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Exclusive breastfeeding among working-class women in Douala, Cameroon: Knowledge, practice, barriers and implications

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Abstract

Background: The World Health Organization (WHO) recommends exclusive breastfeeding (EBF) for the first six months of life. Despite well-established immunological, nutritional, and epidemiological benefits, EBF practice remains persistently low among working-class women globally, and evidence from urban Cameroon is limited. This study assessed the knowledge, practice, and occupational barriers to EBF among working-class women in Douala, Cameroon.

Methods: A descriptive cross-sectional study was conducted from March to June 2023. A minimum sample size of 277 was calculated using the Fischer formula; 457 working-class breastfeeding mothers with infants aged 0–6 months were enrolled by simple random sampling. Data were collected via a structured bilingual (English/French) questionnaire administered through Google Forms and face-to-face interviews and analysed using SPSS Version 26 and Microsoft Excel 2019.

Results: The majority of participants (32.2%) were aged 20–25 years. The overall EBF knowledge score was 67.8% (moderate), with 75.5% having heard of EBF and only 53.0% correctly defining it. However, only 30.6% were currently practising EBF. Early breastfeeding initiation within one hour of delivery was reported by 46.4%. The predominant barriers were difficulty combining work and breastfeeding (79.7%), the perception that breast milk alone is nutritionally insufficient (67.8%), short maternity leave (61.5%), and breastfeeding being time-consuming (55.1%).

Conclusion: Working-class women in Douala demonstrate moderate EBF knowledge but substantially low practice, driven primarily by occupational and structural barriers with compounding physiological consequences. Targeted health education addressing breast milk immunophysiology, extended maternity leave policy, workplace lactation facilities, and postnatal lactation support are urgently recommended.

Keywords: Exclusive breastfeeding, knowledge, practice, occupational barriers, working-class women, lactation physiology, Douala, Cameroon

Introduction

Exclusive breastfeeding (EBF) is defined by the World Health Organization (WHO) as the practice whereby an infant receives only breast milk from the mother, a wet nurse, or expressed breast milk with no other liquids or solids, except for oral rehydration solutions or prescribed drops or syrups of vitamins, minerals, or medicine (WHO, 2023). EBF is universally recognised as one of the most effective, lowest-cost interventions to ensure child health and survival; yet global practice remains suboptimal despite extensive evidence (UNICEF & WHO, 2024) [19].

The Global Breastfeeding Scorecard (UNICEF & WHO, 2024) [19] reports that EBF rates have increased by more than 10 percentage points over the past decade, reaching 48% globally — narrowly approaching the World Health Assembly target of 50% by 2025. The revised Global Breastfeeding Collective target is now 70% by 2030. Despite this progress, Cameroon records an EBF rate of only 24–39% for infants up to six months of age, well below the global average and the national action plan target of 50% (Cameroon DHS, 2018; Ndum Okwen *et al*., 2022) [1, 11].

The immunological and physiological benefits of EBF are extensive. Breast milk is a dynamic biological liquid containing not only macronutrients (proteins, carbohydrates, lipids) and micronutrients, but also a rich array of bioactive immunological compounds including secretory immunoglobulin A (sIgA), cytokines, human milk oligosaccharides (HMOs), lactoferrin, lysozymes, and antimicrobial peptides (Hamdan *et al*., 2024; StatPearls, 2025) [5, 16]. These components protect the neonate through passive immunity and actively shape the developing infant immune system. Exclusively breastfed infants have reduced risks of asthma, obesity, type 1 diabetes, acute respiratory infections, acute otitis media, sudden infant death syndrome (SIDS), gastrointestinal infections, and necrotising enterocolitis (Victora *et al*., 2022) [22]. For mothers, EBF is associated with reduced risks of postpartum haemorrhage, ovarian and breast cancers, and type 2 diabetes (WHO, 2023). Improving EBF rates could save over 820,000 children's lives annually (WHO & UNICEF, 2024) [19].

Despite these benefits, multiple barriers continue to impede EBF, particularly among working women. Frequently cited challenges include cracked or sore nipples, perceived insufficient milk production, lack of social support, short

maternity leave, difficulty combining work and breastfeeding, and inadequate guidance from healthcare providers (Ejie *et al*., 2021; Mutuku *et al*., 2022) [3, 8]. Maternal employment is consistently identified as the primary barrier to EBF in Africa: a systematic scoping review of 203 studies (Mwangi *et al*., 2022) confirmed that paid work without adequate structural support is a key driver of EBF discontinuation across the continent. For working-class women, the return to formal employment represents the most critical juncture at which EBF is abandoned (Nkrumah, 2022) [13].

In Cameroon, although 99% of infants initiate breastfeeding at birth, EBF rates decline sharply in the weeks following delivery, with marked urban-rural disparities (Fomulu *et al*., 2022; Ndum Okwen *et al*., 2022) [4, 11]. Douala, as the most populous economic hub with a population exceeding four million (United Nations, 2023) [20], presents a unique setting where occupational demands directly intersect with infant feeding decisions. Understanding the knowledge gaps, practice patterns, and barriers specific to working-class mothers in this urban setting is essential for designing effective interventions. This study therefore assessed the knowledge, practice, and occupational barriers to exclusive breastfeeding among working-class women in Douala, Cameroon.

Materials and Methods

Study Area and Setting

The study was conducted in Douala, the economic capital and most populous city of Cameroon, located in the Littoral Region along the Wouri estuary. With an estimated population exceeding four million (United Nations, 2023) [20], Douala is characterised by a large and diverse formal workforce, making it an appropriate and unique setting for studying EBF practices among working-class women.

Study Design

A descriptive cross-sectional study combining quantitative and online survey methods was employed. Data collection was conducted between March and June 2023.

Study Population, Sampling, and Sample Size

The target population comprised working-class breastfeeding mothers including health personnel, teachers, public and private sector administrators, businesswomen, entrepreneurs, and lawyers with children aged 0–6 months in Douala at the time of the study. Simple random sampling was used. The minimum sample size was calculated using the Fischer formula: $n = Z^2p(1-p)/d^2$, where Z = 1.96 (95% CI), p = 23.5% (EBF prevalence from Chiabi *et al*., 2011) [2], and d = 0.05, yielding n = 277. A final sample of 457 participants was enrolled to increase statistical power.

Inclusion and Exclusion Criteria

Included were all working-class breastfeeding mothers in Douala with infants aged 0–6 months who voluntarily consented to participate. Excluded were non-working-class mothers, mothers with infants older than six months, and those who declined participation.

Data Collection Instrument and Technique

A validated bilingual (English and French) structured questionnaire was used as the primary instrument. It was administered via Google Forms and face-to-face interviews and comprised four sections: (i) socio-demographic data; (ii) EBF knowledge; (iii) EBF practice; and (iv) challenges and barriers to EBF.

Data Management and Analysis

Data were entered and analysed using SPSS Version 26 (IBM Corp., Armonk, NY, USA) and Microsoft Excel 2019. Results are presented as frequencies and percentages in tables.

Ethical Considerations

Research authorisation (Reference No. 0262/AAR/MINSANTE/DRSPL/BCASS) was obtained from the Douala Regional Delegation of Public Health and the administration of STEM Higher Institute of Health and Business. All participants provided written informed consent. Anonymity and confidentiality were strictly maintained. The study adhered to the Declaration of Helsinki (World Medical Association, 2013) [24].

Results

Socio-Demographic Characteristics

A total of 457 working-class mothers participated. As shown in Table 1, the majority (32.2%) were aged 20–25 years. Most were married (44.6%) or unmarried (42.2%). In terms of infant age, 33.3% of children were aged 0–6 months. Most respondents held secondary or high school qualifications (44.4%) or university degrees (43.5%). The majority identified as Christians (77.0%).

Table 1: Socio-Demographic Characteristics of Mothers (N = 457)

Variable	Category	Frequency	Percentage (%)
Age Range	< 15 years	5	1.9
	15–20 years	70	15.3
	20–25 years	147	32.2
	26–30 years	89	19.5
	31–35 years	52	11.4
	> 35 years	94	20.6
Marital Status	Unmarried	193	42.2
	Married	204	44.6
	Divorced	54	11.8
	Others	6	1.3
Age of Infant	0–6 months	152	33.3
	7 months–1 year	194	42.5
	1–2 years	81	17.7
	> 2 years	30	6.6
Level of Education	No formal education	53	11.6
	Secondary/High school	203	44.4
	University	199	43.5
Religion	Christian	352	77.0
	Muslim	62	13.6
	Others	43	9.5

Note: Religion total is 99.8% due to rounding.

Mothers' Knowledge on Exclusive Breastfeeding

Table 2 presents knowledge scores. Of participants, 75.5% had heard of EBF; however, only 53.0% correctly defined it as feeding exclusively with breast milk, with 23.6% mistakenly including water and 8.3% citing infant formula. Breastfeeding initiation within one hour of birth was correctly identified by 60.7%. The correct EBF duration of 0–6 months was known by 58.0%. A substantial majority (78.3%) recognised that breast milk alone is sufficient for

six months, and 70.0% acknowledged its disease-protective role. Only 47.0% correctly identified six months as the appropriate age for complementary food introduction. The overall average knowledge score was 67.8%, reflecting a moderate level.

Table 2: Mothers' Knowledge on Exclusive Breastfeeding (N = 457)

Question	Correct Answer	n	%
Have you heard of exclusive breastfeeding?	Yes	345	75.5
What does exclusive breastfeeding mean?	Breast milk only	242	53.0
When should breastfeeding be initiated?	Within 1 hour of birth	281	60.7
For how long should infants be exclusively breastfed?	0–6 months	265	58.0
Can breast milk alone sustain infants for 6 months?	Yes	358	78.3
Does EBF protect infants from illness?	Yes	320	70.0
At what age should complementary food be introduced?	At 6 months	215	47.0
Are you aware of the importance of breastfeeding?	Yes	394	86.2
Can EBF serve as a method of child spacing?	Yes	218	47.7
Overall average knowledge score	—	—	67.8%

Practice of Exclusive Breastfeeding

Table 3 summarises EBF practice. Of all participants, 46.4% initiated breastfeeding within one hour of birth; 30.2% initiated breastfeeding some time after birth. Only 30.6% were currently practising EBF. In terms of feeding preferences, 25.6% preferred breast milk exclusively; 29.1% preferred breast milk and water; 24.5% preferred formula feeding; and 20.8% combined breast milk with solid food. With respect to bottle feed introduction, 26.7% introduced bottles before three months and 37.0% did so at 4–5 months.

Table 3: Mothers' Practice of Exclusive Breastfeeding (N = 457)

Question	Response	n	%
When did you start breastfeeding after delivery?	Within 1 hour of birth	212	46.4
	After 1 hour of birth	89	19.5
	Sometime after birth	138	30.2
	I do not know	18	3.9
Are you currently practising EBF?	Yes	140	30.6
	No	316	69.1
What do you prefer to feed your baby?	Breast milk only	117	25.6
	Breast milk and water	133	29.1
	Formula feeding	112	24.5
	Breast milk and solid food	95	20.8
At what age did you introduce bottle feeds?	< 3 months	122	26.7
	4–5 months	169	37.0
	6 months	124	27.1
	> 6 months	42	9.2

Challenges and Barriers to Exclusive Breastfeeding

Table 4 presents Likert-scale barrier responses. More than half (57.3%) acknowledged difficulties practising EBF. The most prevalent barriers were: difficulty combining work and breastfeeding (79.7%; strongly agree + agree), the perception that breast milk alone is nutritionally insufficient (67.8%), short maternity leave (61.5%), and breastfeeding being time-consuming (55.1%). Social pressure to introduce water and artificial feeds was endorsed by 54.6% of respondents. Cracked or sore nipples were reported by 52.5%. Low breast milk production (28.4%), lack of family support (30.4%), concern about medications harmful during breastfeeding (49.9%), and lack of information about EBF's protective effects (72.6%) were also identified.

Table 4: Likert-Scale Responses on Challenges and Barriers to EBF (N = 457)

Challenge/Barrier	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Short maternity leave	111 (24.3%)	170 (37.2%)	52 (11.4%)	94 (20.6%)	30 (6.6%)
Social pressure to introduce water/artificial feeds	109 (23.3%)	143 (31.3%)	77 (16.8%)	92 (20.1%)	36 (7.9%)
Breast milk alone does not meet nutritional needs	128 (28.0%)	182 (39.8%)	55 (12.0%)	73 (16.0%)	19 (4.2%)
Cracked or sore nipples	116 (25.4%)	124 (27.1%)	78 (17.1%)	99 (21.7%)	40 (8.8%)
Difficulty combining work and breastfeeding	210 (46.0%)	154 (33.7%)	40 (8.8%)	43 (9.4%)	10 (2.2%)
Low breast milk production	54 (11.8%)	76 (16.6%)	108 (23.6%)	155 (33.9%)	64 (14.0%)
Lack of family and social support	58 (12.7%)	81 (17.7%)	71 (15.5%)	154 (33.8%)	93 (20.4%)
Breastfeeding is time-consuming	118 (25.8%)	134 (29.3%)	60 (13.1%)	96 (21.0%)	49 (10.7%)
Maternal medications potentially harmful during breastfeeding	118 (25.8%)	110 (24.1%)	78 (17.1%)	104 (22.8%)	47 (10.3%)
Lack of information on EBF's protective effects	192 (42.0%)	140 (30.6%)	37 (8.1%)	49 (10.7%)	39 (8.5%)

Discussion

Knowledge of Exclusive Breastfeeding: A Moderate-Knowledge, Low-Practice Paradox

The overall average knowledge score of 67.8% reflects a moderate level of EBF awareness among working-class mothers in Douala. Although 75.5% had heard of EBF, only 53.0% correctly defined it as exclusively breast milk feeding, with others erroneously incorporating water or infant formula into their definition. This knowledge-practice disconnect is consistent with comparable studies across SSA. Musoke *et al*. (2022) [9] observed a similarly moderate knowledge profile among employed mothers in Uganda, where overall awareness was high but conceptual clarity remained limited. The finding reaffirms the well-documented observation that awareness and knowledge of EBF do not automatically translate into practice a phenomenon driven by the interaction between individual beliefs, occupational demands, and systemic inadequacies (Ejie *et al*., 2021) [3].

From a physiological standpoint, the high prevalence of misconceptions about breast milk sufficiency (47.0% not knowing when to introduce complementary foods; 21.7% not recognising breast milk as nutritionally complete) may reflect a lack of understanding of the remarkable

compositional adequacy of human milk. Breast milk provides 60–75 kcal/100 mL and contains approximately 87% water, 3–5% fat, 7% lactose, and 0.8–0.9% protein, alongside thousands of bioactive molecules including growth factors, hormones, and antimicrobial agents (StatPearls, 2025; Hamdan *et al*., 2024) [5, 16]. The colostrum secreted in the first days of life is particularly rich in sIgA, cytokines, and lactoferrin — immunological compounds that constitute the neonate's first line of passive immune defence before its own immune system matures (Hamdan *et al*., 2024) [5]. This physiological complexity underpins the WHO (2023) recommendation that breast milk alone is nutritionally and immunologically sufficient for the first six months of life, and its misunderstanding is a major driver of premature complementary food introduction in this cohort.

The finding that 60.7% correctly identified breastfeeding initiation within one hour of birth is consistent with WHO guidelines (WHO, 2023), though it falls below the 84.4% reported among health professionals in Niamey, Niger by Moussa Abba *et al*. (2010) [7], likely reflecting differences in population type and the attenuation of facility-based breastfeeding promotion in Douala's urban settings. Similarly, 58.0% correctly identified the recommended duration, consistent with the American Academy of Pediatrics (AAP) recommendation for complementary food introduction at six months when breast milk alone is insufficient to meet the growing infant's energy needs (Onyango *et al*., 2023) [14]. The finding that 70.0% acknowledged EBF's disease-protective properties is encouraging and has been reported similarly by Tahiru *et al*. (2024) [17] among mothers in Northern Ghana.

Practice of Exclusive Breastfeeding: Public Health Implications of the Knowledge-Practice Gap

The EBF practice rate of 30.6% reveals a profound knowledge-practice gap and has major public health significance. This rate falls below the global average of 48% (UNICEF & WHO, 2024) [19] and represents a critical shortfall relative to the World Health Assembly target of 50% by 2025 and the revised Global Breastfeeding Collective target of 70% by 2030. Cameroon's national action plan targets 50% EBF by 2025, yet this urban cohort does not approach that threshold. The 30.6% rate is consistent with the national DHS figure of 24% (Cameroon DHS, 2018) [1] and similar to the 47% reported among employed mothers at Buea Regional Hospital (Nkemdirim *et al*., 2024) [12], suggesting that urban employment status is a systemic suppressor of EBF practice across Cameroon's cities.

From a public health perspective, improving EBF rates from 30.6% toward the 70% collective target could save over 820,000 children's lives annually and prevent hundreds of thousands of cases of diarrhoeal disease, respiratory infection, and malnutrition-related morbidity globally (WHO & UNICEF, 2024) [19]. At the population level, EBF improvements also reduce the incidence of childhood obesity and type 1 diabetes, with lifetime productivity and economic consequences — every USD 1 invested in breastfeeding generates USD 35 in economic returns (UNICEF & WHO, 2024) [19]. In Cameroon, where under-five mortality from infectious diarrhoeal and respiratory diseases remains high, the 53.4% non-EBF practice rate in this cohort represents a preventable health burden of substantial magnitude.

Physiologically, the 26.7% of mothers who introduced bottle feeds before three months of age exposed their infants to a particularly critical risk window. In the first weeks of life, the neonatal intestinal immune system is functionally immature and relies almost entirely on sIgA from breast milk for mucosal protection (Hamdan *et al*., 2024) [5]. The introduction of non-breast-milk feeds disrupts the gut microbiome colonisation process, which is critically shaped by HMOs in breast milk that selectively stimulate the growth of beneficial bifidobacteria (Hamdan *et al*., 2024) [5]. Premature complementary feeding before three months is therefore associated not only with increased infection risk but also with dysregulated intestinal immune programming that may have lifelong consequences for allergy and autoimmune disease susceptibility (Victora *et al*., 2022) [22].

The early breastfeeding initiation rate of 46.4% falls below the global prevalence of 46% reported in national surveys from 2017–2023 (UNICEF & WHO, 2024) [19] and is well below the Global Breastfeeding Collective target of 70%. The physiological consequences of delayed initiation are significant: within the first hour of birth, infant suckling stimulates the posterior pituitary to release oxytocin, which induces uterine contraction (reducing postpartum haemorrhage risk) and triggers the milk ejection reflex, propelling colostrum through the lactiferous ducts to the nipple (StatPearls, 2025) [16]. Simultaneously, nipple stimulation increases prolactin secretion from the anterior pituitary, which drives alveolar milk synthesis. Delayed initiation disrupts these hormonal cascades, activates the feedback inhibitor of lactation (FIL) a local polypeptide that inhibits further milk secretion when milk is not removed and reduces total milk production and lactation duration (StatPearls, 2025; Uvnäs-Moberg *et al*., 2020) [16, 21].

Occupational and Structural Barriers: The Physiology of Stress-Induced Lactation Failure

The barriers reported in this study are multifactorial, operating simultaneously at individual, neuroendocrine, occupational, and societal levels. The most prevalent barrier was difficulty combining work and breastfeeding (79.7%), consistent with the systematic scoping review by Mwangi *et al*. (2022) of 203 studies across Africa, which confirmed paid employment without structural support as the dominant driver of EBF discontinuation on the continent. This finding is also consistent with Nkrumah (2022) [13] and Ejie *et al*. (2021) [3], who identified workplace re-entry as the critical juncture at which EBF is abandoned across SSA.

The physiological mechanism by which occupational stress suppresses lactation deserves specific emphasis, as it is rarely discussed in clinical or public health discourse on EBF barriers. When a mother experiences sustained occupational stress from long working hours, separation from her infant, or psychosocial workplace demands the hypothalamic-pituitary-adrenal (HPA) axis activates, elevating circulating cortisol and adrenocorticotropic hormone (ACTH) (Uvnäs-Moberg *et al*., 2020) [21]. Elevated cortisol directly suppresses the release of prolactin and oxytocin from the anterior and posterior pituitary glands, respectively (StatPearls, 2025) [16]. Since prolactin drives alveolar milk synthesis and oxytocin induces the milk ejection (let-down) reflex, stress-induced suppression of these hormones results in reduced milk supply and impaired milk ejection creating a self-reinforcing cycle in which perceived insufficient milk production (reported by 28.4%

of participants) drives further EBF discontinuation. The association between maternal stress, cortisol suppression of prolactin, and reduced milk yield has been directly demonstrated (Uvnäs-Moberg *et al*., 2020) [21]. Conversely, oxytocin released during breastfeeding exerts powerful anti-stress effects, lowering maternal cortisol and ACTH and reducing anxiety, demonstrating that successful breastfeeding and reduced maternal stress are physiologically mutually reinforcing (Uvnäs-Moberg *et al*., 2020) [21].

Cameroon's current 14-week maternity leave provision below the ILO's recommended minimum of 18 weeks and far below the Global Breastfeeding Collective's preferred six-month provision was identified as a significant barrier by 61.5% of participants, consistent with evidence across SSA (Ejie *et al*., 2021; Ndum Okwen *et al*., 2022) [3, 11]. Inadequate maternity leave compresses the critical window during which the maternal prolactin-oxytocin neuroendocrine axis is being established and calibrated, increasing the risk of physiological lactation failure when mothers must return to work before this axis is stable (StatPearls, 2025) [16]. Only 42 countries globally (23%) meet or exceed the 18-week minimum (Ndum Okwen *et al*., 2022) [11], placing Cameroon among the majority that fail this standard.

The perception that breast milk is nutritionally inadequate (67.8%) represents a major public health knowledge failure. As described in Section 4.1, this misconception has no physiological basis: breast milk's dynamic composition which adjusts to infant demand, infection status, and gestational maturity is nutritionally and immunologically complete for the first six months (StatPearls, 2025; Hamdan *et al*., 2024) [5, 16]. This myth is widely documented in SSA and is frequently reinforced by cultural norms, pressure from older family members, and the aggressive marketing of breast milk substitutes (López *et al*., 2024; Sosseh *et al*., 2023) [6, 15]. The International Code of Marketing of Breast-Milk Substitutes explicitly prohibits the promotion of formula as equivalent to or superior to breast milk, yet enforcement in Cameroon and across sub-Saharan Africa remains inadequate (UNICEF & WHO, 2024) [19].

Cracked or sore nipples (52.5%) represent a specific physiological barrier that is amenable to targeted clinical intervention. Nipple trauma most commonly results from suboptimal latch technique, and physiologically, the neonate's suck-swallow-breathe reflex must be properly coordinated with maternal nipple positioning to avoid areolar compression injuries. Lactation counselling that addresses latch technique, nipple care, and the use of nipple shields where indicated is an effective, low-cost intervention that directly addresses this barrier (Fomulu *et al*., 2022) [4].

The finding that 72.6% of mothers lacked information about EBF's protective effects against infections and allergies directly reflects the absence of systematic, evidence-based lactation counselling within Douala's antenatal and postnatal health services — a gap that structured Baby-Friendly Hospital Initiative (BFHI) programming is specifically designed to address (UNICEF & WHO, 2024) [19].

Conclusion

Working-class mothers in Douala demonstrate moderate EBF knowledge (67.8%) but substantially low practice (30.6%), revealing a profound knowledge-practice gap driven by occupational, structural, physiological, and cultural barriers. The predominant barriers work-breastfeeding incompatibility, inadequate maternity leave, and the misconception that breast milk is nutritionally insufficient are consistent with those documented across urban sub-Saharan Africa. Critically, occupational stress exerts a direct neuroendocrine suppressive effect on prolactin and oxytocin secretion, creating a physiological basis for lactation failure that compounds the structural barriers identified. The early breastfeeding initiation rate of 46.4% and the EBF practice rate of 30.6% both fall substantially short of the Global Breastfeeding Collective's 2025 target of 50% and its 2030 target of 70%. Urgent, coordinated multi-level action is required: evidence-based EBF health education addressing both the public health evidence and the physiological underpinnings of breast milk's immune and nutritional superiority; policy reform for extended maternity leave aligned with ILO standards; mandatory workplace lactation facilities; and strengthened postnatal lactation support integrating structured counselling.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. **Health Education and Awareness:** Strengthen community-based and facility-level EBF education targeting working-class mothers, with content addressing the physiological adequacy and immunological composition of breast milk, early breastfeeding initiation, and the recommended six-month EBF duration.

2. **Policy Reform:** Advocate for legislative extension of maternity leave provisions to at least 18 weeks (ILO minimum) and ideally six months (Global Breastfeeding Collective recommendation) to protect the critical neuroendocrine lactation establishment period.

3. **Workplace Lactation Support:** Mandate dedicated lactation rooms and scheduled breastfeeding breaks in all formal workplaces as part of employer occupational health obligations, reducing stress-induced oxytocin and prolactin suppression in returning working mothers.

4. **Healthcare Capacity Building:** Train and equip healthcare providers to deliver standardised, evidence-based lactation counselling during antenatal and postnatal care, including BFHI implementation across Douala's health facilities.

5. **Further Research:** Conduct longitudinal and qualitative studies to explore the lived experiences of working-class breastfeeding mothers, measure the neuroendocrine correlates of occupational stress on lactation, and evaluate the impact of workplace and policy interventions on EBF rates.

Declarations

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Ethical Approval
Research authorisation (Reference No. 0262/AAR/MINSANTE/DRSPL/BCASS) was obtained from the Douala Regional Delegation of Public Health. All participants provided written informed consent. The study adhered to the Declaration of Helsinki (World Medical Association, 2013) [24].

Consent for Publication
All authors have reviewed and approved the final manuscript and consent to its submission for publication.

Availability of Data and Materials
All data are included in this article. Additional supporting data are available from the corresponding author on reasonable request.

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Authors' Contributions
V.A.M.: Study conception, design, data collection, analysis, results interpretation, and manuscript writing. M.P.F.S.: Study conception, design, manuscript writing, and editing. T.A.E.: Data collection and manuscript review. S.R.C.A.: Manuscript review and critical revision. B.K.M.: Supervision, study design, critical review, and final approval of the manuscript. All authors read and approved the final manuscript.

Abbreviations
AAP: American Academy of Pediatrics; BFHI: Baby-Friendly Hospital Initiative; DHS: Demographic and Health Survey; EBF: Exclusive Breastfeeding; FIL: Feedback Inhibitor of Lactation; HMO: Human Milk Oligosaccharide; HPA: Hypothalamic-Pituitary-Adrenal; ILO: International Labour Organization; sIgA: Secretory Immunoglobulin A; SIDS: Sudden Infant Death Syndrome; SPSS: Statistical Package for the Social Sciences; SSA: sub-Saharan Africa; UNICEF: United Nations Children's Fund; WHO: World Health Organization.

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