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Midwives' professional practices in the psychological, emotional and clinical support of women in labour in Mbandaka (DRC): a multi-centre cross-sectional study

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Abstract

Introduction: Psychological and emotional support for women during labour is recognised as an essential component of high-quality obstetric care. In the Democratic Republic of the Congo, few studies have assessed these practices, particularly in semi-rural areas.

Objective: To assess the professional practices of midwives and obstetric nurses in providing psychological, emotional and clinical support to women in labour in Mbandaka.

Methods: A cross-sectional study conducted from March 2025 to March 2026 in three healthcare facilities (HGR Wangata, CSR Mama Balako, CSR Jules Chevalier). A sample of 150 professionals was included. Data were collected via a self-administered questionnaire. Analyses included descriptive statistics, bivariate tests (ANOVA, Student's t-test, Chi²) and logistic regression.

Results: The overall rate of satisfactory care was 28.0% (95% CI: [20.8 – 35.2]). The mean score for psychological support was 23.4/40 (SD=6.8), and the clinical score was 26.8/40 (SD=5.9). Factors associated with better practice were educational level A0 (OR=4.82; p<0.001), the profession of midwife (OR=3.45; p=0.003) and specific training received (OR=5.12; p<0.001). The main obstacles cited were excessive workload (85.3%) and a lack of continuing professional development (79.3%).

Conclusion: Support practices in Mbandaka are inadequate, with only 28% of professionals achieving a satisfactory standard. Targeted interventions focusing on continuing professional development and the recruitment of qualified staff are required.

Keywords: Psychological support, midwife, woman in labour, Mbandaka, DRC, obstetric care.

1. Introduction

The quality of obstetric care has become a global priority for reducing maternal and neonatal mortality. The World Health Organisation (WHO, 2022) now recommends that psychological and emotional support for women in labour be

systematically integrated into routine clinical care. This support includes active listening, eye contact, reassuring words and respect for the woman's choices (Gill et al., 2023).

In sub-Saharan Africa, several studies have documented significant gaps in this area. In Cameroon, Djomou et al. (2022) reported that only 32% of midwives systematically used emotional support techniques. In the DRC, Lokinda and Bokako (2025) showed that 72% of women in labour in Kisangani considered the psychological support they received to be insufficient.

The city of Mbandaka, capital of Equateur Province, has no published data on midwives' support practices. This study aimed to address this gap by assessing these practices in three healthcare facilities.

2. Methods

2.1. Study design and framework

A descriptive and analytical cross-sectional study was conducted from March 2025 to March 2026 in three healthcare facilities in Mbandaka: The Wangata General Referral Hospital (HGR Wangata), the Mama Balako Referral Health Centre (CSR Mama Balako) and the Jules Chevalier Referral Health Centre (CSR Jules Chevalier).

2.2. Population and sample

The target population consisted of all midwives and nurses working in the maternity wards of the three facilities, with at least three months' seniority. A comprehensive sampling was carried out, including all professionals meeting the inclusion criteria (n=150).

2.3. Data collection tool

A self-administered questionnaire structured into four sections was used:

• Section A: sociodemographic characteristics (age, gender, educational level A0/A1/A2, profession, length of service, training received)

• Section B: psychological and emotional support (10 items, 1–4 Likert scale, score out of 40)

• Section C: clinical support (10 items, score out of 40)

• Section D: perceived barriers (7 items, multiple choice)

2.4. Statistical analysis

Analyses were performed using SPSS version 28. Significance levels were set at $p < 0.05$. Confidence intervals were calculated at 95%.

2.5. Ethical considerations

The study obtained the necessary administrative authorisations from ISTM/MBANDAKA and the healthcare facilities. Informed consent was obtained from each participant. Anonymity and confidentiality were guaranteed.

3. Results

3.1. Sample characteristics

Table 1 presents the sociodemographic and professional profile of the 150 healthcare providers who participated in the study.

Table 1: Sociodemographic and professional characteristics of healthcare providers (n=150)

Characteristic	Method	n	%
Healthcare facility	HGR Wangata	55	36.7
	CSR Mama Balako	48	32
	CSR Jules Chevalier	47	31.3
Level of education	A0 (Bachelor's degree)	32	21.3
	A1 (Graduate)	68	45.4
	A2 (Graduate)	50	33.3
Occupation	Midwife	98	65.3
	Maternity nurse	52	34.7
Gender	Female	128	85.3
	Male	22	14.7
Age (years)	20–29	42	28
	30–39	64	42.7
	40–49	31	20.7
	Over 50	13	8.6
Length of service	< 2 years	28	18.7
	2–5 years	47	31.3
	6–10 years	41	27.3
	> 10 years	34	22.7
Specific training	Yes	29	19.3
	No	121	80.7

Comment:

The sample is predominantly female (85.3%), with midwives making up the majority (65.3%). In terms of academic level, level A1 is the most common (45.4%). A key finding is that only 19.3% of participants had received specific training in psychological support, highlighting a structural weakness in capacity building for service providers in Mbandaka.

3.2. Support practices

This section assesses the quality of professional practices through overall and dimensional scores.

Table 2: Assessment of overall support levels

Indicator	n	%
Satisfactory overall support (total score 50/80)	42	28
Satisfactory psychological support (score 30/40)	46	30.7
Satisfactory clinical support (score 30/40)	61	40.7

Comment:

Only 28% of professionals demonstrate a comprehensive care approach deemed satisfactory. There is a contrast between clinical care (40.7%) and psychological support (30.7%), with the latter being less well mastered. This discrepancy suggests that initial and continuing training in Mbandaka prioritises technical aspects at the expense of the relational dimension of care.

Table 3: Average scores and variability in support practices

Score	Mean	Standard deviation	Median	[Q1 – Q3]	Min - Max
Psychological (0–40)	23.4	6.8	24	[18–29]	Oct-38
Clinical (0–40)	26.8	5.9	27	[22–31]	Dec-39
Total (0–80)	**50.2**	**11.5**	**51**	**[41–60]**	**22–75**

Comment:

The average score for the psychological dimension is significantly lower than that for the clinical dimension (23.4 versus 26.8), confirming that interpersonal skills are the least well established. The high standard deviation (11.5) for the total score reveals considerable heterogeneity in practices among the city's service providers, indicating a disparity in the quality of care.

3.2. Detailed analysis of practices (continued)

Table 4 details the frequency of interventions related to the psychological dimension of care.

Table 4: Frequency of psychological support practices by item (n=150)

Item	Never n (%)	Rarely n (%)	Often n (%)	Always n (%)	Average
B1: Addressing by first name	9 (6.0)	24 (16.0)	63 (42.0)	54 (36.0)	**3.08**
B2: Eye contact	15 (10.0)	38 (25.3)	61 (40.7)	36 (24.0)	**2.79**
B3: Explain the procedures	11 (7.3)	34 (22.7)	67 (44.7)	38 (25.3)	**2.88**
B4: Calm voice	7 (4.7)	29 (19.3)	71 (47.3)	43 (28.7)	**3**
B5: Active listening	9 (6.0)	31 (20.7)	68 (45.3)	42 (28.0)	**2.95**
B6: Well done	18 (12.0)	42 (28.0)	57 (38.0)	33 (22.0)	**2.7**
B7: Staying for 15 consecutive minutes	42 (28.0)	51 (34.0)	38 (25.3)	19 (12.7)	**2.23**
B8: Suggest a support person	58 (38.7)	47 (31.3)	28 (18.7)	17 (11.3)	**2.03**
B9: Keep up the pace	14 (9.3)	36 (24.0)	64 (42.7)	36 (24.0)	**2.81**
B10: TV consent	35 (23.3)	48 (32.0)	41 (27.3)	26 (17.4)	**2.39**

Comment:

The best-integrated practices relate to basic communication, notably the use of first names (3.08) and maintaining a calm tone of voice (3.00). Conversely, the structural and relational aspects are deficient: the presence of a support person (2.03) and continuous presence at the patient's bedside (2.23) are the weakest points. In Mbandaka, the cramped conditions in the delivery rooms and the heavy workload hinder the implementation of these WHO recommendations.

Table 5 analyses technical and clinical procedures during labour and delivery.

Table 5: Frequency of clinical support practices by item (n=150)

Item	Never n (%)	Rarely n (%)	Often n (%)	Always n (%)	Average
C1: Vital signs / 30 min	8 (5.3)	27 (18.0)	68 (45.3)	47 (31.4)	**3.03**
C2: Post-contraction RCF	12 (8.0)	34 (22.7)	63 (42.0)	41 (27.3)	**2.89**
C3: LA monitoring	9 (6.0)	29 (19.3)	67 (44.7)	45 (30.0)	**2.99**
C4: Hour-by-hour partogram	34 (22.7)	48 (32.0)	42 (28.0)	26 (17.3)	**2.4**
C5: Non-supine positions	42 (28.0)	53 (35.3)	36 (24.0)	19 (12.7)	**2.21**
C6: Light drinks/foods	47 (31.3)	51 (34.0)	32 (21.3)	20 (13.4)	**2.17**
C7: Non-pharmacological treatments	38 (25.3)	49 (32.7)	41 (27.3)	22 (14.7)	**2.31**
C8: Delayed clamping (1–3 min)	41 (27.3)	46 (30.7)	38 (25.3)	25 (16.7)	**2.32**
C9: Immediate skin-to-skin contact	18 (12.0)	37 (24.7)	56 (37.3)	39 (26.0)	**2.77**
C10: Monitoring of dispensing	6 (4.0)	22 (14.7)	63 (42.0)	59 (39.3)	**3.17**

Comment:

Close monitoring of the delivery (3.17) and vital signs (3.03) indicates good management of immediate obstetric emergencies. However, there is evidence of excessive 'medicalisation' of labour: adherence to physiological positions (2.21) and nutrition during labour (2.17) are neglected. The completion of the partogram (2.40) also remains incomplete, which poses a risk to the monitoring of labour progress.

3.3. Barriers to quality care

Table 6 identifies the barriers encountered by providers in delivering person-centred care.

Table 6: Analysis of barriers perceived by providers (n=150)

Barrier	n	%	95% CI
D2: Workload overload (> 10 patients/shift)	128	85.3	[78.6–90.6]
D4: Lack of continuing professional development	119	79.3	[72.0 – 85.5]
D3: Lack of a written protocol	108	72	[64.2–78.9]
D1: Lack of privacy (shared rooms)	97	64.7	[56.5–72.2]
D5: Lack of equipment	91	60.7	[52.4–68.5]
D7: Pressure from management	67	44.7	[36.6 – 53.0]
D6: Lack of space for a carer	58	38.7	[30.9 – 46.9]

Comment:

Excessive workloads (85.3%) and outdated skills due to a lack of training (79.3%) dominate the picture of obstacles. In Mbandaka, these two factors are self-perpetuating: staff shortages ( ) prevent staff from attending training, whilst the absence of written protocols (72.0%) leaves healthcare providers without guidance when faced with an influx of patients.

3.4. Bivariate analyses

This subsection explores the factors influencing the quality of care through tests comparing means (ANOVA and Student's t-test).

3.4.1. Influence of academic level

Table 7 analyses the impact of the university curriculum on the reported skills of care providers.

Table 7: Association between level of education and support scores (ANOVA)

Level of education	n	Psychological score (mean ± SD)	Clinical score (mean ± SD)	Total score (mean ± SD)
A0 (Bachelor's degree)	32	28.7 ± 5.2	31.2 ± 4.8	59.9 ± 9.5
A1 (Graduate)	68	24.1 ± 6.1	27.3 ± 5.5	51.4 ± 11.0
A2 (Graduate)	50	19.2 ± 5.8	23.1 ± 5.2	42.3 ± 10.5
Statistics		$F = 28.4$; $p < 0.001$	$F = 22.7$; $p < 0.001$	$F = 31.2$; $p < 0.001$

Comment:

The analysis shows a very clear and statistically **highly significant** ($p < 0.001$) performance gradient: higher levels of education are directly correlated with improved scores. Bachelor's degree holders (A0) achieved a total score 17.6 points higher than that of graduates (A2). This result suggests that in Mbandaka, academic advancement is a key driver of quality of care.

3.4.2. Influence of professional qualifications and training

Tables 8 and 9 compare the impact of specialisation and continuing professional development.

Table 8: Comparison of scores by profession (t-test)

Profession	n	Psychological score	Clinical score	Total score
Midwife	98	25.2 ± 6.5	28.6 ± 5.4	53.8 ± 10.2
Maternity nurse	52	20.1 ± 6.2	23.3 ± 5.8	43.4 ± 11.1
Statistics		t = 4.68; p < 0.001	t = 5.58; p < 0.001	t = 5.64; p < 0.001

Table 9: Impact of specific training on support (t-test)

Training received	n	Psychological score	Clinical score	Total score
Yes	29	30.2 ± 4.8	31.2 ± 4.2	61.4 ± 8.5
No	121	21.8 ± 6.2	25.7 ± 5.8	47.5 ± 10.8
Statistics		t = 6.84; p < 0.001	t = 4.98; p < 0.001	t = 7.12; p < 0.001

Comment:

The status of midwife guarantees significantly higher scores (an average of +10.4 points) than that of an obstetric nurse. Furthermore, the impact of specific training is substantial, with a gain of 13.9 points on the total score. These figures support the hypothesis that specialisation in midwifery and refresher courses are essential for humanising childbirth.

3.4.3. Analysis of performance by healthcare facility

Table 10 compares the results between the different healthcare facilities studied.

Table 10: Inter-site comparison of support scores (ANOVA)

Facility	n	Psychological score	Clinical score	Total score
HGR Wangata	55	20.8 ± 6.2	25.3 ± 5.6	46.1 ± 11.3
CSR Mama Balako	48	25.6 ± 6.5	27.8 ± 5.3	53.4 ± 10.5
CSR Jules Chevalier	47	24.2 ± 6.8	27.8 ± 5.5	52.0 ± 11.0
Statistics		F = 8.12; p < 0.001	F = 4.56; p = 0.012	F = 7.16; p = 0.001

Comment:

There is a significant disparity between the facilities. The Wangata General Hospital (HGR) has the lowest performance score (46.1). This underperformance can be explained by local organisational constraints: whilst the Community Health Centres (CSRs) maintain a ratio of 1 healthcare provider to 6–7 women in labour, the ratio at Wangata rises to 1 to 12. Workload appears here to be a factor limiting the application of clinical and psychological protocols.

3.5. Multivariate analyses

To isolate the specific effect of each factor and eliminate confounding variables, a regression analysis was carried out.

3.5.1. Determinants of acceptable practice

Table 11 presents the results of the binary logistic regression, identifying the variables that significantly increase the probability of providing high-quality support.

Table 11: Binary logistic regression analysis of factors associated with acceptable practice (Score 50/80)

Variable	Crude OR [95% CI]	p-value	Adjusted OR [95% CI]	p-value
Level A0 (vs A2)	4.82 [2.01–11.54]	< 0.001	3.92 [1.98 – 7.76]	< 0.001
Level A1 (vs A2)	2.31 [1.08 – 4.94]	0.031	2.08 [1.12 – 3.86]	0.021
Midwife (vs Nurse)	3.45 [1.68 – 7.08]	< 0.001	2.76 [1.42 – 5.36]	0.003
Training received (vs not)	5.12 [2.21 – 11.86]	< 0.001	4.43 [1.96 – 10.02]	< 0.001
6 years' service	2.15 [1.02 – 4.53]	0.044	1.88 [0.98 – 3.60]	0.057

Comment:

After adjustment, **specific training** emerges as the most powerful predictor: trained practitioners are **4.4 times more likely** to provide acceptable care than others. Educational level A0 also multiplies this score by nearly 4. Conversely, seniority alone is not sufficient to guarantee high-quality practice (p = 0.057 after adjustment), which highlights that experience without updating one's knowledge is no longer sufficient in the current context of Mbandaka.

3.5.2. Modelling overall performance

Table 12 uses multiple linear regression to quantify the contribution of each variable to the total support score.

Table 12: Multiple linear regression model (Dependent variable: Total score)

Predictor variable	Unstandardised β	ET	p-value	Standardised β
(Constant)	37.2	2.8	< 0.001	-
Education received	11.4	1.4	< 0.001	0.38
Level A0	9.8	1.5	< 0.001	0.34
Midwife	6.3	1.1	< 0.001	0.26
Mama Balako CSR site	6.2	1.3	< 0.001	0.24
CSR Jules Chevalier site	5.3	1.3	< 0.001	0.2
Length of service (per year)	0.4	0.2	0.042	0.13

Model indicators: R^2 {adjusted} = 0.61; p {of the model} < 0.001.

Comment:

This mathematical model explains **61% of the variance** in the support score, giving it very strong predictive power. Specific training remains the priority lever for action (beta = 0.38), ahead of academic level. It is interesting to note the significant impact of the workplace: practising in a CSR rather than at the HGR Wangata automatically increases the score by 5 to 6 points, all other things being equal. This confirms that the working environment and patient caseload are structural factors that are inseparable from individual competence.

4. Discussion

4.1. Main findings

This study showed that only 28.0% of obstetric professionals in Mbandaka provide a generally satisfactory level of care. This low rate is concerning because psychological and emotional support is a major determinant of women's birth experience (WHO, 2022). The average psychological score (23.4/40) is lower than the clinical score (26.8/40), confirming that interpersonal skills are the most neglected.

4.2. Comparison with the literature

Our results are consistent with recent African studies. Djomou et al. (2022) in Yaoundé reported an average psychological score of 23.6/40, very close to ours. In Mali, Keita et al. (2023) observed that only 18% of midwives explained procedures before performing them, a figure comparable to our 25.3% 'always' for item B3.

The protective effect of specific training (OR = 4.43) is similar to that reported by Mukendi et al (2024) in Kananga, where a short training course improved midwives' average score by 18 points. This powerful effect argues for the widespread implementation of support training in all maternity wards across Equateur Province.

4.3. Implications for practice

Three major implications arise from this study. Firstly, strengthening continuing professional development is the top priority: only 19.3% of staff have received specific training. Secondly, the recruitment of A0 or A1-level staff should be prioritised for obstetric posts. Thirdly, reducing the workload at Wangata (ratio 1:12) is urgent to ensure high-quality care.

4.4. Limitations of the study

This study has several limitations. Reporting bias (social desirability) may have led to an overestimation of good practices (Paul et al., 2021). The lack of direct observation in the delivery room means it is not possible to verify the discrepancy between reported practices and actual practices. The cross-sectional design does not allow for the establishment of causal relationships. Finally, the results are generalisable only to the three facilities studied.

5. Conclusion

This study reveals that psychological, emotional and clinical support practices for women in labour in Mbandaka are largely inadequate, with only 28% of professionals achieving a satisfactory level. The main factors associated with better practice are a high level of education (A0), the profession of midwife and, above all, having received specific training in support (OR = 4.43). Workload (85.3%) and a lack of continuing professional development (79.3%) are the major obstacles.

Targeted interventions are required: the widespread implementation of continuing professional development in psychological support, the prioritisation of recruitment of A0/A1-level staff, a reduction in the mother-to-midwife ratio at Wangata, and the development of written protocols tailored to the Mbandaka context.

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