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The maternity blues in Western Nigerian women: Prevalence and risk factors

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KEY WORDS

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Objective: The study aims to investigate the prevalence of maternity blues and examine the risk factors involved in a group of Nigerian postpartum women.

Study design: Five hundred and two postpartum women who had a normal vaginal delivery in 5 health centers in Ilesa Township were assessed with the Maternity Blues Scale daily for the first 10 days' postpartum. They also filled a structured questionnaire detailing their sociodemographic and obstetric histories.

Results: The prevalence of maternity blues was 31.3%, and the symptoms peaked at the fifth day postpartum. The predictors of maternity blues include significant mood change during the pregnancy (OR 3.17, 95% CI 1.42-6.11), past admission during the pregnancy (OR 3.21, 95% CI 1.78-5.39), female baby (OR 2.82, 95% CI 1.53-4.12), and single mothers (OR 3.35, 95% CI 2.26-5.64).

Conclusion: The prevalence and the significant risk factors for maternity blues seem to differ across culture. Obstetricians and midwives have to consider this in strategies for prevention and management of postpartum depression in new mothers in this environment.

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Maternity blues, otherwise called “postnatal blues,” or “baby blues,” is a transitory phenomenon of mood changes that may begin within the first few days after delivery and last from 1 day through the first 10 days' postpartum or longer. It is characterized by a range of symptoms, most commonly a lability of mood, between euphoria and misery, heightened sensitivity, tearfulness, often without associated sadness, restlessness, poor concentration, anxiety, and irritability.¹

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Maternity blues should remit within the first 10 days.² Obstetricians and midwives do not usually follow up women who are recognized as having blues. Evidence is mounting of an associated increased risk of postpartum depression in women who experienced maternity blues.²⁻⁴ Although this association still remains controversial, it is known that most women with postnatal depression (PND) have had the blues, although a vast majority of women who had the blues do not develop PND. Proactive identification of, and early intervention for, postpartum depression are important to safeguard maternal and family's psychosocial well being.

Maternity blues have been studied in a variety of countries and cultural groups, including the United

States,⁵ Britain,²⁻⁴ Poland,⁶ Japan,⁷ Jamaica,⁸ and Australia.⁹ Although no standard definition has been used across studies, the prevalence has been fairly consistently reported as between 40% and 60% in the Western countries. A lower incidence of 15% was, however, reported in Japan,⁷ a non-Western culture. This raises a question whether the maternity blues are indeed a cross-cultural phenomenon as earlier claimed. Africans are known to somatize their symptoms,¹⁰ and place much emphasis on childbearing. It has been asserted that few rituals exist in Western society to signify the changes in women's identity, roles, and status after childbirth compared with more traditionally structured societies.¹¹ It is also claimed that the effect of childbirth relates to the society and culture's response to parenthood and the existing family structure.¹²

The coincidence of the maternity blues with major hormonal changes associated with parturition has led to investigations of a biological basis to the condition, but findings are generally inconsistent.¹ There is also no consistent evidence of contribution of possible risk factors like parity,⁴ obstetric factors,⁹ place of delivery,⁴ or personal/family history of mood disorders¹³ to the incidence or severity of the condition.

Both manual and electronic searches revealed few studies done on maternity blues in Africa. An early study in East Africa¹⁴ reported an incidence of 76%. The study, however, had used a retrospective design, had a small sample size, and had interviewed the mothers at different periods. The study had examined only 50 women, with mothers asked to subjectively recall their experience with the blues as late as 16 weeks' postpartum. The mothers were interviewed within 2 to 16 weeks' postpartum. Recent African studies had been done in Burkina Faso¹⁵ and Nigeria,¹⁶ where primiparity and birthing a nonmale child was associated with early postpartum mood problems. These studies used few sample sizes, and used instruments designed for measuring depression, not maternity blues.

The objectives of this study were to investigate the prevalence of maternity blues and identify the risk factors involved in a group of Nigerian postpartum women.

Material and methods

Subjects

For 6 months, all women ($n = 582$) who delivered at the 5 health centers in Ilesa were recruited for the study. The women were recruited on the first day after delivery. Fifty-two women were excluded from the study. They included women who delivered by cesarean section because they were not sufficiently recovered from such recent surgery to feel able to participate, women who are critically ill, do not speak the local Yoruba language or

English, do not reside in Ilesa Township, or who are unable to give informed consent.

Testing procedure

Informed consent was obtained from the participants after the aims and objectives of the study had been explained. The Ethics and Research Committee of the hospitals approved the study protocol. The postpartum mothers were first assessed with a structured questionnaire asking about sociodemographic details (age, marital status, highest educational attainment, socioeconomic status), pregnancy and gynecologic details (time of last confinement before the present delivery, parity, place of antenatal care, hospital admissions during the index pregnancy, whether pregnancy was planned or not, mood problems during the pregnancy, history of premenstrual symptoms), delivery details (gestational age at delivery, mode of delivery, length of delivery, analgesia during labor, fear of labor), and baby's details (baby's weight at delivery, baby gender).

The mothers completed either the English or translated Yoruba version of the Maternity Blues Scale (MBS) from day 1 to day 10. The MBS,² which is composed of 13 symptoms, is a self-rated scale. The symptoms include depression, crying, anxiety, calmness, restlessness, exhaustion, dreaming, appetite, headache, irritability, poor concentration, forgetfulness, and confusion. Each item is allocated scores between 0 to 2, depending on the presence and severity of the symptoms, with 0 meaning absent, 1 meaning mild/probably present, and 2 meaning definitely present. The highest score obtainable was 26 (all the items definitely present). Because most studies have shown that maternity blues remit within the first 10 days,² the scale was completed every day for the first 10 days' postpartum.

A case of blues was defined as a score of 8 or above on any of the first 10 days' postpartum. The MBS had a reliability of 0.75 and validity 0.80.² It was used in several studies in different countries.¹⁷⁻¹⁹ Although some depression scales, such as the Zung Self Rating Depression Scale,²⁰ Beck's Depressive Inventory,²¹ and Edinburgh Postnatal Depression Scale²² were used in some studies to measure early postpartum mood, there are 3 scales that have been designed specifically for measuring the blues. They include Pitt's Blues Rating Scale,²³ Kennerly's Blues Questionnaire,²⁴ and the MBS.² Out of the 3, the MBS is the most widely used and accepted across cultures.

The MBS was translated to Yoruba by a psychiatrist and a linguist. Precise idiomatic equivalents were considered as far as possible. The back translation, which was independently performed by another set of psychiatrists and linguists blind to the first translation, was compared and found to be satisfactory. The translated version was pretested on 20 postpartum and 20

nonpostpartum women. Results from the pretest were used to modify the wordings of the translated MBS. The literate women completed the questionnaire themselves. For those not literate, one of the trained research assistants read out the questions to them and tick the answers. Because the women were discharged within 3 days of delivery, research assistants had to go to their homes to collect the questionnaires daily until the 10th day postdelivery.

Statistical analysis

The statistical package for the social sciences (SPSS, Chicago, IL) program was used for the analysis. Group comparisons were made by unpaired sample *t* test, chi-square test, and Fisher exact test, with $P < .05$ considered significant. Correlations were calculated by Spearman rank coefficient, and stepwise multiple regression analysis done for significant variables.

Results

Sociodemographic analysis of the participants

Of the 582 women recruited, 523 agreed to participate. Of this, only 502 returned a completed set of MBS, giving a response rate of 86.3%. The average age of the mothers was 29.37 (SD = 11.49). Sixty-one (12.2%) of the mothers were single, while most (65.4%) had only secondary school education. They are mostly (54.3%) of low socioeconomic status. There are 98 (19.5%) primiparous women.

Incidence, timing, duration, and manifestation of the blues

Maternity blues was assessed as having occurred when 8 points or more were scored on the MBS on at least 1 out of the 10 days postpartum. According to this criteria, 157 women (31.3%) experienced maternity blues in at least 1 out of the first 10 days of delivery. The analysis of daily mean scores of postpartum women on MBS showed that the mean MBS scores peaked on day 5 (5.25), and was lowest on day 10 (3.09). The difference between the mean scores between the women who experienced maternity blues and the women who did not was found to be statistically significant ($T = 25.56$, $df = 9$, $P < .001$). There were no significant differences between the scores of those who completed the English version, and those who completed the Yoruba version of the MBS.

Women experience the blues for differing periods of time in the first 10 days postpartum. Eighty-seven (55.4%) experienced blues for 1 to 2 days, 34 (21.7%) had blues for 3 to 4 days, 19 (12.1%) had blues for 5 to 6 days, while 17 (10.8%) had blues for more than 6 days.

Symptoms like depressed mood, crying, anxiety, and restlessness peaked on the 5th day, while tension, exhaustion, dreaming, and headache peaked on days 2 and 5.

Risk factors

The risk factors were grouped into sociodemographic, pregnancy related, delivery related, and baby related. When analysis of variance and correlations were done, the variables significantly associated with a score of > 8 on the MBS scale on any of the 10 days' postpartum were marital status ($P = .002$), parity ($P = .045$), hospital admission during the pregnancy ($P < .001$), mood problems during the pregnancy ($P < .001$), baby's gender ($P < .001$), and baby's birth weight ($P = .032$). These variables were entered into a multiple regression analysis and odds ratio and 95% CI calculated for the predicting variables. The predicting variables include significant mood change during the pregnancy (OR 3.17, 95% CI 1.42-6.11), past admission during the pregnancy (OR 3.21, 95% CI 1.78-5.39), female baby (OR 2.82, 95% CI 1.53-4.12), and single mothers (OR 3.35, 95% CI 2.26-5.64).

Comment

The prevalence of maternity blues in our study was 31.3%, which is similar to the rate of 31% found in Poland,⁷ less than 76% in Britain,² 41.8% in the United States,⁵ but higher than the rate found in Japan.⁸ This further supports the notion that the prevalence of postnatal mood disorders differs across cultures. Comparing prevalence rates between studies, however, is only meaningful if the assessment of 'caseness' has used the same method. This study used a score of 8 or more on any of the first 10 days postdelivery. Some of these other studies assessed for only 5 to 6 days postpartum, or had not used the MBS. Our findings show a peaking of symptoms on day 5, which is consistent with other studies.^{2,4} There is also a small but significant peak on day 2, which may be a dysphonic response to stress of childbirth.

A significant mood change in pregnancy was the major risk factor for maternity blues in this study (OR 3.17, 95% CI 1.42-6.11). This could be a carry over of mood problems in pregnancy now affecting the immediate postpartum. This was widely found in other studies.⁷⁻¹¹ Poor health during pregnancy and stress of pregnancy could account for the high prevalence of maternity blues in women admitted during pregnancy (OR 3.21, 95% CI 1.78-5.39). Most African women do not attend any antenatal clinic, thereby making early detection of health problems in pregnancy difficult. Ranges of medical conditions are likely to be associated with mood changes occurring at other times in the life

span, including severe infections, anemia, electrolyte abnormality, and the need for medications.

An interesting finding in this study is the significance of the baby's gender to occurrence of maternity blues. This is in agreement with other earlier studies in Burkina Faso and Nigeria,^{15,16} where birthing of a nonmale child was found to be a risk factor for depressive symptoms in early postpartum periods. Africans, especially Nigerians, have a deep-rooted preference for male children. Women are blamed for the gender of the baby, so giving birth to females, especially if the woman is delivering for the first time, or having not had a male child could be threatening.

Single mothers were found to be at a higher risk of maternity blues in this study (OR 3.35, 95% CI 2.26-5.64). This is also in agreement with earlier African studies.^{15,16} Lack of spouse support may be an important factor here. Most of these mothers may also be primiparous and of younger age group. An increased rate of unplanned and unwanted pregnancies may also be common in this group. All of these may combine to lower the mood of the new mother.

This study was limited by the high rate of exclusion (52) and drop out (28). It considered only women who delivered in the 5 government hospitals in Ilesa town alone, while it is known that most African women are delivered at home or by the traditional birth attendants. It did not include women who had cesarean section. The specific role of operational delivery should be included in future investigations. The strength in this study, however, lies in the large sample size and its multi-centered nature (with 5 participating hospitals).

This study has shown that the prevalence of maternity blues differs across culture, and the risk factors are also significantly different. Consideration of these factors by the attending obstetric and pediatric teams will go a long way in promoting postnatal maternal health.

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