

Frequency of Mental Disorders in the Postpartum Period at the Community and University Health Center of Konobougou

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How to cite this paper: Diaby, A., Goita, I.S., Coulibaly, S.P., Sidibé, S., Sidibé, D.M., Coulibaly, M.B., Barry, K., Sissoko, A.-H.D.G., Wilikpan Okedy, C.P., Traore, K., Sandji, O., Tembiné, I. and Dicko, F. (2024) Frequency of Mental Disorders in the Postpartum Period at the Community and University Health Center of Konobougou. *Open Journal of Psychiatry*, 14, 495-503.

<https://doi.org/10.4236/ojpsych.2024.146030>

Received: September 10, 2024

Accepted: November 5, 2024

Published: November 8, 2024

Abstract

Introduction: Postpartum mental disorders are psychopathological states that affect women after childbirth. These disorders often negatively impact a child's mental health and the mother-child bond. The objective of this work was to determine the frequency of mental disorders during the postpartum period at the University Community Health Center of Konobougou in Mali. **Methods:** This descriptive cross-sectional study took place from March 1 to July 31, 2022, for four months. **Results:** The study involved 201 immediate postpartum women at the Konobougou Community and University Health Center. The 20-35 age group accounted for 70.00% of the population; the average age was 24 years $\pm$ 5.95 years, with a range of 15 to 45 years. Married women made up 96.00% of the sample. The overall frequency of mental disorders was 15.92%. The mental disorders recorded were postpartum depression (5.47%), anxiety disorders (3.98%), postpartum blues (5.47%), and posttraumatic stress disorder (0.50%). Puerperal psychosis was found in 0.50% of the participants. **Conclusion:** This

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study revealed a high prevalence of mental disorders among postpartum women in Konobougou, Mali. During postnatal consultations, health workers should prioritize screening for mental health disorders.

Keywords

Mental Disorders, Postpartum, Mali

1. Introduction

Postpartum mental disorders are psychopathological conditions affecting women after childbirth. These can extend to the first year of the child's life and involve childbirth, breastfeeding, and weaning stages [1]. These disorders often negatively impact a child's mental health and the mother-child bond.

A survey conducted from March 2017 to December 2018 in China included 950 couples in the postpartum period. The survey showed that 4.4% of the couples showed depressive symptoms in both the wife and the husband [2].

A portion of pregnant women in the United Kingdom and France suffered from mental health issues, according to the studies. Bauer, A. *et al.* estimated that approximately 20% of women develop mental disorders during the perinatal period in the United Kingdom [3]. In the French Longitudinal Study from Infancy Onwards (ELFE), 12.5% of pregnant women reported antenatal psychological distress in France [4]. These perinatal mental disorders include depressive disorders, anxiety disorders, and severe mental disorders like bipolar disorder, schizophrenia, severe personality disorders, and addictions [5].

In a French study, 25% of women suffering from psychological distress reported benefiting from a consultation with a mental health specialist [4]. However, a significant proportion of these disorders are undiagnosed and untreated [4].

In underdeveloped countries, the demand for mental health consultations for pregnant women is rising. In Senegal, Gueye *et al.* reported that after more than three years of psychiatric hospitalization in the women's service, puerperium psychosis accounted for 27.5% of cases [6]. In 2003, Diarra, S. recorded that 7.5% of puerperal psychosis cases were identified in the psychiatry department of Point G Hospital in Mali, out of 1,656 outpatient consultations [7].

The need for treatment of mental disorders in perinatal care is acute in Mali. Prenatal and postnatal consultations are conducted by midwives and obstetric nurses. These health workers are not well-equipped to detect and treat mental disorders. Frontline caregivers, such as nurses, midwives, and doctors, must play a critical role in the screening, diagnosis, care, and referral of women with peripartum mental health disorders.

The objective of this work was to study the clinical and epidemiological aspects of mental disorders during the postpartum period in a primary medical area in Mali.

2. Methodology

2.1. Study Framework

The study took place in the health area of the University Community Health Center of Konobougou, Mali. The Konobougou Health Area is located in the town of Konobougou. It was created in 1991 and covers 21 villages: 6 within a 5 km radius, 14 within a 15 km radius, and 1 within a 25 km radius. It has a total population of 28,178 as of 2022.

2.2. Type and Period of Study

This was a descriptive cross-sectional study conducted from March 1, 2022, to July 31, 2022 (four months).

2.3. Study Population

We included women who gave birth during the study period, resided in the Konobougou health area, and agreed to participate. Additionally, women who gave birth before the study's start but were in the postpartum period (6 to 8 weeks after childbirth) according to World Health Organization (WHO) criteria, who also resided in the Konobougou health area and consented to participate, were included.

2.4. Data Collection

For data collection, we chose convenience sampling, recording all available and consenting postpartum women during the four-month collection period. Data collection was conducted at the Community Health Center and the sites of the Community Health Workers, which are annexes of the health center.

To achieve our objectives, we used a screening tool for mental disorders designed by the Department of Family Medicine/Community Medicine of Mali in collaboration with the Department of Psychiatry of Mali. The tool references the "Adaptation of the World Health Organization's mhGAP Intervention Guide for Addressing Mental, Neurological and Substance Use Disorders in Non-Specialized Health Care Settings, Version 1.0" for case definition during a clinical meeting in which the psychiatrist and other doctors participate to validate the diagnosis [8].

Recruitment units included the postpartum suite, postnatal consultations, the expanded program on immunization, the dispensary, and the annex sites managed by community workers.

An interviewer responsible for administering the questionnaire was present in the health center 24 hours a day during the study. The investigation was coordinated with the center manager and the maternity team. After each delivery in the postpartum unit, the investigator was informed. After obtaining the mother's verbal consent, the interviewer briefly explained the importance of screening for mental disorders and how the questionnaire could help, before proceeding with its administration. Recruitment in the other units followed similar procedures.

2.5. Data Analysis

Data collection, processing, and analysis were conducted using Access, Excel 2007, Epi Info 7.2, and Stata 15.1.

The analysis included a description of the study population. Quantitative variables are expressed as the mean and standard deviation, while qualitative variables are expressed as proportions. The survey form for recording information to facilitate data analysis was divided into thirteen items: sociodemographic data, medical history, joint socioeconomic data, nature of the request, clinical data, popular concepts, period of occurrence, factors related to psychological vulnerability, biological factors, gynecological and obstetrical factors, psychosocial factors and personal history, physical examination, complementary examinations, and management.

2.6. Ethical Aspects

The study was approved by the health authority of the Konobougou health area. Participation was voluntary after obtaining informed verbal consent. The anonymity of the questionnaire ensured confidentiality.

3. Results

Our study assessed mental disorders in 201 postpartum women at a primary healthcare center, revealing an overall frequency of mental disorders at 15.92%.

The mean age was 24 years $\pm$ 5.95 years, with a range of 15 to 45 years. The 20 to 35 age group was the most represented at 70%, and married women accounted for 96%. Of the participants surveyed during the study, 54.72% were not in school, and 81.09% were housewives (**Table 1**).

Table 1. Sociodemographic characteristics.

Sociodemographic characteristics		Frequency (n = 201)	Percentage (%)
Age range	Less than 20 years old	54	27.00
	20 to 35 years old	140	70.00
	Over 35 years	7	3.00
Marriage status	Bride	193	96.00
	Bachelor	8	4.00
Educational attainment	Out of school	110	54.73
	Primary	60	29.85
	Secondary	30	14.92
	Upper	1	0.50
Profession	Housewife	163	81.09
	Salesperson	20	9.95
	Student/Pupil	9	4.48
	Other	9	4.48
Total		201	100

The majority of participants were surveyed in the postpartum period (57.21%), followed by postnatal consultation (ONCP) and/or during the expanded program on immunization (EPI) (37.31%) (**Table 2**).

Clinically, within our study population, the screening tool allowed us to diagnose postnatal depression in 5.47% of the patients. The signs and symptoms were dominated by depressed mood and/or persistent sadness in 100% of the patients, decreased interest or pleasure in previously enjoyable activities and sleep problems in 90.90% of the patients, and loss of energy or fatigue in 63.60% of the patients (**Table 3**).

A diagnosis of postpartum blues was suggested for 5.47% of the study participants. Mood lability was present in 100% of postpartum blues patients. Hypersensitivity and irritability were present in 45.50% and 54.50% of the patients, respectively. All signs and symptoms of postpartum blues resolved within two weeks of onset in 100% of patients.

Among the psychological disorders identified through the screening tools, anxiety was mentioned in 3.98% of participants. It manifested as anticipation and/or fear related to one or more perceived threatening situations in 100% of cases, followed by physical symptoms such as muscle tension, a sensation of a lump in the throat, tremors, rapid heart rate, and nervousness in 87.50% of cases, and sleep difficulties in 75% (**Table 3**).

Posttraumatic stress disorder and puerperal psychosis were found in 0.50% of the study participants. Their clinical manifestations were dominated by reactions to one or more past events that aroused feelings of fear, horror, or helplessness due to a threat to one's life or the lives of others. These events were constantly associated with repetitive and intrusive memories, nightmares, flashbacks, significant distress related to cues evoking past events, sleep difficulties, irritability or anger, difficulty concentrating, hypervigilance, and exaggerated startle responses in the case of posttraumatic stress.

Abnormal or disorganized behavior, delusions, hallucinations, significant social or activity dysfunction, and loss of willpower are characteristics of puerperal psychosis.

Table 2. Distribution of participants by mode of enrollment.

Enrollment Mode	Frequency	Percentage (%)
Postpartum suite	115	57.21
ONCP*/EPI**	75	37.31
Site CHW***	6	2.99
Childhood diseases	3	1.49
Hospitalization of the mother	2	1
Total	201	100

*ONCP: postnatal consultation. **EPI: expanded programme on immunization. ***site CHW: sites of the Community Health Workers.

Table 3. Distribution by clinical characteristics.

<i>Characteristics</i>	<i>Frequency (n)</i>	<i>Percentage (%)</i>
Type of mental health disorder (n = 32)*		
Depression	11	5.47
Anxiety	8	3.98
Postpartum blue	11	5.47
Posttraumatic stress disorder	1	0.50
Puerperium psychosis	1	0.50
Signs of depression (n = 11)**		
Depressed mood, persistent sadness	11	100
Decreased interest or enjoyment in previously interesting activities	10	90.90
Loss of energy or fatigue	7	63.60
Sleep problems	10	90.90
Appetite problems	6	54.50
Signs of anxiety (n = 8)***		
Anticipation and/or fear related to one or more situations perceived as threatening	8	100
Possible physical symptoms, including muscle tension, a lump in the throat, tremors, tachycardia, and nervousness	7	87.50
Sleep difficulties	6	75.00
Difficulty concentrating	2	25.00
Signs of Post-Partum Blue (n = 11)****		
Labile-mood	11	100
Hypersensitivity	5	45.50
Irritability	6	54.50
Resolution	11	100

*The percentage of different types of mental health disorders was calculated using the total of participants (201). **The percentage of different signs of depression was calculated using the total of patients with depression (11). ***The percentage related to different signs of anxiety was calculated using the total number of patients with anxiety (8). ****The percentage of different signs of post-partum blue was calculated using the total of patients with post-partum blue (11).

4. Discussion

The screening tool used in this study allowed us to diagnose psychological disorders such as puerperal psychosis, post-traumatic stress, postpartum blues, anxiety, and depression, with frequencies ranging from 0.50% to 5.47%. The mean age was 24.01 ± 5.95 years, with ages ranging from 15 to 45 years. Female participants between 20 and 35 years accounted for the majority of the study participants (70.00%). This could be explained by the fact that the majority of the Malian population is young (52.00%) [9]. This result was comparable to that of Diarra, S. in Mali, who reported a prevalence of 62.10% [7]. However, Tiji, A. in Morocco [10]

reported a predominance in the 25-35 age group. Togola, H. scored 47.70% for the 21-30 age group [11]. This difference could be explained by the choice of age group boundaries in different studies.

In the present study, 96% of the participants were married. This result was similar to those of Diarra, S. and Togola, H., who reported 87.9% and 88.1%, respectively [7] [11]. These results could be explained by the early age at which women enter marriage in Mali. According to the 5th edition of the Demographic Health Survey, 53% of women were already in a union before the age of 18 [9].

In Mali, two-thirds, or 66.00% of women have no education [9]. Of the participants interviewed in our study, 54.72% had no education, and 81.09% were housewives. These results were comparable to those of Togola, H., who reported 58.40% and 83.90%, respectively [11].

The frequency of postnatal depression in our study was 5.47%. This result was close to that of Massoubre, C., who reported 7% minor depression and 3% major depression in women [12]. However, this percentage was lower than that of Bydlowski, S., who reported 13% postpartum depression [13], and Gavin, who reported 19.2% (95% CI = 10.7 - 31.9%) depression within 3 months of childbirth. Over the same period, the prevalence of major depressive episodes was 7.1% (95% CI = 4.1 - 11.7%) [14]. This difference could be explained by the methodology used, and in our study, there were no cases of major depression. The quality of psychosocial support and community anchoring that postpartum women enjoy in this community could explain this.

Anxiety affected 3.98% of our participants. This rate was comparable to that reported by Wenzel, A., who noted that the prevalence of social anxiety disorders in the early postpartum period ranged from 0.2% to 6.5% [15]. Our rate was lower than that of Matthey and Makrides, who reported rates of 10.4% and 16.2% for anxiety disorders and 20.6% for anxiety symptoms, respectively [16] [17]. This difference could be explained by the beneficial effect of social anchoring.

Postpartum blues occurring in the first few days after childbirth are transient and self-limiting. It affected 5.47% of the participants. This result was lower than those generally described in the literature. According to Bydlowski, S. and Elise, R., the rates are 50 to 80% and 30 to 80%, respectively [13] [18].

Posttraumatic stress disorder (PTSD) and puerperal psychosis were found in 0.50% of the participants. Our prevalence of PTSD was lower than the average reported by Yildiz in a meta-analysis, where the mean prevalence of PTSD at the community level for the majority of studies was 4.0% (95% CI, 2.44 - 4.54) [19].

5. Conclusion

The postpartum period is a time of significant psychological vulnerability with a high risk of decompensation. This study revealed a high prevalence of mental disorders among postpartum women in Konobougou, Mali. During postnatal consultations, health workers need to pay attention to these signs and symptoms to better detect mental health problems and ensure proper case management.

Competing Interests

There are no financial interests concerning the work described.

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