperative to screen women for depression as they attend antenatal and post natal care. Equally important is the need to institute cost-effective and culturally relevant interventions for those women who would have been screened. One such intervention could be the Group Problem-Solving Therapy (PST), which can be easily instituted with trained peer counsellors and has been proven to be acceptable among women in Zimbabwe as well as being feasible and cost-effective.<sup>11</sup>

Findings from this study showed that there was no association between the presence of postnatal depression and maternal age which compliments findings in a similar setting in Zimbabwe but which contradicts findings reported in other parts of the world.<sup>1,12-13</sup> Although the results in Zimbabwe are consistent and complimentary, it should be noted that both this study and the one by Chibanda *et al* used relatively smaller sample sizes (295 and 210

respectively) which might have affected the statistical power of both studies.<sup>1</sup> Another plausible explanation could be that both studies were conducted in urban areas and utilizing a rural populace may yield different results. Further studies should therefore attempt to focus more on rural populations and utilize large sample sizes.

In this study parity did not seem to have an effect on postnatal depression in women in Zimbabwe, which is in contrast to results obtained in a similar setting close to five years ago where Chibanda *et al* reported that multiparity was significantly associated with postnatal depression.<sup>1</sup> There was also no association between employment status and postnatal depression which contradicts Chibanda *et al* who found that unemployment among the women in their sample was associated with postnatal depression. In light of these discrepancies there is need for further studies in primary care settings which will utilize larger sample sizes.

### Limitations

The main limitation of this study is that the results cannot be generalized to the rest of women in Zimbabwe, as it was urban based and used a relatively small sample size of mothers who were attending one primary care setting. Furthermore, the study did not measure other variables such as mothers' HIV status or exposure to intimate partner violence, factors which have been reported to predispose some women to postnatal depression.

### Conclusion

This study has shown that the prevalence of postnatal depression is high and confirms similar prevalence rates reported previously in primary care settings. However, no significant associations were established with the independent variables. There is continued need to integrate mental health services into primary care in Zimbabwe so as to help reduce the disease burden. Cost effective interventions which target risky groups for peri-natal depression need to be developed and there is need for continual support and strengthening of antenatal care for women in Zimbabwe.

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