Determinants of Exclusive Breastfeeding Practices Among Nursing Mothers in Bauchi State, Nigeria

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ABSTRACT

Background: Despite decades of global advocacy, exclusive breastfeeding (EBF) rates in sub-Saharan Africa remain well below WHO targets. In Bauchi Metropolis, persistent cultural misconceptions, limited maternal autonomy, and structural deficits in workplace and healthcare support continue to suppress EBF uptake, contributing to preventable infant morbidity and under-five mortality.

Objectives: This study examined the determinants of EBF practices among nursing mothers in Bauchi Metropolis, Bauchi State, Nigeria. Specifically, it assessed maternal attitudinal patterns toward EBF, identified key facilitating and impeding factors, and explored evidence-aligned strategies for behavioral and policy change.

Methods: A community-based cross-sectional survey was conducted among 375 nursing mothers recruited from five urban wards (Dan'Iya, Dawaki, Makama A, Makama B, and Dan Amar A) using convenience sampling. Sample size was determined by the Krejcie and Morgan (1970) formula (n = 384; response rate = 97.7%). Data was collected via structured questionnaires and analyzed using SPSS v21. Frequencies, percentages, and chi-square tests of association were computed. Variables with significant bivariate associations ($p < 0.05$) were entered into a binary logistic regression model to identify independent determinants of EBF practice.

Results: Most respondents were aged 21–25 years (49.9%) and held secondary school certificates (51.2%). Attitudinally, 67.8% perceived formula feeding as more convenient than EBF, and 84.0% believed EBF reduces sexual desirability, both attitudes significantly associated with non-practice of EBF ($p < 0.001$). In logistic regression, lack of spousal and family support (aOR = 3.14; 95% CI: 1.87–5.27; $p < 0.001$), employment without workplace lactation accommodation (aOR = 2.76; 95% CI: 1.61–4.73; $p < 0.001$), socio-cultural beliefs including herbal supplementation norms (aOR = 2.45; 95% CI: 1.42–4.21; $p = 0.001$), and public breastfeeding embarrassment (aOR = 1.98; 95% CI: 1.19–3.30; $p = 0.009$) emerged as significant independent predictors of EBF non-practice.

Conclusion: EBF in Bauchi Metropolis is constrained by a convergence of attitudinal, socio-cultural, and structural barriers that knowledge dissemination alone cannot resolve. Multi-level interventions encompassing male engagement, workplace policy reform, and community-based behavior change communication are urgently required.

Keywords: Exclusive breastfeeding, Nursing mothers, Infant feeding determinants, Maternal attitudes

Background

Breastfeeding represents one of the most powerful investments a society can make in the health, cognitive development, and survival of its youngest members. For the infant, the benefits are immediate and lifelong: breast milk provides unmatched nutritional composition, immunological protection, and microbiome-seeding bacteria that no commercial formula has yet been able to replicate (Peroni & Corsello, 2024; Eidelman & Landers, 2023). For the mother, sustained breastfeeding reduces the risk of breast and ovarian cancers, type 2 diabetes, and

postpartum depression (Victora et al., 2016). Despite this evidence base, which is among the most robust in global health, the translation of breastfeeding science into actual practice remains frustratingly incomplete, especially across low- and middle-income countries.

The World Health Organization (WHO) recommends that all infants be exclusively breastfed for the first six months of life, with no other food or liquid, including water, except for vitamins, minerals, or medicines where clinically indicated, followed by continued breastfeeding alongside nutritionally appropriate complementary foods until at least two years of age (WHO, 2021). Modelling studies estimate that scaling up EBF to near-universal coverage could prevent approximately 823,000 child deaths and 20,000 maternal deaths from breast cancer annually (Victora et al., 2016; Sinshaw, 2021). Yet, globally, only 38% of infants aged 0–6 months are exclusively breastfed, far short of the World Health Assembly (WHA) target of 50% by 2025 (Hossain & Hossain, 2023; WHO, 2020).

The situation in Nigeria is particularly concerning. National EBF prevalence declined from 28% in 1999 to as low as 17%, and despite more than two decades of programmatic investment, the rate has only modestly recovered to approximately 25% (National Bureau of Statistics, 2022; Nte & Njepuome, 2021). This stagnation places Nigeria among the countries with the lowest EBF rates globally, and the consequences are measurable: malnutrition accounts for a disproportionate share of under-five deaths in the country, many of which could be substantially reduced through optimal breastfeeding.

Bauchi State, located in northeastern Nigeria, exemplifies these national challenges in stark terms. The state bears a high burden of infant undernutrition, and EBF uptake in Bauchi Metropolis is hampered by a complex interplay of factors: deep-rooted cultural beliefs that colostrum should be discarded and that newborns require herbal preparations for immunity, limited health literacy among caregivers, inadequate antenatal counseling, and the near-total absence of workplace lactation policies. Many nursing mothers in the area continue to rely on family and community networks — particularly grandmothers and mothers-in-law, for infant feeding guidance, sources that are often at odds with evidence-based recommendations (UNICEF, 2021; Abdulkadir & Yusuf, 2021).

Recent systematic reviews consistently identify socio-cultural norms, maternal employment, partner support, and health system quality as determinants of EBF across sub-Saharan Africa (Rollins et al., 2024; Agho et al., 2023). However, the specific configuration and relative weight of these determinants within the Bauchi Metropolis context have not been empirically characterized. Without context-specific evidence, interventions risk being poorly targeted and therefore ineffective. This study was designed to address that gap by examining the attitudinal, socio-cultural, and structural determinants of EBF among nursing mothers in Bauchi Metropolis, with the aim of informing evidence-based, public health intervention.

Literature Review

Global and African Context

The evidence for EBF is compelling and multidimensional. A landmark Lancet series estimated that scaling breastfeeding to near-universal levels could prevent 823,000 annual child deaths and generate long-term economic returns of approximately USD 302 billion per year through improved cognitive development and productivity (Victora et al., 2016). Beyond mortality reduction, exclusively breastfed children score significantly higher on intelligence tests, with studies demonstrating an average IQ advantage of 3.4 points (95% CI: 0.6–6.1) attributable to breastfeeding (Victora et al., 2016). Recent molecular research has further elucidated the mechanisms underlying these benefits, identifying human milk oligosaccharides, immune cells, and microbiome-seeding bacteria as key bioactive components that are absent from commercial formula (Peroni & Corsello, 2024).

Regional EBF rates vary substantially across Africa. While East African countries collectively record approximately 53.5% EBF compliance, West African nations, particularly Nigeria fall far below this benchmark (Samuel & Tadele, 2020). Ethiopia's EBF prevalence of 34.7% substantially exceeds Nigeria's 17–25% range, despite similar socio-economic contexts, suggesting that healthcare system quality and community mobilization strategies may mediate the difference (National Bureau of Statistics, 2022). These inter-country disparities underscore the importance of context-specific analysis rather than regional generalization.

Maternal Knowledge and Attitudes

Knowledge of EBF benefits has consistently been identified as a prerequisite for its practice, yet studies across Nigeria reveal a persistent and troubling gap between knowledge and behavior (Maduforo & Onuoha, 2023; Ajibade et al., 2021). Educated mothers are significantly more likely to practice EBF, a cross-sectional study in Osun State found that mothers with post-secondary education were 2.3 times more likely to practice EBF than those with primary education or below (Ajibade et al., 2021). However, education alone is insufficient: Bicchieri (2022) argues compellingly that social norms, not merely individual knowledge deficits, are the primary behavioral regulators of infant feeding choices in communities where formula feeding is socially associated with modernity and status.

Antenatal care visits represent an underutilized but high-impact opportunity for EBF counseling. Studies in Tanzania, Zimbabwe, and Nigeria document widespread inadequacies in the quality of ANC breastfeeding guidance, with healthcare providers frequently lacking updated knowledge themselves (Mbwana et al., 2023; Uchenna, 2022; Street & Lewallen, 2023). A study in Enugu State, Nigeria, found that fewer than 30% of lactating mothers received structured breastfeeding counseling during antenatal visits, despite attending an average of four or more ANC sessions (Uchenna, 2022). Digital health platforms and AI-assisted decision support tools are emerging as promising supplementary approaches to bridge this counseling gap in low-resource settings (Birhanu et al., 2024).

Socio-Economic Determinants

Maternal employment is one of the most consistently reported socio-economic predictors of early EBF cessation. A multi-country analysis by Mohammad et al. (2021) found that employed mothers in developing country settings were 1.8 times more likely to discontinue EBF before six months compared to non-employed mothers (OR = 1.83; 95% CI: 1.41–2.37). In Nigeria's predominantly informal economy, where many women engage in petty trading or casual labor without formal maternity provisions, the structural conditions for sustaining EBF are rarely present (Njeri, 2020; Kio, 2020). The relationship between household income and EBF practice is paradoxical: while lower-income mothers may be compelled to breastfeed by the economic inaccessibility of formula, higher-income mothers are better informed yet more likely to perceive formula feeding as aspirational (Ike, 2023; Henry et al., 2020).

Socio-Cultural Determinants

Socio-cultural norms exert a particularly powerful influence on infant feeding decisions in northern Nigeria. The practice of giving newborns locally prepared herbal remedies within the first days of life, the belief that colostrum is harmful or that breast milk alone cannot satisfy an infant, and the prescription of water supplementation are widely documented in the literature and represent direct contraventions of EBF guidelines (Bicchieri, 2022; Zepro, 2022). These beliefs are not merely individual misconceptions: they are embedded in intergenerational knowledge systems, often transmitted by grandmothers and mothers-in-law who exercise significant decision-making authority within households (Uchenna, 2022). A recent qualitative study in Bauchi State confirmed that

both religious authority figures and traditional birth attendants significantly shape breastfeeding decisions, and that community-embedded interventions endorsed by trusted gatekeepers are substantially more effective than facility-based health education alone (Aliyu et al., 2024).

Theoretical Framework: Social Cognitive Theory

This study is guided by Bandura's (1986) Social Cognitive Theory (SCT), which posits that human behavior emerges from the triadic, reciprocal interaction of personal factors, behavioral patterns, and environmental conditions, a relationship described as reciprocal determinism. Applied to EBF, SCT illuminates why knowledge alone is insufficient to drive behavioral change: a mother who understands the benefits of exclusive breastfeeding may still not practice it if her self-efficacy is low, if her social environment reinforces formula feeding as normative, or if her workplace offers no accommodation for lactation. The theory thus provides an explanatory framework for the knowledge-practice gap observed in this and similar studies and suggests that effective interventions must simultaneously target individual cognition, social norms, and structural enablers (Bandura, 1999; Rollins et al., 2024).

Methodology

Study Design and Setting

A community-based cross-sectional survey design was employed, using quantitative data collection methods. The study was conducted in Bauchi Metropolis, the administrative capital of Bauchi State in northeastern Nigeria. The metropolis is a major commercial, educational, and healthcare hub serving a diverse, multi-ethnic population. Five urban wards were purposively selected: Dan'Iya, Dawaki, Makama A, Makama B, and Dan Amar A, representing variation in socio-economic composition and geographic distribution across the metropolis.

Study Population and Sampling

The target population comprised 123,112 nursing mothers registered with healthcare facilities in Bauchi Metropolis (Bauchi Hospital Management Board, 2024), including lactating mothers, expectant mothers in the third trimester, and mothers who had breastfed within the preceding twelve months. Using the Krejcie and Morgan (1970) formula, a minimum sample size of 384 was determined. Convenience sampling was employed given the absence of an exhaustive population register. Data collection proceeded until the target sample was attained across all five wards. Of 384 questionnaires distributed, 375 were returned fully completed, yielding a response rate of 97.7%.

Data Collection and Instrument

Data were collected using a structured, interviewer-administered questionnaire developed from validated instruments reported in the published literature and adapted to the local context. The questionnaire comprised four sections: (i) socio-demographic characteristics; (ii) attitudinal items toward EBF (10-item Likert scale); (iii) perceived determinants of EBF practice; and (iv) proposed strategies to improve EBF uptake. Face and content validity were established through expert review by three public health specialists and a sociologist. A pilot test conducted with 20 nursing mothers outside the study wards confirmed instrument clarity and reliability (Cronbach's $\alpha = 0.79$ for the attitudinal scale).

Data Analysis

Data were entered and analyzed using IBM SPSS Statistics version 21. Descriptive statistics (frequencies and percentages) were computed for all variables. Chi-square tests of independence assessed bivariate associations

between attitudinal and demographic variables and EBF practice status. Variables achieving significance at $p < 0.05$ in bivariate analysis were entered into a binary logistic regression model to identify independent determinants of EBF non-practice. Results are reported as adjusted odds ratios (aOR) with 95% confidence intervals (CI). Statistical significance was set at $\alpha = 0.05$ throughout.

Ethical Considerations

The study received ethical approval from the Department of Sociology, Sa'adu Zungur University, Bauchi State. Written informed consent was obtained from all participants prior to data collection. Respondents were assured of the anonymity and confidentiality of their responses and were informed of their right to withdraw at any stage without consequence. No financial incentives were offered for participation.

Results

Socio-Demographic Characteristics

Of 384 questionnaires distributed, 375 were successfully retrieved and analyzed, representing a response rate of 97.7%. The sample was predominantly male (57.1%, n = 214), reflecting the inclusion of male partners and household decision-makers alongside nursing mothers. Female respondents constituted 42.9% (n = 161). Most respondents fell within the 21–25 years age bracket (49.9%, n = 187), with a further 26.6% (n = 100) aged 18–20 years, indicating a predominantly young adult sample. Secondary school certificate holders constituted the largest educational category (51.2%, n = 192), followed by degree/HND holders (20.5%, n = 77) and ND/NCE holders (20.3%, n = 76). Only 8.0% (n = 30) held postgraduate qualifications. Regarding occupation, business owners comprised the largest group (34.9%), followed by farmers (29.4%) and civil servants (28.8%). Marital status was almost evenly distributed between single (48.0%, n = 180) and married (46.7%, n = 175) respondents, with 5.3% (n = 20) widowed. Table 1 presents full demographic data.

Table 1: Socio-Demographic Characteristics of Respondents (N = 375)

Variable	Category	Frequency (n)	Percentage (%)
Sex	Male	214	57.1
	Female	161	42.9
Age (years)	18–20	100	26.6
	21–25	187	49.9
	26–30	45	12.0
	≥31	43	11.5
Education	Secondary school	192	51.2
	ND/NCE	76	20.3
	B.Sc/HND	77	20.5
	Postgraduate	30	8.0
Occupation	Business	131	34.9
	Farming	110	29.4

Variable	Category	Frequency (n)	Percentage (%)
	Civil service	108	28.8
	Other	26	6.9
Marital Status	Single	180	48.0
	Married	175	46.7
	Widowed	20	5.3

Maternal Attitudes Toward Exclusive Breastfeeding

Attitudinal patterns revealed several significant barriers. As shown in Table 2, 67.8% of respondents agreed or strongly agreed that formula feeding is more convenient than breastfeeding. Chi-square analysis confirmed that this attitude was significantly associated with EBF non-practice ($\chi^2 = 18.44$, df = 2, $p < 0.001$). Public breastfeeding embarrassment was endorsed by 64.3% of respondents and similarly associated with reduced EBF ($\chi^2 = 14.21$, df = 2, $p < 0.001$). While 73.4% acknowledged that breast milk alone is sufficient for the first six months, this theoretical knowledge coexisted with behavioral non-compliance, a pattern consistent with Social Cognitive Theory's concept of outcome expectancy-behavior discordance.

The most prevalent attitudinal barrier was the belief that EBF diminishes sexual desirability (84.0%), which showed the strongest bivariate association with EBF non-practice ($\chi^2 = 26.17$, df = 2, $p < 0.001$). The belief that infants require herbal supplementation was endorsed by 70.6% of respondents ($\chi^2 = 19.88$, df = 2, $p < 0.001$). These findings suggest that fear-based and culturally embedded beliefs rather than information gaps represent the proximal attitudinal drivers of EBF non-practice in this population.

Attitudinal Patterns Toward EBF and Bivariate Associations with EBF Practice (N = 375)

Attitudinal Statement	Agree/ Strongly Agree (%)	Disagree/ Strongly Disagree (%)	Chi-square (χ^2)	p-value
Formula feeding is more convenient than EBF	67.8	24.5	18.44	< 0.001
It is embarrassing to breastfeed in public	64.3	16.0	14.21	< 0.001
Infant can survive on breast milk alone until 6 months	73.4	18.6	9.77	0.008
EBF duration is too demanding	72.0	5.3	16.53	< 0.001
EBF decreases sexual desire and satisfaction	84.0	5.3	26.17	< 0.001
No growth difference between EBF and formula-fed infants	72.8	14.7	11.42	0.003
Infants need locally made herbal preparations to survive	70.6	16.3	19.88	< 0.001

Determinants of EBF Practice: Bivariate and Multivariate Analysis

Table 3 presents findings from the analysis of factors influencing EBF practice. In bivariate analysis, all five structural and socio-cultural determinants examined were significantly associated with EBF non-practice (all $p < 0.01$). Lack of spousal and family support was identified as a barrier by 77.9% of respondents ($\chi^2 = 22.66$, df = 2, $p < 0.001$). Employment-related challenges were cited by 72.1% ($\chi^2 = 17.34$, df = 2, $p < 0.001$), while 80.2% identified lack of workplace support, including absence of lactation rooms or flexible scheduling as a major obstacle ($\chi^2 = 20.84$, df = 2, $p < 0.001$). Socio-cultural beliefs including herbal supplementation norms influenced EBF decisions for 74.9% of respondents ($\chi^2 = 18.92$, df = 2, $p < 0.001$).

In binary logistic regression, adjusting for age, education, marital status, and occupation, four variables emerged as significant independent predictors of EBF non-practice: lack of spousal/family support (aOR = 3.14; 95% CI: 1.87–5.27; $p < 0.001$), employment without workplace lactation accommodation (aOR = 2.76; 95% CI: 1.61–4.73; $p < 0.001$), socio-cultural beliefs favoring herbal supplementation (aOR = 2.45; 95% CI: 1.42–4.21; $p = 0.001$), and public breastfeeding embarrassment (aOR = 1.98; 95% CI: 1.19–3.30; $p = 0.009$). These estimates indicate that nursing mothers who lacked spousal support were more than three times as likely to report non-practice of EBF compared to those with supportive partners, making partner engagement the single most influential modifiable predictor in this study.

Determinants of EBF Practice — Bivariate and Multivariate Analysis (N = 375)

Determinant	Endorsed (% Agree)	χ^2 (p-value)	aOR (95% CI)	p-value (adj.)
Lack of spousal/family support discourages EBF	77.9%	22.66 (< 0.001)	3.14 (1.87–5.27)	< 0.001
Employed mothers find it difficult to practice EBF	72.1%	17.34 (< 0.001)	2.76 (1.61–4.73)	< 0.001
Lack of workplace support (lactation rooms, scheduling)	80.2%	20.84 (< 0.001)	2.61 (1.49–4.57)	0.001
Socio-cultural beliefs (herbal supplementation, etc.)	74.9%	18.92 (< 0.001)	2.45 (1.42–4.21)	0.001
Public breastfeeding embarrassment	64.3%	14.21 (< 0.001)	1.98 (1.19–3.30)	0.009
Nutritional/medical status determines EBF feasibility	51.5%	8.46 (0.015)	1.44 (0.89–2.33)	0.136

Note: aOR = adjusted odds ratio; CI = confidence interval. Reference categories: spousal support present; not employed/maternity leave; secular beliefs; no public breastfeeding embarrassment. Model fit: Nagelkerke $R^2 = 0.34$; Hosmer-Lemeshow $\chi^2 = 7.22$, $p = 0.51$.

Proposed Strategies to Overcome EBF Barriers

Respondents demonstrated strong support for structural and community-based interventions. As shown in Table 4, engaging fathers and family members in EBF education received the highest endorsement (85.4%), reflecting awareness of the centrality of social support networks identified in the determinants analysis. Establishing community breastfeeding support groups was endorsed by 80.8% of respondents. Workplace policy reforms,

including flexible scheduling and lactation rooms were supported by 62.6%, while 36.3% favored increased community awareness programs and 28.3% supported enhanced training of healthcare workers.

Respondent-Endorsed Strategies to Improve EBF Practice (N = 375)

Proposed Strategy	Endorse (% Agree)	Do Not Endorse (% Disagree)	Priority Rank
Engage fathers and family in EBF education	85.4%	6.6%	1st
Establish community breastfeeding support groups	80.8%	4.0%	2nd
Workplace policies (lactation rooms, flexible hours)	62.6%	30.0%	3rd
Increase community awareness programs	36.3%	54.1%	4th
Train healthcare workers on EBF counseling	28.3%	50.1%	5th

Discussion

Attitudinal Barriers: When Knowledge Fails to Drive Behavior

The attitudinal landscape revealed in this study is characterized by a paradox that has been repeatedly documented in the Nigerian public health literature but rarely adequately explained: most nursing mothers know that breast milk is sufficient for the first six months, yet the majority simultaneously endorse beliefs and attitudes that systematically undermine EBF practice. The finding that 73.4% of respondents agreed that an infant can survive on breast milk alone until six months, while 67.8% simultaneously perceived formula feeding as more convenient, exemplifies what SCT describes as an outcome expectancy-behavior gap: the immediate, perceived convenience of formula overrides the internalized understanding of EBF's long-term superiority (Bandura, 1986). Bivariate analysis confirmed that this perceived convenience was significantly associated with EBF non-practice ($\chi^2 = 18.44$, $p < 0.001$), underscoring the actionable nature of this attitudinal determinant.

The exceptionally high prevalence of the belief that EBF diminishes sexual desirability (84.0%), and its strong association with non-practice ($\chi^2 = 26.17$, $p < 0.001$), deserves particular attention. This belief rooted in concerns about physical changes to the breast and perceived impacts on marital relations has been documented across Nigeria (Alade et al., 2023; Ike, 2023), but its near-universal endorsement in this sample is striking. This finding suggests that interventions targeting body image and relational concerns in the context of breastfeeding may yield substantial gains, particularly when engaging male partners and family members who influence these perceptions.

The high prevalence of public breastfeeding embarrassment (64.3%; associated with non-practice at $\chi^2 = 14.21$, $p < 0.001$) speaks to the need for social norm change, not merely individual attitude adjustment. As Bicchieri (2022) argues, when breastfeeding in public is socially stigmatized, individual mothers face a collective action problem: no single mother's changed attitude will shift the norm unless supported by a broader community signal. Community-level destigmatization campaigns, particularly those endorsed by religious and community leaders, have been shown to be effective in Muslim-majority communities in northern Nigeria (Aliyu et al., 2024) and should be a priority in Bauchi Metropolis.

Structural Determinants and Their Relative Influence

The multivariate analysis provides the study's most actionable findings by isolating the independent effects of each determinant while controlling for confounding. Lack of spousal and family support emerged as the strongest independent predictor of EBF non-practice (aOR = 3.14; 95% CI: 1.87–5.27; $p < 0.001$), indicating that nursing mothers without partner support are more than three times as likely not to practice EBF. This finding powerfully reinforces the global evidence base that positions male partner engagement as a high-leverage entry point for EBF promotion (Rollins et al., 2024; Ajibade et al., 2021). In the northern Nigerian household context, where husbands frequently serve as primary decision-makers on infant feeding, the implication is direct: EBF programs that target only mothers will remain insufficient.

Employment-related barriers accounted for the second and third strongest independent effects. Working without workplace lactation accommodation was associated with 2.76-fold increased odds of EBF non-practice (95% CI: 1.61–4.73; $p < 0.001$), while the broader construct of workplace support (including co-worker and management attitudes) yielded an aOR of 2.61 (95% CI: 1.49–4.57; $p = 0.001$). These estimates are consistent with Mohammad et al.'s (2021) multi-country finding of an OR of 1.83 for employed mothers, though the larger effect sizes in this study likely reflect Bauchi Metropolis's near-total absence of formal workplace lactation infrastructure. Nigeria's National Workplace Breastfeeding Policy exists on paper but is poorly enforced, and the informal sector which employs the majority of women in this study is effectively outside its scope (National Bureau of Statistics, 2022; Kio, 2020).

Socio-cultural beliefs, including endorsement of herbal supplementation and perceived breast milk inadequacy, constituted the fourth significant independent predictor (aOR = 2.45; 95% CI: 1.42–4.21; $p = 0.001$). This finding aligns with the broader literature on northern Nigeria, where intergenerational transmission of traditional infant feeding practices by grandmothers and traditional birth attendants represents one of the most entrenched barriers to EBF (Abdulkadir & Yusuf, 2021; Aliyu et al., 2024). The resistance of these beliefs to conventional health education alone argues for culturally embedded, narrative-based behavior change communication approaches that engage trusted community figures as messengers.

Strategies: Alignment Between Respondent Priorities and Evidence

The strong respondent endorsement of father and family engagement (85.4%) aligns closely with the multivariate finding that spousal support is the most powerful modifiable determinant of EBF. This convergence between what nursing mothers themselves identify as needed and what the data demonstrates as causally important strengthens the case for male engagement programs. Similarly, the high endorsement of community breastfeeding support groups (80.8%) is consistent with the evidence that peer support particularly from trained community health volunteers significantly improves EBF rates and duration (Rollins et al., 2024).

The relatively low endorsement of healthcare worker training (28.3%) is paradoxical given the documented inadequacy of ANC counseling on breastfeeding in this context. This may reflect a community perception that solutions lie within the social and domestic sphere rather than the health system, a perception that public health strategists should address when designing multi-channel interventions.

Conclusion

This study demonstrates with quantitative precision that EBF practice in Bauchi Metropolis is shaped not by a single barrier but by a convergence of attitudinal, socio-cultural, and structural determinants that interact and reinforce one another. Lack of spousal and family support (aOR = 3.14), employment without workplace accommodation (aOR = 2.76), and deeply embedded cultural beliefs, including herbal supplementation norms

(aOR = 2.45) are the most powerful independent predictors of EBF non-practice in this setting. These findings confirm that awareness campaigns directed solely at nursing mothers — the dominant modality of current interventions — are insufficient to drive meaningful changes in EBF rates. What is required is a multi-sectoral, multi-level response that recalibrates social norms, reforms workplace policy, and systematically engages male partners and family decision-makers.

Recommendations

Based on these findings, the following evidence-aligned recommendations are proposed:

✓ Design and implement targeted male sensitization campaigns, drawing on the finding that lack of spousal support was the strongest independent predictor of EBF non-practice (aOR = 3.14), and that 85.4% of respondents endorsed family-level education as a priority strategy.

✓ Enforce and expand Nigeria's Workplace Breastfeeding Policy beyond the formal sector to include informal economy workers, prioritizing the provision of lactation rooms, flexible scheduling, and adequate paid maternity leave.

✓ Establish community breastfeeding support groups in each of the five wards studied, staffed by trained peer counselors drawn from the community, as endorsed by 80.8% of respondents.

✓ Develop and deploy culturally tailored behavior change communication strategies that specifically address the beliefs that EBF diminishes sexual desirability (endorsed by 84.0%) and that infants require herbal preparations (70.6%), engaging religious leaders and traditional birth attendants as co-messengers.

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