

## PREVALENCE AND CORRELATES OF PUERPERAL PSYCHIATRIC MORBIDITY AMONG ATTENDEES OF A TERTIARY HOSPITAL IN NORTHERN NIGERIA

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DOI: 10.5455/ijmsph.2014.210820141

Received Date: 30.07.2013

Accepted Date: 21.08.2014

### ABSTRACT

**Background:** Postpartum psychiatric morbidity is linked to significant adverse consequences.

**Aims & Objectives:** This study aimed to examine the prevalence and correlates of puerperal psychiatric morbidity in a Nigerian hospital.

**Materials and Methods:** This was a prospective study of 203 women. The GHQ-30 was used to screen for psychiatric morbidity while Structured Clinical Interview for DSM IV disorders (SCID) was used to determine specific psychiatric disorders.

**Results:** Twenty five women (13.9%) experienced psychological distress. Psychiatric morbidity was associated with poor cordiality ( $\chi^2 = 62.45$ ;  $p < 0.001$ ), poor support ( $\chi^2 = 95.86$ ;  $p < 0.001$ ), and change in marital relationship ( $\chi^2 = 5.86$ ;  $p < 0.001$ ). Predominant symptoms of anxiety in pregnancy ( $\chi^2 = 4.55$ ;  $p = 0.033$ ) and poor status of the baby ( $\chi^2 = 11.94$ ;  $p = 0.001$ ) were the only significant obstetric factors.

**Conclusion:** Adequate care and interventions tailored to the mental health needs of pregnant women should be provided in the delivery of maternal and child health services in Nigeria in order to reduce the burden of postpartum psychiatric disorders.

**Key Words:** Puerperium; Psychiatric Morbidity; Nigeria

### Introduction

Puerperium is a stressful phase of motherhood that has been associated with adverse physical and psychological phenomenon.<sup>[1]</sup> Despite the frequency of childbearing in everyday life, it remains a significant event, charged with emotion and associated with superstitious and irrational feelings.<sup>[2,3]</sup>

A variety of mental and behavioural disorders including schizophrenia, mild to severe affective disorders, organic psychosis and anxiety disorders occur in different phases of the postpartum period.<sup>[3,4]</sup> In Nigeria, the pattern of these disorders has changed over time, as obstetric care improved. For instance, organic psychoses featured prominently in the 70s, in contrast to the preponderance of schizophrenia and affective disorders reported later.<sup>[5-8]</sup> A wide range of prevalence rates of specific disorders have been reported in previous studies. For example, the proportion of schizophrenia occurring postpartum ranged from 20% to 65%, while depressive disorders ranged from 14.6% to 27.2% in previous studies.<sup>[7-10]</sup> A number of methodological factors may explain the inconsistent findings in previous studies. These include differences in the definition of the puerperium<sup>[11]</sup>, small sample sizes, measures used, setting and time of data collection during postpartum period.<sup>[4,12]</sup>

In understanding postpartum disorders, previous studies have evaluated demographic and clinical factors that may

increase the psychological stress of childbirth. These include vulnerability factors e.g. lack of a confiding relationship with a husband and marital disharmony<sup>[13,14]</sup>, demographic factors e.g. unemployment<sup>[14]</sup>, age range<sup>[5,7,8]</sup>, lower social class<sup>[8]</sup>, being unmarried<sup>[4]</sup>, and obstetric factors e.g. previous histories of spontaneous abortion, neonatal weight, preterm delivery, perinatal death and caesarean section.<sup>[4,9,16]</sup> A recent prospective study suggests that distinct risk factors may be associated with postpartum psychiatric morbidity in some cases.<sup>[17]</sup>

Psychiatric morbidity in puerperium may have profound consequences on health of the mother, child and other family members.<sup>[18,19]</sup> For example, mothers' ill health may impair bonding. It may limit maternal facilitation of school attendance and childhood friendships.<sup>[20]</sup> It may also result in marital breakup and poor breastfeeding practices with adverse effects on infant development.<sup>[21]</sup>

There is a need to further evaluate psychosocial factors associated with postpartum psychiatric morbidity in Nigeria. Previous local studies were significantly limited by their retrospective designs, small samples and exploration of limited factors.<sup>[6-8,22]</sup> In view of the millennium development goal of reducing maternal morbidity in Nigeria, findings from this study may have implications for policies regarding maternal and child care programmes in general.

This study is aimed at examining the socio demographic and obstetric factors associated with psychiatric morbidity in puerperium.

## Materials and Methods

### Setting and Participants

The study was conducted at the University of Ilorin Teaching Hospital, Ilorin, Kwara State. The participants were women available for an initial interview within 48 hours of delivery, over a 3 month period in 2003. Subjects on medication linked to cognitive impairment or depressive symptoms such as antihypertensive, sedatives and hypnotics, were excluded. Ethical approval was obtained from the ethical review board of the University of Ilorin Teaching Hospital. Informed consent was obtained from participants.

### Measures

*(a) Data Collection Questionnaire:* A questionnaire designed by the one of the researchers was used to collect data from the respondents and case notes. These covered the followings: Sociodemographic data such as age, occupation, level of education, religion, and marital status. Obstetric history consisting of pregnancy, labour and delivery, status of the baby, previous psychiatric illness and self-reports of emotional states during pregnancy.

*(b) General Health Questionnaire-30 (GHQ-30):* This is a widely used self-administered screening instrument designed to screen the psychiatric morbidity in clinical and community settings.<sup>[23]</sup> It identifies depression, anxiety, social impairment and hypochondriasis. Each item has four responses "not at all", "the same as usual", "rather more than usual" or "much more than usual". The General Health Questionnaire scoring method 0-0-1-1 was adopted and each item was scored 0 (Not at all or the same as usual) or 1 (Rather, or much more than usual). A cut-off of 4 was used to determine cases in this study.<sup>[24]</sup> The GHQ-30 has good psychometric properties.<sup>[23]</sup>

*(c) Structured Clinical Interview for DSM IV Diagnosis (SCID):* This is a semi-structured clinician administered interview schedule for making Axis I diagnoses according to the fourth edition of Diagnostic and Statistical Manual (DSM IV). It has an overview that focuses on patient's main psychiatric problems followed by modules that cover mania, depression, psychosis, substance abuse disorder, somatization disorders, eating disorders and

adjustment disorder.<sup>[25]</sup> The researcher was trained in the use of SCID by a consultant psychiatrist and certified trainer at the University College Hospital Ibadan, Nigeria.

### Procedure

After explaining the objective of the study to the participants, consent was obtained and the initial interview was conducted. The initial psychiatric interview involved the administration of sociodemographic questionnaire and GHQ-30. This occurred before the subjects were discharged from the hospital. The follow up interview was done eight weeks post- partum, in view of peak incidence of psychiatric disorders reported during this period. The second interview occurred in two settings: postnatal or immunization clinic and during home visits to trace clinic defaulters. A two staged method was used during the follow up interview. The GHQ-30 was administered on all follow-up participants. Persons screened as having psychiatric morbidity with the GHQ-30 (1<sup>st</sup> stage) received a further assessment with SCID (2<sup>nd</sup> stage) to determine specific psychiatric disorders. This was also supplemented by clinical interviews following the guidelines of DSM-IV axis IV (Psychosocial and Environmental Problems), in the assessment of the psychosocial factors at the second interview.

### Data Analysis

All data were analyzed using the EPI info version 6.0 computer software. Frequency tables were generated, cross tabulation and Chi-square figures (with Yates Correction where applicable) were obtained from the analysis to determine sociodemographic and clinical factors associated with psychiatric morbidity. The level of statistical significance was set at 5%.

## Results

Out of the 203 patients initially recruited, 180 patients (88.7%) were available for further interview at follow up. Twenty-three patients (11.3%) had moved from known addresses. The mean age of the respondents was 28.2 years. Majority of the respondents were aged 20-29 years (58.4%), married (90.6%), living within monogamous settings (85%), reported having a cordial marital relationship (91.6%), and had experienced no change in marital relationship in past 6 months (89.9%) (Table 1). Two (1.1%) had a previous history of mental illness, although they had been in remission in the past

12 months. In terms of obstetric factors, majority had planned the pregnancy (83.9%), had vagina delivery (76.1%), were multiparous (52.9%) and had self-reports of prenatal anxiety without postpartum complications (86.1%) (Table 2).

**Table-1: Sociodemographic characteristics and Psychiatric morbidity in Puerperium**

Variable	Total (n=180)	Morbidity GHQ > 4 (n=25)	No Morbidity GHQ ≤ 4 (n=155)	
Age (Years)	10-19	6 (3.3)	1 (4)	5 (3.2)
	20-29	105 (58.4)	14 (56)	91 (58.7)
	30-39	65 (36.1)	10 (40)	55 (35.8)
	40-49	4 (2.2)	-	4 (2.6)
Religion	Christianity	83 (46.1)	11 (44)	72 (46.5)
	Islam	97 (53.9)	14 (56)	83 (53.5)
Marital Status	Single	17 (9.4)	5 (20)	12 (7.7)
	Married	163 (90.6)	20 (80)	143 (92.3)
Marital setting	Monogamy	153 (85)	21 (84)	132 (85.2)
	Polygamy	27 (15)	4 (16)	23 (14.8)
Relationship with Husband	Cordial	165 (91.6)	11 (44)	154 (99.4)
	Not Cordial	15 (8.4)	14 (56)*	1 (0.6)
	Hostile	-	-	-
Support Level	Good	73 (40.6)	2 (8)	71 (45.8)
	Average	88 (48.9)	5 (20)	83 (53.5)
	Poor	19 (10.5)	18 (72)*	1 (0.6)
Change in marital relationship	Yes	18 (10.1)	17 (68)*	1 (0.6)
	No	160 (89.9)	8 (32)	154 (99.4)

\*  $P < 0.001$

**Table-2: Obstetric factors associated with psychiatric morbidity at 8 weeks postpartum**

Variable	Total (n=180)	Morbidity GHQ > 4 (n=25)	No Morbidity GHQ ≤ 4 (n=155)	
Parity	Primiparous	79 (43.9)	9 (36)	70 (45.2)
	Multiparous	95 (52.8)	14 (56)	81 (52.1)
	Grand multiparous	6 (3.3)	2 (8)	4 (2.7)
Pregnancy planned	Yes	151 (83.9)	16 (64)	135 (86.1)
	No	29 (16.1)	9 (36)	20 (12.9)
Hospitalization	Yes	12 (7.1)	4 (16)	8 (5.2)
	No	168 (92.9)	21 (84)	147 (94.8)
Predominant mood during pregnancy	Depression	7 (3.9)	1 (4)	6 (3.9)
	Anxiety	77 (42.8)	15 (60)	62 (40)*
	Mixed	60 (33.3)	4 (16)	56 (36)
Baby's status	Others	36 (20)	5 (20)	31 (20)
	Good	133 (73.9)	12 (48)	121 (78)
Duration of labour	Poor	47 (26.1)	13 (52)	34 (21.9)**
	< 12 hours	177 (98.3)	24 (96)	153 (98.7)
Type of delivery	> 12 hours	3 (1.7)	1 (4)	2 (1.3)
	Vaginal	137 (76.1)	17 (68)	120 (77.4)
	Forceps/Vacuum	2 (1.1)	1 (4)	1 (0.6)
Postpartum complications	Caesarean	41 (22.8)	7 (28)	34 (21.9)
	Yes	25 (13.9)	6 (36)	19 (12.2)
Postpartum complications	No	155 (86.1)	19 (64)	136 (87.7)

\*  $P < 0.05$ ; \*\*  $P < 0.001$

Significant association with psychiatric morbidity at the second interview were found in those with poor cordiality ( $\chi^2 = 62.45$ ;  $p < 0.001$ ), those with poor support ( $\chi^2 = 95.86$ ;  $p < 0.001$ ), and those with a change in marital

relationship within six months prior to the study ( $\chi^2 = 5.86$ ;  $p < 0.001$ ). There was no significant difference between the occurrence of psychiatric morbidity and type of relationship ( $\chi^2 = 1.10$ ;  $p = 0.294$ ) (Table 1). Predominant symptoms of anxiety in pregnancy ( $\chi^2 = 4.55$ ;  $p = 0.033$ ) and poor status of the baby ( $\chi^2 = 11.94$ ;  $p = 0.001$ ) were the only significant obstetric factors (Table 2).

Twenty five respondents (13.9%) had psychiatric morbidity. All those who were 'GHQ positive', were assessed with the SCID. Twenty-two (88%) had a moderate depressive illness, while three (12%) were cases of paranoid schizophreniform disorder.

## Discussion

The prevalence and pattern of specific mental disorders found in the puerperium, agrees with earlier studies in western countries and Nigeria.<sup>[7]</sup> Change in marital relationship, poor support and low level of cordiality were found to be significantly associated with psychiatric morbidity in puerperium. This agrees with previous local studies.<sup>[26]</sup> It appears to support the observation, that a lack of a confiding relationship is an independent risk factor for postpartum morbidity.

These issues impinge directly on the quality of the marital relationship, as the assumption that one's spouse should be a confidant, is one of the reasons for marriage. Subsequent loss of such confiding in the husband could be a risk for developing psychiatric disorder in the puerperium.<sup>[27]</sup>

The finding of a significant relationship between morbidity and predominance of anxiety symptoms during pregnancy, is consistent with previous studies.<sup>[28]</sup> Anxiety during pregnancy has also been associated with negative labour and delivery outcomes.<sup>[29]</sup> It is possible that prenatal anxiety and attitude, e.g. worrying about the outcome of pregnancy, acts as a fertile substrate for other factors resulting in psychiatric morbidity in puerperium.<sup>[30]</sup>

The finding of a relationship, between psychiatric morbidity and birth of stillborn or ill babies, may be explained by the psychological processes often reported to accompany "loss events". Feelings of guilt, shame, anger, sadness occur following the birth of a deformed, ill or deceased baby.

The limitation of our study includes the use of hospital based samples. We followed up the participants for a brief period which provided a limited picture of the interplay of those factors in the relationship, with the incidence of psychiatric disorders in puerperium. We did not assess psychosocial variables with standardized instruments. We did not include participants that were "GHQ negative" for specific disorders. The strengths of the study lies in its prospective design, modestly large sample size and evaluation of specific disorders with standardized instruments.

The findings of this study highlight the need to strengthen existing maternal mental health programs, with a view to reduce the burden of postpartum psychiatric morbidity. Antenatal clinic provides an opportunity for assessing and prescribing interventions, e.g. marital therapy for these risk factors. Obstetricians may seek out patients with significant psychological symptoms in pregnancy, and follow them up to determine whether they have intervening social problems, which may increase the risk of psychiatric morbidity of postpartum onset.<sup>[18]</sup> Appropriate post-discharge follow up of persons with postpartum psychiatric disorders, may include information sharing sessions and supportive counselling.<sup>[28,30]</sup> This could involve exploring the dynamics of marital relationship, and paying special attention to women who experienced negative outcomes, in the context of surgical interventions. They should be given special attention, especially when the baby is stillborn or dies after such interventions. The predominance of psychological and social issues require a multi-disciplinarian approach involving the obstetricians, mid-wives, psychiatrist, clinical psychologists and social workers. Future research should focus on culturally appropriate and effective interventions for preventing and treating postpartum psychiatric disorders.

## Conclusion

Adequate care and interventions tailored to the mental health needs of pregnant women should be provided in the delivery of maternal and child health services in Nigeria in order to reduce the burden of postpartum psychiatric disorders.

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**Cite this article as:** Oyewole AO, Adelufosi AO, Abayomi O. Prevalence and correlates of puerperal psychiatric morbidity among attendees of a tertiary hospital in Northern Nigeria. *Int J Med Sci Public Health* 2014;3:1402-1406.

**Source of Support:** Nil

**Conflict of interest:** None declared

IJMSPH