



Determinants of Exclusive Breastfeeding Rate in Central Region of Ghana Health

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

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ABSTRACT

The prevalence of exclusive breastfeeding (EBF) has recently garnered significant attention from public health experts. Recognised as a cost-effective strategy, EBF significantly enhances the well-being of both mothers and infants. This study investigates the factors influencing exclusive breastfeeding (EBF) practices in Ghana's Central Region, with a focus on the role of socio-demographic characteristics. The study used a cross-sectional study design and a structured questionnaire to collect data from 358 breastfeeding mothers across 15 health centres in the Central Region of Ghana. The findings reveal a weak but statistically significant correlation between socio-demographic characteristics and EBF practices (Pearson correlation $r = 0.179$, $P = 0.001$), indicating that factors such as maternal age, education, marital status, and number of births modestly influence EBF practices. Similarly, a weak negative correlation was observed between socio-demographic factors and current breastfeeding rates (Pearson correlation = 0.105 $r = 0.105$, $P = 0.048$), suggesting some level of impact by these variables. However, the relationship between

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working status and breastfeeding practices was found to be non-significant (Pearson correlation = 0.011, $r = 0.011$, $P = 0.181$). Based on these findings, the study recommends tailored public health interventions that address specific demographic characteristics, enhanced awareness and education on EBF, the development of breastfeeding-friendly workplace policies, and further research utilising qualitative methods to better understand the complexities of breastfeeding behavior.

Keywords: Lactating mothers; socio-demographic characteristics; influencing factors; Ghana.

1. INTRODUCTION

Exclusive breastfeeding (EBF) refers to the method of nourishing a neonate for the initial half-year of existence solely with breast milk, devoid of any additional foods, liquids, or water [1]. Research has demonstrated that EBF confers a multitude of health advantages to both neonates and mothers. These include diminished rates of infant mortality, enhanced cognitive development, and a reduced likelihood of developing chronic diseases [2]. EBF is recommended by the World Health Organisation (WHO) for the initial half-year of a child's existence due to its unparalleled health benefits, which are vital for the child's well-being and growth. Nevertheless, compliance with EBF exhibits significant variation on a global scale, with West and Central Africa presenting unique obstacles due to its below-average rates [1]. Maternal preferences have been impacted by historical changes in breastfeeding standards and the introduction of infant formula, frequently to the detriment of EBF practises [3]. In spite of the manifold advantages associated with EBF, prevalence rates continue to be inadequate in numerous developing nations, particularly Ghana. The proportion of neonates in Ghana that are exclusively breastfed for the initial half-year of life is approximately 40% [4].

A multitude of determinants exert an impact on EBF practises in Ghana. These factors consist sociodemographic variables, including income, education, and maternal age, are correlated with EBF practises in Ghana. The utilisation of EBF is more prevalent among mothers who are older, have higher incomes, and have more education [4].

Additionally, employment status and healthcare accessibility are economic factors that can impact EBF practises. The utilisation of EBF is comparatively less prevalent among employed mothers and mothers with limited healthcare access [4]. The next factor is cultural factors. EBF practises may also be influenced by

traditional beliefs and practises. Certain traditional beliefs and practises, such as administering water to infants, discourage EBF and may impede its progress, respectively [4]. Additionally, the healthcare system contributes to the promotion and support of EBF. Healthcare providers possess the ability to furnish mothers with guidance and counselling pertaining to EBF, in addition to aiding mothers in surmounting obstacles including latch-on difficulties and inadequate milk production. Nevertheless, the Ghanaian healthcare system occasionally fails to offer sufficient assistance for EBF. For instance, numerous healthcare facilities lack the resources to offer comprehensive EBF counselling and support due to a shortage of healthcare professionals [5]. Furthermore, mothers in Ghana encounter numerous obstacles when attempting to implement EBF. A significant number of mothers in Ghana are not cognizant of the numerous health advantages associated with EBF [4]. EBF is dissuaded by certain traditional practises and beliefs [4]. Certain mothers in Ghana struggle to implement EBF without the assistance of their communities and families [4].

Employment status and absence of work environments conducive to breastfeeding: EBF may be challenging to implement for employed mothers and mothers who lack access to breastfeeding-friendly workplaces [4]. Certain mothers in Ghana may find breastfeeding supplies, including milk storage containers and breast machines, prohibitively expensive [4]. Notwithstanding the obstacles, there exist several potential strategies for enhancing EBF rates in Ghana. These consist of enhancing knowledge regarding the advantages of EBF among healthcare providers and mothers. Collaboration among governmental bodies, healthcare organisations, and non-profit entities can be instrumental in raising awareness regarding the benefits of EBF among these populations. Community and religious leaders have the capacity to contribute to the effort of challenging conventional beliefs and practises that discourage alternative behaviour fidelity

(EBF). By increasing support for EBF via the healthcare system and the community, the government and healthcare organisations can do more. This assistance may consist of offering EBF counselling and support to mothers, educating healthcare professionals about EBF, and establishing community spaces that are conducive to lactation.

In order to establish work environments that are conducive to lactation, collaboration between the government and employers is possible. This may involve supplying breastfeeding mothers with lactation spaces and pauses. Collaborative efforts between governmental bodies and non-profit organisations can be directed towards enhancing the affordability of lactation supplies for mothers residing in Ghana. This may involve distributing breastfeeding supplies to mothers in need and providing subsidies for breastfeeding supplies.

A comprehensive understanding of EBF practices was sought by this study through the collection of data from a diverse sample of 358 participants across 15 health centres using a multi-centre approach [6]. The investigation conducted by Quansah (2019) explores the correlation between EBF rates and a range of socio-demographic factors [7] [8]. The findings of this research are of utmost importance to policymakers, healthcare practitioners, and stakeholders involved in maternal and infant health. The broad geographic coverage and methodological variety of the sample emphasise the potential of the study to provide valuable insights for policymakers and targeted interventions seeking to enhance EBF rates throughout the region [8]). Through this lens, the research seeks to contribute to the ongoing discourse on EBF, addressing both the micro- and macro-level factors that shape maternal and infant health outcomes. The objective is to illuminate the pathways through which socio-economic, cultural, and policy-related factors converge to influence EBF practices in Ghana, with implications for broader global health strategies [9].

The research aims to make a scholarly contribution to the ongoing discussion on EBF by examining the various factors that influence the health outcomes of mothers and infants at both the micro and macro levels. The objective of this study is to shed light on the interconnections between socio-economic, cultural, and policy-related elements that impact EBF practises in Ghana.

2. LITERATURE REVIEW

2.1 The Heath Relief Model

The Health Belief Model (HBM), developed by Rosenstock in 1974, is a psychological model that predicts and explains health behaviours by focusing on the attitudes and beliefs of individuals. Central to the HBM is the premise that an individual's decision to engage in a health behavior, such as exclusive breastfeeding (EBF), is influenced by their perceptions of susceptibility to and severity of a health condition, the benefits of taking preventive action, and the barriers to taking such action, as well as their confidence in their ability to perform the behavior (self-efficacy) [6,7,10].

In the context of EBF in Ghana, the HBM provides a valuable framework for understanding the factors that influence a mother's decision to exclusively breastfeed. Mothers are more likely to practice EBF if they believe in the risk of developing health problems from not breastfeeding (perceived susceptibility), recognise the serious implications of not engaging in EBF (perceived severity), and acknowledge the health benefits for themselves and their babies (perceived benefits). However, their decision is also tempered by the challenges they face, including societal and logistical barriers (perceived barriers) and their belief in their ability to successfully breastfeed (self-efficacy) [6].

Ghanaian mothers may perceive a high risk of health issues, like postpartum depression and increased breast cancer risk, if they do not practice EBF [5]. They may also view EBF as crucial due to the high rates of infant mortality and malnutrition in the country, underscoring the severity of the issue [5]. While the benefits of EBF, such as enhanced cognitive development and reduced chronic disease risk for their children, are widely recognised [9], mothers often encounter barriers like a lack of family support, employment demands, and inadequate breastfeeding-friendly environments [4]. Thus, increasing self-efficacy among mothers becomes a key aspect of promoting EBF in Ghana.

Interventions based on the HBM can be designed to target these specific perceptions. Efforts can focus on increasing awareness of the health risks associated with not practicing EBF, educating mothers about the comprehensive benefits of EBF, providing support mechanisms to overcome societal and logistical barriers,

advocating for breastfeeding-friendly policies in workplaces, and empowering mothers with the confidence and skills necessary to practice EBF despite the challenges [6] [7]. By addressing these critical factors, interventions guided by the HBM have the potential to significantly enhance EBF practices in Ghana, thereby contributing to the improvement of maternal and child health outcomes in the region.

2.2 Exclusive Breastfeeding

Exclusive breastfeeding (EBF), which means giving babies only breast milk for the first six months of their lives, is a suggested practice that is known to be very important for their health and growth [9]. There is a lot of research that supports the many benefits of EBF, such as higher protection and a lower chance of gastrointestinal diseases [11]. Even with these benefits, EBF rates around the world, especially in poor countries like Ghana, are still not as high as they could be [12]. New studies have tried to figure out the many things that make EBF hard. Some important things that affect EBF practices are the mother's schooling, her socioeconomic status, and cultural standards [13] [14]. Public health programmes, like the Baby-Friendly Hospital Initiative (BFHI), have been very important in lowering EBF rates, but it's still hard to keep these gains [2]. The research also shows that we don't fully understand the effects of women working and the support systems that are in place for breastfeeding moms at work [15]. This study adds to what has already been written by looking at what causes EBF in the Central Region of Ghana, focusing on how socio-demographic factors are related to EBF rates. This work adds to what is known by looking at EBF factors that are specific to Ghana through a cross-sectional study design and a mixed-methods approach [16].

2.2.1 Individual factors influencing Exclusive Breastfeeding (EBF)

Maternal characteristics such as age, education, and income play a significant role in the practice of exclusive breastfeeding (EBF). Studies have shown that older mothers, those with higher levels of education, and those with greater income levels are more likely to practice EBF [4] [9]. The correlation may be attributed to older and more educated mothers being better informed about the benefits of EBF and having access to the necessary resources and support. Additionally, mothers with higher incomes are potentially less likely to be employed outside the

home, providing more opportunities for EBF. Conversely, employment status impacts EBF practices notably. Employed mothers often face greater challenges in maintaining EBF compared to non-employed mothers [4] [9]. Factors like the absence of breastfeeding-friendly environments at workplaces, time constraints, and the necessity to supplement with formula milk while at work contribute to this disparity. Parity also influences EBF, with primiparous (first-time) mothers being less likely to practice EBF than multiparous (having had more than one child) mothers [5] [12]. This trend may stem from the relative inexperience of first-time mothers with breastfeeding, leading to challenges like difficulties with latching and concerns about milk supply.

Another crucial factor is knowledge about the benefits of EBF. Mothers who understand the advantages of EBF for both themselves and their children are more inclined to adopt this practice. Breastfeeding self-efficacy, defined as a mother's confidence in her ability to breastfeed successfully, also significantly impacts EBF practices. Higher levels of self-efficacy correlate with a greater likelihood of practicing EBF, as mothers with confidence in their breastfeeding abilities are more resilient in overcoming breastfeeding challenges [7].

2.2.3 Social and cultural factors affecting EBF

The social and cultural context in which a mother lives plays a pivotal role in her breastfeeding practices. Family and community support are instrumental in promoting EBF [4] [9]. Such support can range from practical help to emotional encouragement, both of which are vital for a breastfeeding mother. Traditional beliefs and practices, however, can sometimes pose barriers to EBF. In some cultures, there are misconceptions such as the need to give water to newborns or to cease breastfeeding if the mother becomes pregnant again. Addressing and educating people about these beliefs is crucial to promoting EBF. Access to breastfeeding-friendly workplaces is another significant factor. Workplaces that accommodate breastfeeding needs, by providing time and space for it, positively influence a mother's ability to practice EBF. Lastly, the cost of breastfeeding supplies, such as breast pumps and milk storage bags, can be a barrier for some mothers. The expense associated with these supplies can make EBF challenging, highlighting the need for making these supplies more affordable [9].

3. METHODS

The study used a cross sectional research design by engaging 358 breastfeeding mothers from 15 health centres, selected for their diversity and relevance to the EBF practices observed in the region. The study excluded breastfeeding mothers who are outside these 15 selected health facilities. These selected 15 health centres are Agona East District, Agona West Municipality, Gomoa Central District, Gomoa East District, Offutu Municipal, Gomoa West District, Ewutu Senyan West, Ewutu Senyan East, Twifo Atti Morkwa District, Aburra/Asebu ,Kwamankese District, Ajumako Enyan Essiam District ,Asikuma Odoben, Brakwa District, Assin North District, Assin South District and Kissi Health Center District. On the day of data collection, respondents were informed and briefed again about the study. They were also well informed and given more time to understand and respond to each question. The data collection took a period of three months (January 15th to March 21st, 2023).

The primary tool for data collection was a structured questionnaire, meticulously designed to capture comprehensive information on participants' socio-demographic backgrounds, household-specific factors, and current breastfeeding practices. After gathering the data, an exhaustive statistical analysis was conducted using SPSS software, version 25. Central to this analysis was the application of Pearson's correlation technique, which was employed to scrutinise the interrelationships among various study variables, revealing insightful patterns and correlations. Prior to the actual data collection, ethical clearances were obtained from relevant institutional review boards.

4. RESULTS AND DISCUSSION

This section presents findings, which were derived using Pearson's correlation analysis to understand the extent to which variables such as maternal age, education level, and employment status influence EBF. The results offer critical insights into the dynamics of breastfeeding behaviours within this demographic context. The subsequent discussion interprets these findings, considering their implications for public health policies and breastfeeding support initiatives in Ghana.

The Table 1 focused on the association between socio-demographic characteristics and individual

household factors related to EBF practice. The table focused on the association between socio-demographic characteristics and individual household factors related to EBF practice. The results revealed a weak but statistically significant relationship (Pearson correlation $r = 0.179$, $N = 358$, $P = 0.001$). This finding suggests that while socio-demographic factors such as age, education level, marital status, and number of births do have some influence on EBF practices, the strength of this relationship is not particularly robust. Despite the weak correlation, the statistical significance of these results underscores the relevance of socio-demographic characteristics in understanding and promoting EBF practices within the region.

Table 2 showed a negative relationship between socio-demographic characteristics and current breastfeeding rates and to analyze the potential effect of improved breastfeeding rate ($r = 0.105$, $N = 358$, $P = 0.048$). The table explored the link between socio-demographic characteristics and current breastfeeding rates, including the potential effect of improved breastfeeding practices. The study uncovered a weak yet statistically significant negative relationship (Pearson correlation $r = 0.105$, $N = 358$, $P = 0.048$). This correlation, though modest, indicates that socio-demographic factors do, in some capacity, affect current breastfeeding rates. The findings imply that these variables should be factored into public health strategies aiming to enhance breastfeeding rates in the region.

The Table 3 examined the influence of socio-demographic factors, including working status, on breastfeeding practices. The results showed a very weak and non-significant correlation (Pearson correlation $r = 0.011$, $N = 358$, $P = 0.181$). This suggests that in the Central Region of Ghana, socio-demographic characteristics and working status are not significant determinants of breastfeeding practices. This finding is particularly insightful for policymakers and healthcare providers, indicating that while these factors may have some qualitative impact, they are not key drivers of breastfeeding habits within this specific context. The lack of a significant statistical relationship highlights the need for further research to explore other potential influences on breastfeeding practices, possibly utilising different methodologies that can capture more nuanced aspects of this behaviour.

Table 1. Summary of the relationship between socio-demographic characteristics and individual household factors associated with exclusive breastfeeding practice in selected healthcentres Central Region

Correlation		Socio-demographic	Household
Socio demographics	Pearson Correlation	1	0.179
Sig. (2-tailed)			0.001
N		358	358
Individual household	Pearson Correlation	0.179	1
Sig. (2-tailed)		0.001	
N		358	358

Significant at 0.01 level

Table 2. Summary of the relationship between socio-demographic characteristics and current breastfeeding rates and to analyze the potential effect of improved breastfeeding rate in selected hospitals Central Region

Correlation		Socio demo	Current rate
Socio demographics	Pearson Correlation	1	0.105
Sig. (2-tailed)			0.048
N		358	358
Current breastfeeding rate	Pearson Correlation	0.105	1
Sig. (2-tailed)		0.048	
N		358	358

Significant at 0.05 level

Table 3. Summary of the relationship between socio-demographic characteristics and factors, including working status associated with breastfeeding in selected healthcentres Central Region

Correlation		Socio demo	Working status
Socio demographics	Pearson Correlation	1	0.011
Sig. (2-tailed)			0.181
N		358	358
Working status	Pearson Correlation	0.011	1
Sig. (2-tailed)		0.181	
N		358	358

Significant at 0.05 level

5. CONCLUSION

The study revealed nuanced insights into the factors influencing exclusive breastfeeding (EBF) practices and current breastfeeding rates in the region. Firstly, it identified a statistically significant, though weak, correlation between socio-demographic characteristics and EBF practices (Pearson correlation $r=0.179$, $N=358$, $P=0.001$). This correlation suggests that while socio-demographic factors such as age, education level, marital status, and number of births play a role in EBF practices, their overall impact is modest. Secondly, the research also found a weak but significant negative relationship between socio-demographic characteristics and current breastfeeding rates (Pearson correlation

$r=0.105$, $N=358$, $P=0.048$). This indicates that these factors, though not strongly, do influence breastfeeding rates in the region. Lastly, the study showed that working status and similar socio-demographic variables are not major determinants of breastfeeding practices, as evidenced by a very weak and non-significant correlation (Pearson correlation $r=0.011$, $N=358$, $P=0.181$).

Based on these findings, several recommendations can be made. Public health interventions should be tailored to specific demographic groups to more effectively address the influence of socio-demographic factors on EBF practices. This could involve creating educational and support programs that cater to

the varying needs of different age groups, education levels, and family structures. Additionally, increasing awareness and education about the benefits of EBF is crucial. This includes debunking myths and providing practical support to mothers, particularly in demographically diverse communities. Although the study found a weak correlation between working status and breastfeeding practices, the development of breastfeeding-friendly workplace policies is still recommended. These policies could include adequate maternity leave, breastfeeding breaks, and facilities for breastfeeding or milk expression. Further research is also necessary to explore other factors that might influence breastfeeding practices, with a focus on qualitative methods to capture the complexities of this behavior. Finally, policymakers and healthcare providers should consider these findings in their efforts to promote and support breastfeeding, designing policies that address socio-economic and cultural barriers to breastfeeding to improve overall rates in the region.

These findings and recommendations offer a comprehensive understanding of the dynamics influencing breastfeeding practices in Ghana's Central Region and provide actionable insights for improving EBF rates through targeted public health strategies and policies.

This study's overarching goal is to fill in some of the gaps in our understanding of mother and infant health in Ghana. Breastfeeding is the best way to ensure an infant's healthy growth and development. As a result of this research, policymakers and other stakeholders in Ghana's Central Region will have a better grasp on the significance of exclusive breastfeeding and be better equipped to craft strategies to increase the region's already high rates of it.

CONSENT AND ETHICAL APPROVAL

Informed consent was then sought from all participants, who were given comprehensive explanations about the study's objectives, procedures, and how the collected data would be utilized. Each respondent was given the freedom to voluntarily participate in the study, thereby eliminating any form of coercion or pressure. The entire procedure was conducted with strict adherence to ethical guidelines, including ensuring confidentiality and data security.

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COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. WHO, Exclusive breastfeeding for optimal growth, development and health of infants. World Health Organisation, Geneva; 2021.
2. Pérez-Escamilla R, Martinez JL, S. Segura-Pérez, Impact of the Baby-friendly hospital initiative on breastfeeding and child health outcomes: A systematic review., " Maternal & Child Nutrition. 2019; 15(3):e12778.
3. Smith D, The impact of historical changes in breastfeeding standards and the introduction of infant formula on maternal preferences., " Maternal and Child Nutrition.2018;14(4):e12584.
4. GSS, Ghana demographic and health survey report.. Ghana Statistical Service. Accra; 2017.
5. GHS, Ghana Health Service annual report. Ghana Health Service., Accra; 2021.
6. Asamoah B, CY, Osei-Kuffour, Odimegwu C, Application of the health belief model to promote exclusive breastfeeding among mothers in Ghana: A scoping review., " International Breastfeeding Journal.2021; 17(1):1-11.
7. Akinyemi O, Odimegwu C, Adebayo O, Health belief model factors influencing exclusive breastfeeding among working mothers in Nigeria., " International Breastfeeding Journal. 2020;15(1):1-12.
8. Quansah PE, Mensah EO, Factors influencing exclusive breastfeeding practices among mothers in Ghana: A theoretical review., " International Journal of Nursing and Midwifery. 2020;12(2):57-65.
9. WHO, Exclusive breastfeeding: A practical guide for health workers. World Health Organization , Geneva; 2016.

10. Rosenstock IM, The health belief model and personal health behavior. Health Education & Behavior. 1974;2(4):358-385.,
11. Kramer MS, Kakuma R, The optimal duration of exclusive breastfeeding: A systematic review. Adv Nutrition. 2020;3(2):547-555., 2020.
12. UNICEF, The state of the world's children 2019. children, food and nutrition: Growing well in a changing world., World Health Organisation, Geneva; 2019.
13. Patil CL, Turab A. Ambikapathi R, Nesamvuni C, Maternal education and child nutritional status: Is there a strong causal relationship?," Demography. 2015;52(2):221-245.
14. Hajeerhoy N, Rigsby A, McColl A, Sanghvi T, Abrha TH, Godana A, Sather M, Early initiation of breastfeeding and the risk of infant mortality in rural Ethiopia. Acta Paediatrica. 2015;104(3):123-130.,.
15. Cox J, Giglia R, Zhao Y, Binns CW, Factors influencing the continuation of breastfeeding in older infants: a cross-sectional study., " Matern Child Health Journal.2014;18(2):332-338.,.
16. Aidam BA, Pérez-Escamilla R, Larrey A. Aidam J., "Factors associated with exclusive breastfeeding in Accra, Ghana.," Eur J Clin Nutr. 2015;9(6):789-796.

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