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Health facility delivery and early initiation of breastfeeding: Cross-sectional survey of 11 sub-Saharan African countries

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Abstract

Background and Aims: Early initiation of breastfeeding (EIB) remains one of the promising interventions for preventing neonatal and child deaths. EIB is positively associated with healthcare delivery or childbirth. Meanwhile, no study in sub-Saharan Africa (SSA) appears to have investigated the relationship between health facility delivery and EIB; thus, we assessed the correlation between health facility delivery and EIB.

Methods: We used data from the Demographic and Health Survey (DHS) of 64,506 women from 11 SSA countries. The outcome variable was whether the respondent had early breastfeeding or not. Two logistic regression models were used in the inferential analysis. With a 95% confidence interval (CI), the adjusted odds ratios (aORs) for each variable were calculated. The data set was stored, managed, and analyzed using Stata version 13.

Results: The overall percentage of women who initiated early breastfeeding was 59.22%. Rwanda recorded the highest percentage of early initiation of breastfeeding (86.34%), while Gambia recorded the lowest (39.44%). The adjusted model revealed a significant association between health facility delivery and EIB (aOR = 1.80, CI = 1.73–1.87). Compared with urban women, rural women had higher likelihood of initiating early breastfeeding (aOR = 1.22, CI = 1.16–1.27). Women with a primary education (aOR = 1.26, CI = 1.20–1.32), secondary education (aOR = 1.12, CI = 1.06–1.17), and higher (aOR = 1.13, CI = 1.02–1.25), all had higher odds of initiating early breastfeeding. Women with the richest wealth status had the highest odds of initiating early breastfeeding as compared to the poorest women (aOR = 1.33, CI = 1.23–1.43).

Conclusion: Based on our findings, we strongly advocate for the integration of EIB policies and initiatives with healthcare delivery advocacy. Integration of these efforts can result in drastic reduction in infant and child mortality. Essentially, Gambia and other countries with a lower proclivity for EIB must reconsider their current

breastfeeding interventions and conduct the necessary reviews and modifications that can lead to an increase in EIB.

KEYWORDS
early initiation of breastfeeding, newborn, neonatal health, global health, sub-Saharan Africa

1 | BACKGROUND

Early initiation of breastfeeding (EIB) is a promising intervention to forestall preventable neonatal and child deaths and improving child survival.[1] Early initiation of breastfeeding (EIB) is defined as "the provision of mothers' breast milk to infants within the first hour of birth and ensures that the newborn receives colostrum."[2] Colostrum is high in nutrients and antibodies, which help protect the newborn from a variety of infections.[3] Every day, 6,700 newborns die, accounting for 47% of all child deaths, with low- and middle-income countries having the highest rate.[4] Every year, approximately 3 million babies die in their first month of life, and inappropriate feeding practices alone account for approximately 35% of deaths among children under the age of five.[5,6] Sub-Saharan Africa (SSA) is the region with the highest number of newborn deaths.[4]

Both the newborn and the mother benefit from EIB. EIB stimulates the release of oxytocin, which aids in uterine contraction and thus reduces the risk of postpartum hemorrhage in mothers.[7] EIB has also been shown to strengthen mother-child bonding, particularly when exclusive breastfeeding occurs.[8] EIB protects newborns from diseases such as neonatal sepsis, diarrhea, and pneumonia; ultimately lowering the risk of neonatal mortality.[9] Breastfeeding promotion initiatives are estimated to prevent 11.6% of infant deaths.[10] The World Health Organisation (WHO) estimates that over 820,000 under five children could be saved, if all children 0–23 months were optimally breastfed.[11] Breastfeeding is noted to improve intelligence quotient (IQ), school attendance, and also linked with higher income in adult life.[12] It is therefore not surprising that the WHO and UNICEF recommend that children should be breastfed exclusively from the first hour of birth and be continued for the first 6 months of life.[13,14]

Despite the enormous benefits of EIB for mothers and newborns, more than half of newborns worldwide do not receive EIB. Between 2013 and 2018, approximately 43% of newborns were breastfed within the first hour of birth. However, the EIB's collective targets for 2030 are 70%, indicating the need for significant concerted efforts.[15] As a result, efforts at the national and regional levels must be stepped up to meet the global target. The proportion of newborns who receive EIB is roughly comparable to global statistics. A recent evidence study, for example, reported a prevalence of 57%, with some countries recording as low as 24%.[16]

Healthcare delivery or childbirth has been found to be positively associated with EIB. Dharel et al.[17] found a 26.5% increase in EIB among infants born in health facilities compared with a 17.1% increase in EIB among those born at home in Nepal. Other parts of the world have reported higher rates of EIB among children born in health facilities.[18,19] This is understandable given the importance of trained healthcare providers in various health facilities in ensuring the health of mothers and newborns.[20] In contrast, some evidence suggest that a significant proportion of children born in health facilities do not receive EIB.[21,22] Overall, these series of evidences emphasize that EIB advocacy may be ineffective if separated from healthcare delivery.

Some country-level studies in SSA have investigated the relationship between health facility delivery and EIB, with mixed results. These include children born in health facilities in Nigeria, where the qualitative and quantitative arms of the study revealed that 37% and 39% of children born in health facilities, respectively, did not receive EIB.[23] Besides, a number of factors such as antenatal care attendance, type of delivery (i.e. vaginal birth or cesarean section), and health education have been identified to be associated with EIB.[23] In Ethiopia, Seyoum et al.[24] noted that the place of delivery has no effect on EIB. Regardless, it appears that no single study in SSA has investigated the relationship between health facility delivery and EIB based on the eleven (11) SSA countries with the most recent DHS data, collected between 2018 and 2021. As a result, we assessed the relationship between health facility delivery and EIB to generate current evidence that would help these countries achieve the third Sustainable Development Goal.

2 | METHODS

2.1 | Data source and sampling

The DHS data from 64,506 women from 11 SSA countries was used in this study (see Table 1). Countries were considered if their DHS took place between 2018 and 2021 and included the variables of interest. DHS selects nationally representative samples of women of reproductive age (15–49 years), using a two-stage stratified cluster sampling approach. The first stage entails obtaining a list of primary sampling units (PSUs) or enumeration areas (EAs) from the most recent national censuses. Each EA is further subdivided into standard-size segments, from which a random sample of predetermined segments is drawn with a probability proportional to the number of households in each EA. The second stage involves systematically selecting households from a list of previously enumerated households in each EA and surveying them. This data set was obtained from the MEASURE DHS website (URL: https://www.dhsprogram.com/data/available-datasets.cfm) and freely available to download. The STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) statement was used to conduct this study and write the manuscript.

TABLE 1 Basic descriptive information of study sample.

Country	Year of DHS Survey	Count (n)	Proportion (%) who initiated early breastfeeding
Benin	2018	7629	55.66
Cameroon	2018	4691	53.51
Gambia	2020	4372	39.44
Guinea	2018	4425	46.68
Liberia	2020	2400	67.16
Mali	2018	5820	66.29
Mauritania	2021	5118	58.23
Nigeria	2018	14,180	45.42
Rwanda	2020	5022	86.34
Sierra Leone	2019	5658	78.16
Zambia	2018	5191	77.09
Total		64,506	59.22

Abbreviation: DHS, Demographic and Health Survey.

2.2 | Study variables and measurements

2.2.1 | Outcome variable

The outcome variable for the study was whether the respondent initiated early breastfeeding. The DHS asked the following question of the mothers: how long after birth did you put to the breast? Outcome variable was based on last-born child(ren) born in the 2 years preceding the survey, including the children who started breastfeeding immediately, within an hour (after 20 min) of birth, and given something other than breast milk during the first 3 days of life. Women who indicated immediately or within the first 1 hour were coded "1 = Yes" and those who indicated after the first 1 hour were coded "0 = No."

2.2.2 | Explanatory variables

The main independent variable of interest was whether or not the respondent's last birth was in a designated healthcare facility. This was derived from the question "Where did you give birth?", in reference to their last birth. The response was recoded as 0 = "other" (i.e. any place other than a designated healthcare facility such as a respondent's home, residence of a traditional healer, etc.) and 1 = "health facility." Fourteen other explanatory variables were included in the model in accordance with both theoretical and empirical literature and epidemiological plausibility. These are: type of residence (urban and rural); level of education (no education, primary, secondary, and higher); wealth index quintile (poorest, poorer, middle, richer, and richest); maternal age (15–19, 20–24, 25–29, 30–34, 35–39, 40–44, and 45–49 years); current marital status (married and cohabiting); parity (1, 2, 3, and 4+); frequency of watching television (not at all, less than once a week, at

least once a week, and almost every day); frequency of listening to radio (not at all, less than once a week, at least once a week, and almost every day); partner's level of education (no education, primary, secondary, and higher); the respondent's perception of how much of a problem distance to the nearest health facility is (not a big problem and big problem); the respondent's perception of how much of a problem getting permission to go to health facility is (not a big problem and big problem); the respondent's perception of how much of a problem getting money needed for treatment at health facility is (not a big problem and big problem); and occupation (working and not working).

2.3 | Analytical procedure

The descriptive analysis consisted of calculating the percentage of respondents in each sociodemographic category who initiated early breastfeeding along with bivariate tests of independence between sociodemographic variables and early initiation of breastfeeding. The inferential analysis consisted of two logistic regression models. Model 1 investigated the bivariate association between the major predicting variable (place of delivery) and the outcome variable (early initiation of breastfeeding). Model 2 added the remaining aforementioned predicting variables into a multivariate logistic regression model if they had statistically significant ($p < 0.05$) bivariate associations. Results from the multicollinearity test showed that the variables in the models had a mean-variance inflation factor (VIF) of 2.98. According to Chatterjee (2000), multicollinearity is present when the VIF value is greater than 10. The adjusted odds ratios (AORs) for all the variables were calculated with a 95% confidence interval. Stata version 13 was used to store, manage, and analyze the data set. Calculations were weighted appropriately to account for DHS sampling procedures.

2.4 | Ethical considerations

This was a secondary analysis that relied on pre-existing data. The authors were not involved in data collection or interviewing. Access to the data was requested and granted by the DHS Program. According to the DHS Program, the surveys were ethically approved by ORC Macro Inc. and institutional IRBs of partner organizations in the surveyed countries. Proper consent is obtained for all respondents in DHS. The data set is freely available for download at: https://dhsprogram.com/.

3 | RESULTS

3.1 | Descriptive results

Table 1 above shows that the overall percentage of women who initiated early breastfeeding for the whole 11-country sample was 59.22%. Rwanda recorded the highest percentage of early initiation of breastfeeding (86.34%), while Gambia recorded the lowest (39.44%). Table 2 below shows the frequencies and percentages of

TABLE 2 Summary of EIB by sociodemographic characteristics.

Variable	Count (n = 64,506)	Proportion (%) who initiated early breastfeeding	χ^2 (p-value)
Place of delivery			$\chi^2 = 1.1e + 03$ (0.000)
Home	18,147	49.07	
Health facility	45,655	63.23	
Residence			$\chi^2 = 16.5937$ (0.000)
Urban	24,198	56.67	
Rural	40,308	60.74	
Education			$\chi^2 = 350.1065$ (0.000)
No education	29,281	56.08	
Primary	16,249	65.15	
Secondary	15,953	59.31	
Higher	3023	57.20	
Partner's education			$\chi^2 = 309.5068$ (0.000)
No education	27,222	57.10	
Primary	13,523	65.49	
Secondary	17,980	58.87	
Higher	5781	55.59	
Wealth status			$\chi^2 = 47.7199$ (0.000)
Poorest	14,022	57.18	
Poorer	13,715	58.59	
Middle	13,017	59.52	
Richer	12,363	60.80	
Richest	11,389	60.41	
Age			$\chi^2 = 37.4687$ (0.000)
15–19	3398	55.98	
20–24	11,557	58.20	
25–29	16,854	58.50	
30–34	14,213	60.23	
35–39	11,347	60.34	
40–44	5259	61.23	
45–49	1878	57.60	
Marital status			$\chi^2 = 149.3561$ (0.000)
Married	57,486	58.30	
Cohabiting	7020	66.72	
Parity			$\chi^2 = 74.0928$ (0.000)
1	10,147	56.37	
2	11,939	60.74	
3	10,900	61.87	
4	31,521	58.64	

TABLE 2 (Continued)

Variable	Count (n = 64,506)	Proportion (%) who initiated early breastfeeding	χ^2 (p-value)
Frequency of listening to radio			χ^2 = 160.6302 (0.000)
Not at all	28,080	59.26	
Less than once a week	15,272	56.31	
At least once a week	20,175	60.39	
Almost every day	979	79.10	
Frequency of watching television			χ^2 = 234.6436 (0.000)
Not at all	36,105	60.28	
Less than once a week	11,002	58.41	
At least once a week	16,072	55.89	
Almost every day	1328	77.20	
Occupation			χ^2 = 136.8648 (0.000)
Not working	15,934	62.83	
Working	48,572	58.03	
Getting permission to go			χ^2 = 37.0261 (0.000)
Big problem	12,003	61,48	
Not a big problem	52,503	58,70	
Money needed for treatment			χ^2 = 0.1066(0.744)
Big problem	31,720	59.13	
Not a big problem	32,786	59.30	
Distance to health facility			χ^2 = 18.0319 (0.000)
Big problem	22,349	60.15	
Not a big problem	42,157	58.72	

Note: Frequencies are raw counts. Percentages are weighted. Chi-square and p-values are from bivariate tests of independence.

women initiating early breastfeeding across all sociodemographic variables of interest along with Chi-square and p-values. Women with health facility delivery recorded the highest proportion (63.23%) of initiating early breastfeeding. Rural residents (60.74%), women with primary education (65.15%), women with primary educated partners (65.49%), and women with richer wealth status (60.80%) recorded the highest proportion of initiating early breastfeeding. Women aged 40–44 (61.23%) and cohabiting women (66.72%) recorded the highest proportion of initiating early breastfeeding.

Regarding parity, women with parity 3 (61.87%) recorded the highest proportion of initiating early breastfeeding, whereas, women with parity 1 recorded the lowest proportion (56.37%). Women who were not working (62.83%), women who had big problem getting permission to go to a health facility (61.48%), and women who had big problem with distance to a health facility (60.15%) had the highest proportion of initiating early breastfeeding. Regarding the media variables, women who listen to radio almost every day (79.10%) and women who watch television almost every day (77.20%) had the highest proportion of early

initiating of breastfeeding as opposed to those exposed to media sources less frequently.

3.2 | Logistic regression results

Table 3 below presents the odds of early initiation of breastfeeding across the sociodemographic variables of interest. An unadjusted bivariate model (Model 1) was run with the main independent variable, which was place of delivery. The results of Model 1 was that women who delivered at health facilities had higher odds (odds ratio [OR] = 1.73, confidence interval [CI] = 1.73–1.86). After adjusting for type of residence, education, wealth status, age, marital status, parity, health insurance, difficulty with distance to health facility, and several media exposure variables, the association between place of delivery and subsequent early initiation of breastfeeding remained significant (adjusted odds ratio [aOR] = 1.80, CI = 1.83–1.87). Compared with urban women, rural women had higher likelihood of initiating early breastfeeding (aOR = 1.22, CI = 1.16–1.27). Women with primary

TABLE 3 Results from bivariate and multivariate logistic regression models.

Variable	Model 1 Crude odds ratio (95% confidence interval)	Model 2 Adjusted odds ratio (95% confidence interval)
Place of delivery		
Home	Ref	Ref
Health facility	1.79 (1.73–1.86)***	1.80 (1.73–1.87)***
Residence		
Urban		Ref
Rural		1.22 (1.16–1.27)***
Education		
No education		Ref
Primary		1.26 (1.20–1.32)***
Secondary		1.12 (1.06–1.17)***
Higher		1.13 (1.02–1.25)*
Wealth status		
Poorest		Ref
Poorer		1.02 (0.97–1.07)
Middle		1.09 (1.03–1.14)**
Richer		1.18 (1.11–1.26)***
Richest		1.33 (1.23–1.43)***
Age		
15–19		Ref
20–24		0.99 (0.91–1.07)
25–29		1.07 (0.99–1.16)
30–34		1.17 (1.07–1.28)**
35–39		1.18 (1.07–1.30)**
40–44		1.25 (1.13–1.39)***
45–49		1.19 (1.05–1.36)**
Marital status		
Married		Ref
Cohabiting		1.27 (1.20–1.34)***
Parity		
1		Ref
2		1.22 (1.15–1.30)***
3		1.24 (1.16–1.32)***
4+		1.09 (1.02–1.16)**
Frequency of listening to radio		
Not at all		Ref
Less than once a week		0.93 (0.89–0.87)**
At least once a week		1.04 (1.00–1.09)*
Almost every day		1.68 (1.42–1.99)***

TABLE 3 (Continued)

Variable	Model 1 Crude odds ratio (95% confidence interval)	Model 2 Adjusted odds ratio (95% confidence interval)
Frequency of watching television		
Not at all		Ref
Less than once a week		0.87 (0.83–0.92)***
At least once a week		0.71 (0.68–0.75)***
Almost every day		1.51 (1.30–1.77)***
Occupation		
Not working		Ref
Working		0.82 (0.78–0.85)***
Getting permission to go		
Big problem		Ref
Not a big problem		0.85 (0.81–0.89)***
Money needed for treatment		
Big problem		Ref
Not a big problem		1.02 (0.98–1.06)
Distance to health facility		
Big problem		Ref
Not a big problem		0.89 (0.86–0.93)***

Note: Ref, reference category.

*= $p < 0.05$;

**= $p < 0.01$;

***= $p < 0.001$.

education (aOR = 1.26, CI = 1.20–1.32), secondary education (aOR = 1.12, CI = 1.06–1.17), and higher (aOR = 1.13, CI = 1.02–1.25) had higher odds of initiating early breastfeeding as compared to women with no education. Women with the richest wealth status had the highest odds of initiating early breastfeeding as compared to the poorest women (aOR = 1.33, CI = 1.23–1.43).

Except for the age group 20–24 (aOR = 0.99, CI = 0.91–1.07), all other age groups had higher odds of EIB when compared to the age group 15–19. Compared to the married women, cohabiting women had higher odds of EIB (aOR = 1.27, CI = 1.20–1.34). Regarding parity, the odds of EIB was highest for women with parity 3 (aOR = 1.24, CI = 1.16–1.32). The odds of EIB was highest for women with greater media exposure. Women who listened to radio every day and women who watched television every day had the highest of odds as compared to women who don't listen to radio at all or watch television at all. Occupation was strongly associated with EIB, as working women had lower odds of initiating early breastfeeding as compared to women who were not working. Lastly, women who reported that distance to a health facility and getting permission to go to a health facility was 'not a big problem' had lower odds (aOR = 0.89, CI = 0.86–0.93)

and (aOR = 0.82, CI = 0.78–0.85) respectively of EIB versus women who stated it was "a big problem."

4 | DISCUSSION

Despite a wealth of data on various aspects of EIB,[15,17,20] recent evidence on the relationship between health facility delivery and EIB appears to be limited in the context of SSA. As a result, the current study examined the relationship between health facility delivery and EIB in eleven SSA countries using the most recent DHS datasets spanning 2018–2021, to uncover the sub-region's evidence on the subject. The key findings of this study indicate that early breastfeeding initiation is more pronounced among women who gave birth in health facilities (63.2%) than those who gave birth at home (49.1%), with an average of 59.2%. The overall prevalence (59.2%) exceeded the prevalence reported by another SSA study, thus 50%.[25] We agree with Bergamaschi[25] that further inquiry on EIB is needed considering the generally suboptimal prevalence. The inferential findings followed a similar pattern, with both the adjusted and unadjusted models revealing that women who give birth in health facilities have an increased likelihood of EIB.

Comparatively, the highest proportion of EIB occurred in Rwanda (86.3%) while Gambian women reported the lowest prevalence (39.4%). The relative advantages of health facility childbirth over home birth is well established in the literature and these include increased likelihood of EIB.[26–28] In spite of the gaps and problems that are sometimes associated with health facility delivery such as verbal abuse, neglect, and disrespect,[29,30] the associated benefits, including positive maternal outcome, far outweigh the nonmonetary costs that are aligned with home delivery. In the context of Rwanda, conscious efforts have been made to increase chances of early initiation of breastfeeding. For instance, the Rwandan Ministry of Health has collaborated with Partners in Health/Inshuti Mu Buzima (PIH/IMB) to implement interventions aimed at enhancing breast-feeding prospects for newborns and infants across Neonatal Intensive Care Units (NICUs) in the country.

This intervention includes training healthcare providers, provid-ing breastfeeding counseling to mothers, and improving the healthcare system to promote early and exclusive breastfeeding.[31] Though the Gambia has similar initiatives, such as the Baby Friendly Community initiative,[32] which was modeled after the UNICEF/WHO global strategic initiative of the Baby Friendly Hospital Initiative, bottlenecks such as cultural, economic, social, and political factors have been cited to undermine the efficacy of such interventions.[33] These events in Rwanda and Gambia may account for some of the observed variation. It emphasizes the importance of the Gambia's government to review existing pro-EIB strategies and consider current trends and new approaches that can accelerate the nation's prospects of increasing factors that enhance EIB, regardless of the place of childbirth. First, recent national surveys show that the proportion of health facility childbirth in Rwanda (93%) is higher than the proportion in Gambia (84%).[34,35] In accordance with available evidence, any society or nation that dominates in health facility delivery is expected to dominate in EIB for the reasons stated in the preceding paragraphs.

A major distinction between births that occur at the health facility and births that occur at home is the guaranteed availability of skilled birth attendants at the health facility. As a result, a tenable reason why someone who gives birth at the health facility would have increased chances of EIB is that she plausibly received support, motivation, or advice from skilled birth attendants to achieve this. Skilled birth attendants are persons who are trained and dedicated to safe childbirth and well-being of mothers and their newborns.[36] Due to the critical role of this cadre of healthcare providers, there has been consistency in the positive association between health facility delivery and EIB in several jurisdictions across the globe.[17,37–39] This seemingly universal constancy presumably attests to the indispensable role of health facility delivery in achieving EIB.

Rural women were more likely than urban women to start breastfeeding at a young age. It is common knowledge that healthcare facilities are widely available and easily accessible in urban areas.[40,41] Meanwhile, road traffic conditions and massive work demands on urban residents may jeopardize their chances of securing a promising environment for childbirth in which EIB can be guaranteed.[42,43] A typical rural setting has a strong sense of community, strong social ties, with next to zero road traffic.[44] These characteristics may increase rural women's chances of receiving EIB. For example, given how easily information circulates in rural settings,[45] rural women who have received some education on the importance of EIB can easily pass it on to other women. Additionally, radio and some other traditional mass media outlets are available to rural residents,[46,47] and all of these can help them achieve EIB. The finding could be interpreted as a call for future breastfeeding interventions to prioritize urban women equally, as well as a shift away from the long-held belief that rural women are always the most vulnerable group.

Women with primary, secondary, and higher education had higher odds of EIB as compared to women with no education. Meanwhile, there was no clear pattern of increment in the level of education and a corresponding increase in the odds of EIB. Relatedly, the odds of EIB was highest for women with greater media exposure. Thus, women who listened to radio every day and women who watched television every day had the highest odds as compared to women who don't listen to radio at all or watch television at all. Education could be formal or informal, and the media has been a powerful tool for informal education, thereby augmenting formal education in several ways.[47] Hence, a number of health education interventions are administered either solely through the media or jointly implemented with the media and other outlets.[48] As a result, is it anticipated that both educated women and those with frequent media encounter will have increased prospects of EIB.

Women with the richest wealth status had the highest odds of EIB as compared to the poorest women. On the contrary, through a community-based prospective cohort study, Khanal et al[49] observed that women of poor wealth quintile in Bangladesh have increased

prospects of EIB relative to richest women. In addition to differences in the study design, contextual factors between SSA and Bangladesh may partly underpin the incongruent findings. Though a woman's wealth status may not be directly linked to her ability to breastfeed her newborn, it is instructive to appreciate that relatively affluent women have an increased propensity to give birth in relatively conducive health facilities where motivation for EIB will be high, considering the guaranteed availability of trained birth attendants.

Except for women aged 20–24, all other age groups had a higher likelihood of EIB when compared to those aged 15–19. In comparison to someone over the age of 20, a teenager (aged 15–19) is more likely to be in school or learning a trade. Given the general contempt with which teenage pregnancies and teen motherhood are treated, particularly in Sub-Saharan Africa, and the stigma,[50,51] pregnant teenagers usually initiate ANC late, are less frequent at ANC, have a higher tendency of canceling ANC appointments, and as a result miss some important motherhood education, such as the importance of EIB.[52] All of these factors may interact to explain why women in advanced age groups have a higher likelihood of EIB than teenagers. This highlights the importance of continuing efforts to support pregnant teenage girls and teenage mothers, as well as advocacy for modern contraception use among sexually active teenagers.

Cohabiting women had a higher odd of EIB compared to married women. One notable distinction between marriage and cohabitation is that the former is socially sanctioned, whereas the latter is not. As a result, women in cohabitation unions tend to be comparatively autonomous, allowing them to exercise some degree of freedom while under the control of their male partners.[53] As discovered in this study, this freedom may extend to a woman's ability to begin breastfeeding early.

Women with parity of 3 had a higher likelihood of EIB than those with parity of 1. Similarly, a population-based survey in Malawi discovered that women with high parity are more likely to have EIB.[54] Among the many possible explanations, the role of maternity experiences cannot be overstated. Thus, women who have had more births may have noticed some physiological and physical differences between the children who breastfed early and those who did not, bolstering their conviction that the newborn child must be breastfed within the first hour of birth. Furthermore, the benefits of EIB may be common knowledge to women who have had multiple births due to previous pregnancy and birthing encounters with health facilities, increasing their motivation to breastfeed their newborns.

Occupation was strongly related to EIB, with working women having a lower likelihood of starting breastfeeding early than nonworking women. Furthermore, women who stated that the distance to a health facility and obtaining permission to visit a health facility were 'not a big problem' had a lower likelihood of EIB than women who stated that these were major issues. The findings regarding women's employment status and EIB are consistent with previous findings.[19,55] As stated in previous reports, the women's work demands and commitments may have hampered their appreciation for EIB, either by limiting their chances of receiving the necessary motherhood education or by other means. Concerning those who reported health facility accessibility issues, their difficulties may have kept them from learning about the importance of EIB, as in the case of working women.

4.1 | Strengths and limitations of the study

This study has some impressive strengths. The results are based on the most recent nationally representative surveys conducted in 11 countries. As a result, the study's conclusions and recommendations are applicable to current events surrounding EIB in the included countries. Furthermore, because the surveys were representative, the findings are generalizable to women of reproductive age in the countries studied. Despite these advantages, we must exercise caution in interpreting our findings because the surveys are cross-sectional and thus do not lend themselves to causal inference. Besides, since the outcome variable was self-reported, there is a possibility of recall bias. It is also possible that there were some incomplete or partial reporting during the surveys.

5 | CONCLUSIONS

The study found that healthcare delivery encourages EIB; however, EIB varies greatly across the 11 countries studied. Based on our findings, we strongly advocate for the integration of EIB policies and initiatives with healthcare delivery advocacy. Integration of these disparate efforts can result in an increase in healthcare delivery, increasing the likelihood of EIB. Essentially, the Gambia and other countries with a lower proclivity for EIB must reconsider their current breastfeeding interventions and conduct the necessary reviews and modifications that can lead to an increase in EIB.

AUTHOR CONTRIBUTIONS

Edward Kwabena Ameyaw: Formal analysis; methodology; project administration; writing—original draft; writing—review & editing. **Kenneth Setorwu Adde**: Methodology; writing—review & editing. **Jones Arkoh Paintsil**: Writing—review & editing. **Kwamena Sekyi Dickson**: Writing—review & editing. **Olanrewaju Oladimeji**: Writing—review & editing. **Sanni Yaya**: Conceptualization; data curation; formal analysis; funding acquisition; investigation; methodology; project administration; resources; software; supervision; validation; visualization; writing—review & editing.

CONFLICT OF INTEREST STATEMENT

The authors declare there is no conflict of interest. All authors have read and approved the final version of the manuscript. Sanni Yaya had full access to all of the data in this study and took complete responsibility for the integrity of the data and the accuracy of the data analysis.

DATA AVAILABILITY STATEMENT

The data set is freely available for download at: https://dhsprogram.com.

TRANSPARENCY STATEMENT

The lead author Sanni Yaya affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

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