



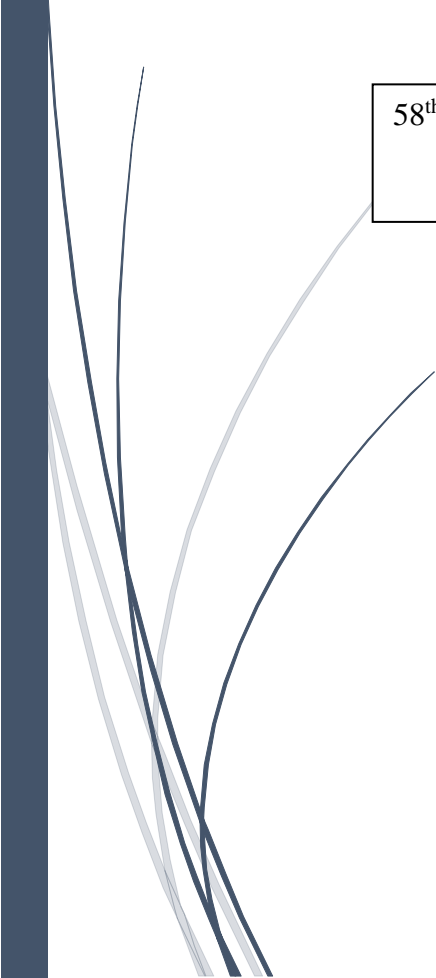
BARRIERS AND ENABLERS OF EXCLUSIVE BREASTFEEDING IN GHANA

A LITERATURE REVIEW

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GHANA

58th Master of Public health /International course in health development
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A thesis submitted in partial fulfilment of the requirement for the degree of master of science in public health

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DECLARATION

Where other people's work has been used (from either a printed or virtual source, or any other source), this has been carefully acknowledged and referenced in accordance with academic requirements.

The thesis "Barriers and enablers of exclusive breastfeeding in Ghana" is my own work



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List of abbreviations

ANC	Antenatal Care
DHMT	District Health Management Team
EBF	Exclusive Breastfeeding
GHS	Ghana Health Service
IYCF	Infant and Young Child's Feeding
JHS	Junior High School
LMICs	Low- and Middle-Income Countries
MOH	Ministry of Health
MPH	Masters in Public Health
NCDs	Non-Communicable Diseases
OKP	Orange Knowledge Programme
RHTS	Rural Health Training School
SHS	Senior High School
UNICEF	The United Nations International Children's Emergency Fund
VU	Vrije Universiteit
WHO	World Health Organization

Definition of terms often used

Exclusive breast feeding: Exclusive breastfeeding (EBF) means the infant is fed breast milk alone during the first six months after delivery. Only medications that are prescribed are allowed. (WHO, 2021)

Exclusive breast-feeding rate: percentage of new-borns under six months who are only given breast milk over a period of time divided by the total number of new-borns under six months, during the same period. (WHO, 2018)

Early initiation of breast feeding: babies who are put to the breast within 1 hour after delivery (WHO, 2018).

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ABSTRACT

Background

Exclusive breastfeeding (EBF) is a key public health intervention that increases the survival of infants and young children and promotes their healthy growth and development. In Ghana, the rate of EBF is rapidly decreasing and may not be able to reach the global target if no action is taken immediately.

Exploring the enablers and barriers to EBF is crucial.

Objective

To examine the barriers and enablers of exclusive breastfeeding in Ghana in order to better understand why the EBF rate is declining and make recommendations for improvement.

Methods

A literature review was carried out to identify enablers and barriers to exclusive breastfeeding in Ghana. The findings were analysed using the Dahlgren and Whitehead framework (Figure 3).

Results

there was strong evidence that access to healthcare services influence EBF positively. There was also strong evidence that working in the formal sector, cultural practices, beliefs of the mother and lack of support impact negatively on the practice of EBF in Ghana. There was no evidence that housing had any influence on EBF.

Conclusion

The framework was limited in identifying the influence of infant formula on EBF in Ghana.

Recommendations

Further research on the impact of infant formula on exclusive breastfeeding in Ghana, review of the current twelve (12) weeks of paid maternity leave policy to sixteen (16) weeks, breastfeeding promotion activities at the household, community, and facility levels at the same time, training of health professionals, community health workers to support breastfeeding in communities.

Keywords: Exclusive breastfeeding, breast milk, infants, nursing mothers, Ghana

Word count: 10,423

INTRODUCTION

My name is Martha Amoako. I am a public health officer (nutrition) in Ghana. I started my tertiary education at the Rural Health Training School (RHTS), now the College of Health and Wellbeing, in the year 2002 and completed it in 2005 with a Diploma in Community Health. I was posted by the Ministry of Health to work with the Ghana Health Service as a community health technical officer in 2006 in one of the rural districts of the Ahafo Ano South district in the Ashanti Region. I was in charge of the nutrition unit of the district and also a member of the District Health Management Team (DHMT).

In 2012, I moved on to the School of Public Health at the University of Ghana, where I eventually earned a Bachelor of Public Health degree in 2016. I returned to my district in the same year (2016), and after serving there for exactly one (1) year, I was transferred to a district that had just been established, this time one that was centred around a city. I was posted there as a public health officer in charge of the nutrition unit and a member of the DHMT. I worked there until last year (2021), when I received admission to KIT to pursue my Masters in Public Health (MPH).

One of the main responsibilities of the nutrition department is the reduction of childhood morbidity and mortality through the promotion of infant and young child feeding practices. As a nutrition public health officer, I am passionate about interventions that seek to promote the health of children. I decided to do research into the barriers and enablers of exclusive breast feeding because it ensures the survival of children and it also benefits everyone.

Exclusive Breast Feeding (EBF) is feeding infants solely on breast milk starting within an hour after birth until six months of age. The World Health Organization (WHO) recommends that only vaccines and medicines that are prescribed are allowed. Despite the many advantages of EBF, just 43% of children in Ghana are breastfed exclusively as of 2018, down from 63 percent in 2008. Ghana may miss the worldwide goal of 50% and 70% breastfeeding rates by 2025 and 2030, respectively. It is one of the best ways of feeding infants and has many advantages for the child, the mother, and society. All the essential nutrients as well as water, that new-borns require for proper growth and development are present in breast milk. Additionally, it offers defence against respiratory tract infections and other common paediatric diseases including diarrhoea. Children who are exclusively breastfed perform well in school and are less likely to develop non-communicable diseases in later life (WHO, 2021).

This study seeks to examine barriers and enablers of exclusive breastfeeding in Ghana in order to better understand why the EBF rate is declining and make recommendations for improvement.

1.1.1 ORGANIZATION OF THE STUDY

Chapter one: Background information

Chapter two: Problem statement, justification and objectives

Chapter three: Methodology and conceptual framework

Chapter four: Results/ Findings

Chapter five: Discussions, conclusion and recommendations

CHAPTER ONE: BACKGROUND INFORMATION

This gives information about Ghana, the educational system, the structure and organization of the Ghana health service, maternal and child health including infant and young child feeding practices.

1.1. Geography and Demography

Ghana is a West African country with a total population of 30,832,019 of where about 4 out of 10 people live in rural areas. The age group from 15 to 64 years old accounts for 60.4% of the total population (GSS, 2021; Susu, 2022). Ghana covers a land area of 238,537 square kilometres. It shares borders with Togo on the east, Burkina Faso on the north and northwest, and Côte d'Ivoire on the west. These are all French-speaking countries. In the south, the Gulf of Guinea can be found. Ghana is primarily a lowland country with few mountains. Mt. Afadjato, at 884 meters above sea level, is the highest peak. The Volta Lake, a hydroelectric dam in Ghana's eastern region, is one of the world's largest artificial lakes. (GDHS, 2014)

Annually, the average temperature in Ghana is about 26 Degree Celsius (79 Degree Fahrenheit). The southern and middle parts of Ghana have two rainfall periods, while the northern part has one rainfall period. Ghana experiences the harmattan, which is a dry and dusty wind from December to March. In the northern part of Ghana temperatures are high during the day and the nights are very cold and in the southern part of Ghana, the effects of the harmattan are mainly felt in January. (GDHS, 2014)

1.1.1 History of Ghana:

Ghana declared independence from colonial domination on March 6, 1957. Accra, is the capital of Ghana and also the country's largest city. Every four years, a new president is elected for a maximum of two terms through popular vote. Ghana had ten regions at first, but currently has 16, as shown on the Ghana map (Figure 2). To boost development at all levels, these 16 regions are subdivided into 261 districts. The Ghanaian population is multi-ethnic, but the Akans account roughly for 48% of all the ethnic groups. (GSS, 2021; GDHS, 2014)

1.1.2 Education:

The educational system in Ghana has gone through many changes. It is mandatory for all elementary schools to have nurseries or kindergartens. To improve educational attainment, all basic education is free and also compulsory. (GDHS, 2014)

In Ghana's educational system, pupils attend elementary school for six years before moving on to junior high school (JHS), which was previously known as junior secondary school (JSS). Senior high school (SHS) lasts three years as well. The policy was changed from a three-year SHS level to four-years during the 2007/2008 academic year, it has now been returned to three years. Ghana's government launched free SHS for all students who qualify in September 2017, hence increasing access to education for all. (Pajibo and Tamanja, 2019).

1.1.3 Organization of The Ghana Health Service:

The Ghana Health Service (GHS) is a government-run organization founded in 1996 under Act 525, as mandated by the 1992 constitution. The GHS is mandated to implement approved national policies by the ministry of health. It is also to provide essential and quality health services that are accessible to the population of Ghana. The Ghana health service is also mandated to manage the financial, human, and material resources that are available for the delivery of health care services to the people of Ghana (MOH, 2016).

In 2003, a national health-insurance scheme was established to ensure fair access to quality health care and achieve universal health coverage (MOH, 2015).

1.1.4 Organizational Structure of Ghana Health Services Delivery

Health care provision within the Ghana health service is done at different levels (Figure 1). These are the community, health centre, district, regional and tertiary hospitals. Each level has a different package of services provided by different cadres of staff.

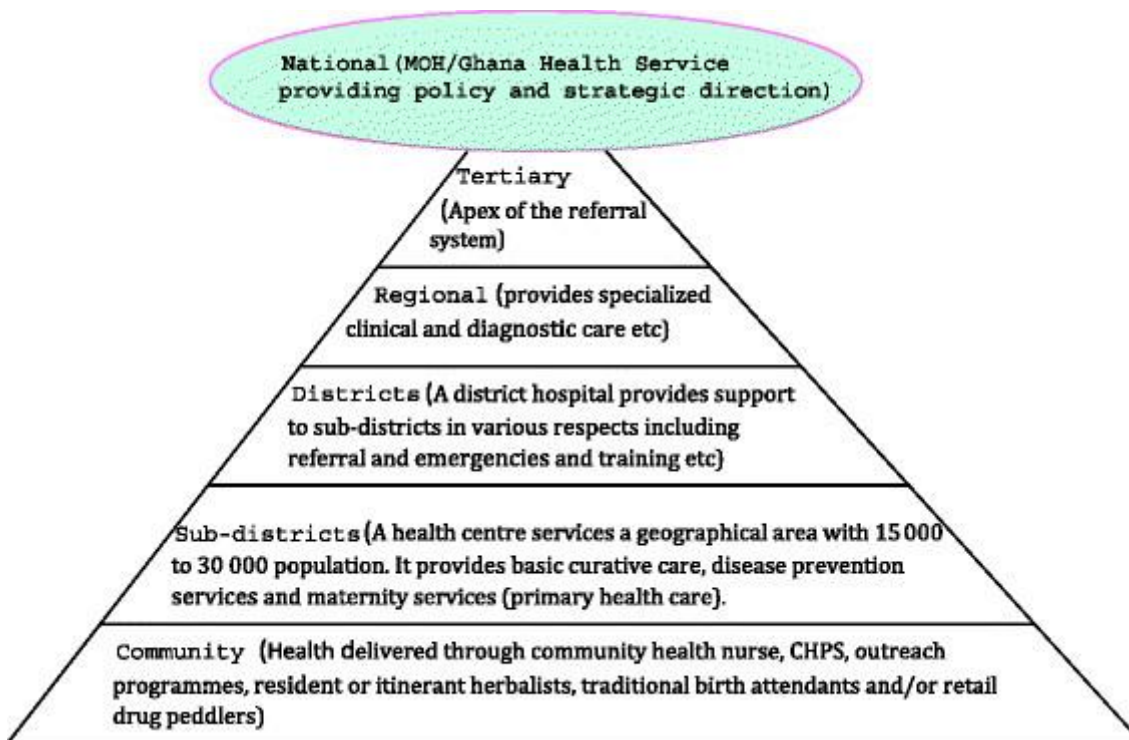


Figure 1: Organizational structure of Ghana Health Service Delivery, (Awoonor-Williams et al., 2016)

1.1.5 Maternal and Child Health:

About 9 out of 10 pregnant women make at least four prenatal care visits in health care facilities. In addition, approximately 8 out of 10 pregnant women deliver their babies with the assistance of healthcare professionals. Maternal mortality ratio (310/100,000 live births) is still high even though there are high coverages for maternal intervention. About 3 out of 10 married women do not use any modern contraceptives even though they want to delay their next pregnancy or space their children. Mortality rate for children under five years is 52/1000 live births (Afro.who.int. 2019).

1.1.6 Infant and Young Child Feeding Practices in Ghana:

Optimal feeding is key to the improvement of the health, growth, and development of infants. The Ghana health service adheres to WHO and UNICEF recommendations to start breastfeeding within an hour of delivery and to give the new-born solely breast milk for the first six months of life. In addition to this, the child is introduced to family foods at six months, as well as breastfeeding until the child is two years old or more.

The GHS and the MOH are working to protect, promote, and support Exclusive Breast Feeding (EBF) through various interventions such as raising awareness about infant and young child feeding (IYCF), granting maternity leave to all nursing mothers, and training and designation of health facilities as baby-friendly to create the enabling environment for mothers to breastfeed exclusively for the first six months.

Education and counselling are some of the regular activities, and staff training is done on a regular basis with the help of UNICEF. Every year in the first or second week of May, Child Health Promotion Week is held to raise awareness about child health interventions including the benefits of exclusive breastfeeding. Ghana joins the rest of the world in commemorating World Breastfeeding Week in August each year to raise awareness about breast feeding and this has improved the level of awareness of exclusive breast feeding among the general public (GSS, 2018; GDHS, 2014).

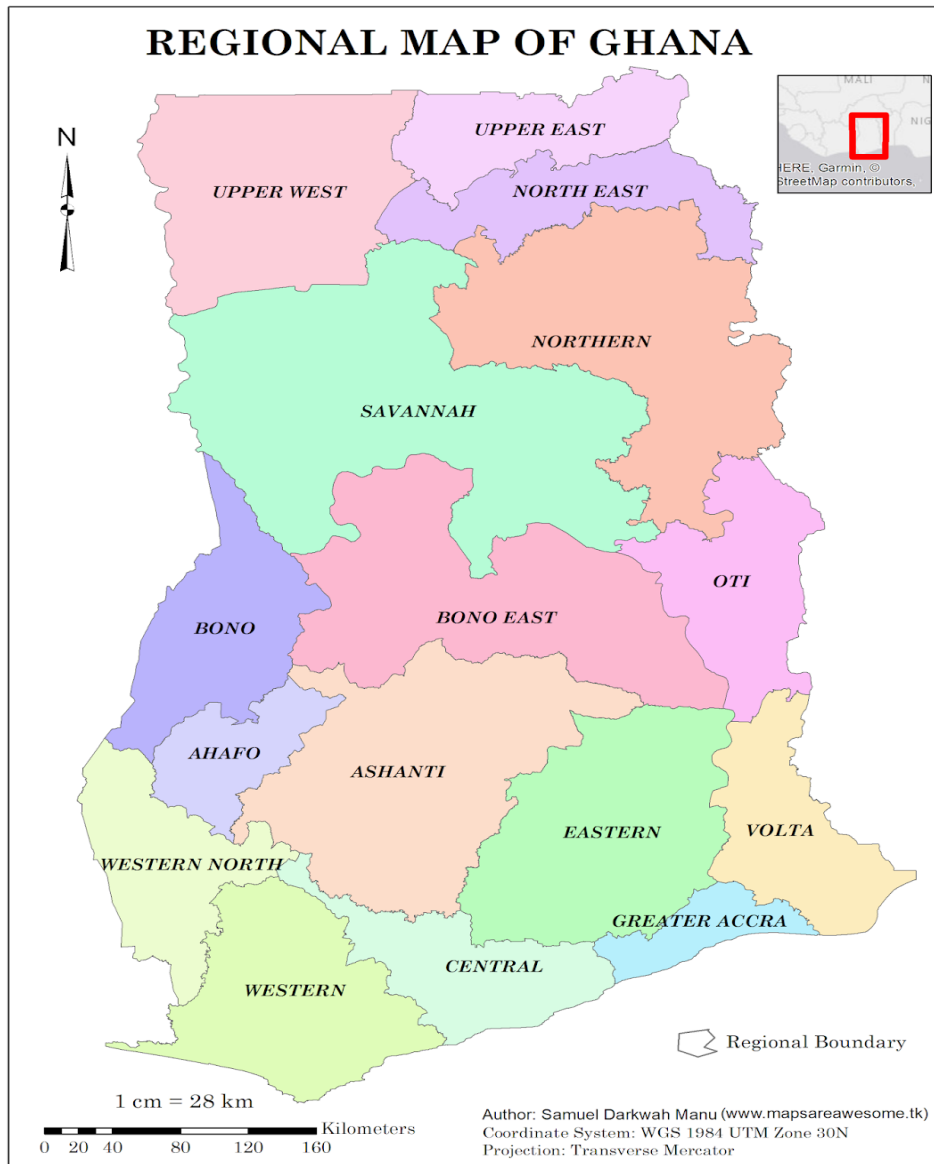


Figure 2: Map of Ghana, 2019

CHAPTER TWO: PROBLEM STATEMENT, JUSTIFICATION AND OBJECTIVES

2.1 Problem statement:

Exclusive breastfeeding (EBF) means the baby is fed breast milk only during the first six months after delivery. Only medications that are prescribed are allowed. (WHO, 2021). It is recommended by the World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF). It is among the best ways of feeding infants and it offers a lot of benefits to the infant, the mother, and society. Exclusive breastfeeding is free from germs and contains all the nutrients, including water, that are needed for healthy growth and development. It also provides protection against childhood infections such as diarrhoea and respiratory tract infections. Children who are breastfed exclusively do well in school and have a lower risk of non-communicable diseases (NCDs) in the future. (WHO, 2021).

According to the WHO, optimum breast feeding protects children against undernutrition as well as overnutrition. It also serves as the first vaccination for babies. Starting breast feeding early (within one hour after delivery) reduces medical problems of the mother such as post-partum haemorrhage and also helps with the removal of the placenta. Exclusive breastfeeding also improves the health of the mother by delaying conception, allowing for more space between pregnancies. Breastfeeding women are less likely to develop non-communicable diseases such as breast and ovarian cancer, hypertension and type 2 diabetes. It also saves money since it removes the need for supplements, pricey formulas, and equipment. (WHO, 2021).

For many reasons, the introduction of family foods and liquids, including water, earlier than recommended, is not the best option for infants. There is a high risk of infection as children are introduced to micro-organisms. Also, when babies are fed on other foods in addition to breastmilk, they are not able to take in more breastmilk and this will affect the quantity of breastmilk produced by the mother. Another reason for discouraging early supplementation is that, in some instances, the family foods are not well balanced. (GDHS, 2014).

The period from conception through to the first two years of life is a period where adequate child nutrition is essential for the prevention of malnutrition. Poor nutrition in this essential period can have both short and long-term consequences, such as stunting, which is irreversible. Breast milk is an ideal food for babies during this important period of life (USAID, 2019).

Globally, only 44% of infants less than six months old are fed only breast milk (WHO, 2021).

Global target set by the WHO, originally on the rate of EBF by member countries was to achieve 50% by the end of 2025. Lately this target has been updated to 70% or more by 2030 (Amugsi, 2021)

In Low and Middle Income Countries (LMICs), only 37% of children under six months are fed solely breast milk. (Victoria, et al., 2016)

In Africa, under-five mortality is high compared to Western countries. A young child is 14 times more at risk of dying during the first 30 days of life than in Western nations. Yet there is a cost-effective intervention accessible to all children, irrespective of the socio-cultural and economic backgrounds of their families. Breast milk provides the nutritional and health needs of all children and is available to all mothers at no additional cost to the family. Only 30% of infants less than six months are on only breast milk in Africa (Mbog, 2020).

In West Africa, countries with worst EBF rates include Nigeria and Niger. On the other hand, Burkina Faso has the highest rate. (Brits, 2021; Reimers et al., 2019)

In Nigeria, numbers of infants who receive only breast milk from birth to six months have been consistently low for about a decade with 17%. According to a 2018 demographic and health survey data, the rate has improved by 12%, now standing at 29% (NDHS, 2018). Also in Niger, 23% of new-borns less than 6 months are exclusively breastfed (UNICEF, 2019) and in Burkina Faso, half of the infants are breastfed exclusively (Walters et al., 2019).

In Burkina Faso, a randomized controlled trial published in the *Lancet Global Health* 2019 revealed a massive improvement in EBF rate in the intervention group. An intervention called "Alive and Thrive" was implemented in Burkina Faso at the facility and community levels at the same time. The initiative did not only target women, but the entire community as well. The goal of this intervention was to improve knowledge and skills about appropriate breast-feeding practices, as well as socio-cultural beliefs about breast feeding. The key messages of this intervention were to initiate breastfeeding in the first hour after delivery, including feeding the baby with colostrum, to give no water or other liquids to new born babies, and to give only breast milk during the first six months of life. The intervention group was supported with these messages using different communication channels, while the control group was not. At the end of the intervention, a risk difference of 38.9% was observed in the rate of EBF between the two groups. (Health et al., 2019).

Breast-feeding is a common practice among Ghanaian mothers. Approximately 98% of women who have given birth have fed their children with breast milk at some point in time. The fundamental problem is that exclusive breast-feeding practices are suboptimal. (USAID, 2019)

In Ghana, about half of the children from birth to six months are given only breast milk within an hour after birth and about 4 out of 10 infants are given only breast milk during the first six months of live. (GSS, 2018).

In Ghana, the rate is higher in the rural areas than in the urban areas with 45.8% and 38.7% respectively (GSS, 2018).

In Ghana, the rate of EBF has rapidly declined from 63% in 2008 to 52% in 2014, and then to 43% in 2018. (GDHS, 2014; GSS, 2018). Ghana may miss the global breastfeeding target of achieving 50% and 70% by 2025 and 2030 respectively with this downward trend. According to the director general of the Ghana health service, Dr. Patrick Kuma-Aboagye, during the launch of the national breast-feeding week said that the rapid decline could be due to unhealthy cultural practices involving giving water, other liquids and preparations to new born infants as well as aggressive marketing of infant formula in the country (Afro.who.int, 2021).

Inappropriate breast-feeding practices in Ghana are associated with increased morbidity and mortality rates. Edmond and colleagues discovered that babies who are put to the breast after 24 hours are three times more likely to die. They also discovered that infants who are fed with something other than breast milk before the initiation of breastfeeding within 2 to 28 days, have a three times increased risk of death. (Edmond et al., 2008)

Suboptimal breast-feeding practices lead to childhood nutritional problems, such as acute and chronic malnutrition, which affects immunity and increases the risk of infection. According to the Ghana demographic and health survey report, about 2 out of 10 children below five years are stunted. (GDHS,2014)

Despite the numerous benefits and the recommendation made by the WHO and UNICEF to practice exclusive breastfeeding for the first six months of life, this rate is still not improving (WHO, 2021).

The GHS and MoH have also made efforts to protect, promote, and support EBF through various interventions such as awareness-creation on infant and young child feeding (IYCF), granting

maternity leave for all nursing mothers, and training and designation of health facilities as baby-friendly with the support of UNICEF. Despite these, the rate is extremely low (GDHS, 2014).

This study seeks to examine barriers and enablers of exclusive breastfeeding in Ghana and make recommendations for improvement.

2.2 JUSTIFICATION

The EBF rate has been declining rapidly in Ghana in the past decade despite various efforts made to improve the practice. This literature review will help identify barriers that breastfeeding mothers face when trying to provide only breast milk for their infants in the first six months of life. This study will contribute to a better understanding of why the EBF rate is declining in order to make recommendations for improvement. The findings from this study will add to the scientific knowledge of infant and young child feeding practices and how to improve them.

2.3 OBJECTIVES

2.3.1 MAIN OBJECTIVE

The objective of this study is to examine the barriers and enablers of exclusive breastfeeding in Ghana in order to better understand why the EBF rate is declining and make recommendations for improvement.

2.3.2 SPECIFIC OBJECTIVES

1. To identify individual factors influencing EBF
2. To ascertain the influence of the family and community members on EBF
3. To ascertain whether living and working conditions have influence on EBF
4. To explore the influence of breast milk substitute on EBF practice
5. To make recommendations to policy makers on how EBF practices could be improved.

CHAPTER THREE: GENERAL METHODOLOGY AND CONCEPTUAL FRAMEWORK

3.1 METHODOLOGY

3.1.1 Search strategy

This was a review of literature. Papers on exclusive breastfeeding were found using Google Scholar and Advance Google search engines, the Vrije Universiteit (VU) Online Library search, and the PubMed database. Additionally, reports were obtained from the websites of the World Health Organization (WHO), Ministry of Health/Ghana Health Service, and UNICEF. Using the snowballing technique, additional pertinent publications were found in the reference lists of systematic reviews.

By using a combination of keywords and Boolean operators as shown in the annex (table 2) an advance search was performed and a number of articles were retrieved. After reading through the titles and the abstracts, these articles were arranged based on their importance for the study.

3.1.2 Inclusion criteria

Only articles published in the English language were included in this study. Also, articles published within the last fifteen (15) years (from 2007 to 2022) were included in this study. This was because they provided relevant and up to date information on barriers to EBF apart from the Dahlgren and Whitehead framework (figure 3).

Studies done in some other West African countries (Nigeria, Niger, Guinea, Burkina Faso, Liberia, Mali, Senegal, Sierra Leone) were included in this study. This was due to the fact that they are in the same geographical location as Ghana and have similar cultural characteristics. It was also due to availability of data found in these countries about EBF and also to explore the success of new interventions that have been successful in these countries of the region and to learn from them.

3.1.3 Exclusion criteria

All articles written in other languages and all articles which were written more than 15 years ago were excluded from this study. Studies done in other African countries apart from West Africa were also excluded from this study.

3.1.4 Study area

Ghana, a West African country was the study area. This is because Ghana was doing well, but now the rate of EBF is rapidly decreasing. EBF benefits the entire nation, and the WHO recommends that every nation should attain an EBF rate of at least 50% and 70% by the end of 2025 and 2030, respectively. Ghana may not be able to achieve this target if no immediate action is taken. There is a need to study why the rate is decreasing and make recommendations for improvement.

3.1.5 Why Exclusive Breastfeeding (EBF)

EBF was chosen because it is the most effective approach to feed new-borns and provides numerous short and long-term health benefits to the infant, mother, and society. EBF is one of the key interventions to reduce childhood morbidities and mortalities in Ghana and other countries. Exclusive breastfeeding is crucial, because most women in Ghana have breastfed at some point, but not exclusively.

3.2 CONCEPTUAL FRAMEWORK

The findings were analysed using the Dahlgren and Whitehead framework. (Figure 3) also known as the rainbow model. This model has the individual in the middle and surrounding these individuals are four different layers. These layers can influence individual health positively or negatively.

The framework was chosen due to the fact that the different layers have enabling factors as well as barriers in promoting EBF.

Individual characteristics, such as age and sex are fixed and people have no control over them. The first layer is about individual lifestyle factors, which can affect health positively or negatively. The second layer is about social and community networks. Individuals can be supported by friends and community members, to promote good health or otherwise. Also, community norms have a positive or negative influence on the health of people. The next layer is the living and working conditions such as education, work environment, unemployment, and health care services. All these factors have a positive or negative influence on the health of the people. The last layer, which is the fourth one, talks about general socio-economic, cultural and environmental conditions which can impact on health.

With regard to breast feeding, individuals can decide to breastfeed or not. Women can also be supported by partners, friends, peers, and community members to breastfeed their babies exclusively. On the other hand, when mothers do not receive any support from people around their EBF may be difficult. Mothers who are educated are more knowledgeable about the benefits of breast feeding and are likely to practice it. Also, women who have access to health services for information and management of breastfeeding problems are more likely to breastfeed exclusively. Educated people have more access to health care services. The framework allows to make an analysis of the interconnected linkages between the factors and how they interact with one another and affect individuals.

Because these layers are linked and eventually affect people at the centre, it is a good way for looking at the barriers and enablers of exclusive breast feeding in Ghana.

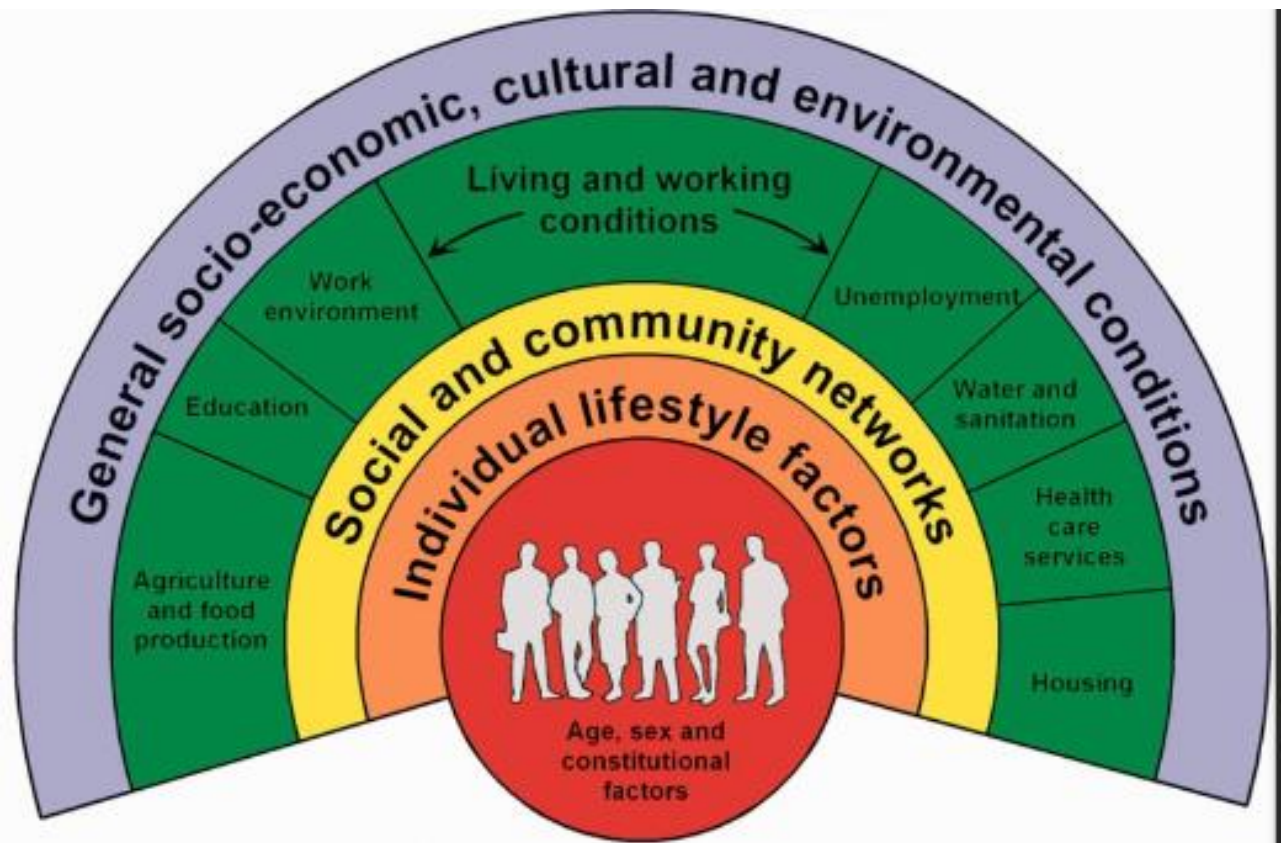


Figure 3: Dahlgren and Whitehead framework, 1991

CHAPTER FOUR: RESULTS/FINDINGS

This section presents available evidence from studies done in Ghana and other West African Countries to answer the objectives of this study, using the Dahlgren and Whitehead framework (Figure 3).

4.1 AGE, SEX AND CONSTITUTIONAL FACTORS

4.1.1 Age of the mother:

In Ghana, the age of the mother has been reported in studies to impact on the practice of EBF. In a cross-sectional study by Asare and colleagues as well as Manyeh and colleagues, it was reported that mothers, who are more than twenty (20) years, are more likely to give only breast milk to the baby than their counterparts, who are below the age of twenty. They attributed this to the fact that older women are advanced in child caring and younger mothers favour maintaining the form of their breasts, which has a negative impact on the practice of EBF (Asare et al., 2018; Manyeh et al., 2020). These studies were done in the southern part of Ghana.

In a descriptive cross-sectional study, done in a regional hospital by Diji and colleagues, it was also discovered that older women are more likely to give their new born babies only breast milk for the recommended period than their counterparts, who are younger and they attributed this to the experience that older women have had with child care (Diji et al., 2017). Again, this study was done in the southern part of Ghana.

In the northern part of Ghana, other studies have also shown that the age of nursing mothers is not related to whether or not they give their new born babies only breast milk (Dun-Dery & Laar, 2016; Fosuaa Boateng, 2018).

4.1.2 Knowledge and beliefs of mother:

Having knowledge of EBF has been attributed to the practice of EBF. Appiah and colleagues demonstrated that in Ghana, nursing mothers, who are knowledgeable about EBF, have a positive influence on the practice as well (Appiah et al., 2021). This was also confirmed in studies done in the Northern part of Ghana (Mogre et al., 2016; Sam, 2016) and the Southern part as well (Ayawine & Ae-Ngibise, 2015).

On the other hand, EBF is sometimes not being practiced even when mothers are knowledgeable and have high levels of awareness, possibly due to the fact that the importance of giving only breast milk to infants is not well appreciated. This was reported by two studies in the southern part of Ghana (Asare et al., 2018; Mensah et al., 2017) as well as two other studies done in the northern part of Ghana (Dun-Dery & Laar, 2016; Fosuaa Boateng, 2018).

This was also reported in Burkina Faso (Cresswell et al., 2017).

The beliefs of the nursing mother have also been reported to influence the practice of EBF. Otoo and others found out that the fundamental driving force behind EBF was the conviction that breast milk is ideal for babies because it contains all the necessary vitamins, minerals, and fluids. Nursing mothers are able to give only breast milk to their infants from birth to the first six months, because they believe that breast milk makes their babies strong and they have fewer infections (Otoo et al., 2009). This was done in the southern part of Ghana and this review did not identify any other studies done in the northern part of Ghana, about the belief of the nursing mother influencing the practice of EBF positively.

In Ghana, Appiah and colleagues discovered that most women believe that breast milk alone cannot satisfy their babies. They reported that mothers cited that if a baby cries after receiving breast milk or if the baby has trouble sleeping, especially in the night, it indicates that the baby is not satisfied on breast milk alone and therefore there is the need to give additional foods (Appiah et al., 2021). This was also reported by three other studies in the southern part of Ghana (Mensah et al., 2017; Otoo et al., 2009; Nsiah-Asamoah et al., 2020). One other study also reported this in the northern part of Ghana (Mogre et al., 2016).

In the northern part of Ghana, Tahiru and colleagues revealed that most mothers believe that they can't produce enough breast milk for their babies during the first six months, and therefore, formula and other homemade porridges are introduced in addition to breast milk before six months (Tahiru et al., 2020). There was no study identified in the southern part of Ghana with regards to this belief.

In a study conducted by Nsiah-Asamoah and his colleagues, it was revealed that nursing mothers' beliefs that their grandparents did not give only breast milk to their new-borns, yet their infants did not die but grew well. They further reported that nursing mothers' belief that children cannot survive without water for six good months and this impacts negatively on the practice of exclusive breast feeding in Ghana (Nsiah-Asamoah et al., 2020). This was conducted in the southern part of Ghana among rural nursing mothers. This current study did not identify any study in other parts of the country.

The knowledge and beliefs of a mother are linked with her educational level. Nursing mothers with higher educational levels are more knowledgeable about the benefits of EBF. They are more likely to know how and where to access needed information and other support than the less educated mothers. The mother's educational level also affects her belief system. Higher educated women tend to have a better diet and are more convinced that they will be able to produce enough breast milk for the baby during the first six months.

A mother's knowledge and beliefs are also linked with health care services. Nursing mothers who believe in traditional medicine are less likely to seek antenatal care and delivery services, where breast feeding issues are mostly discussed.

4.1.3 Marital status:

In a study done among professional working mothers in a city in the northern part of Ghana demonstrated that giving only breast milk to infants, by nursing mothers during the first six months does not depend on whether or not they are married (Dun-Dery & Laar, 2016). This review did not identify any other studies in the southern part.

On the other hand, C. Ogbe and colleagues reported that in Enugu State in Nigeria, married women are more likely to provide only breast milk to their infants during the first six months (C. Ogbe et al., 2020).

4.1.4 Age of the infant (in months):

The age of the child has also been reported to influence the practice of EBF. In Ghana, children who are within the first three months after birth are more likely to be breastfed exclusively than those after three months (Appiah et al., 2021). Again, Alabi and Alabi reported that from four months on, the number of infants on exclusive breast feeding has decreased due to three months of maternity leave (Alabi & Alabi, 2007).

Mogre and colleagues also found out that among rural lactating mothers in the Northern part of Ghana, mothers are more inclined to start introducing other meals when the infant is more than three

months, because mothers believe that only breastmilk may not be enough to satisfy the child (Mogre et al., 2016).

This was confirmed in Nigeria by Agho and colleagues, that the number of children on EBF reduces as the age of the baby increases within the first six months (Agho et al., 2011).

Also in Guinea, the age of the child determines the practice of EBF. According to a study by Soumah and colleagues, EBF is high during the first month of birth. However, within two to five months, the rate is reduced (Soumah et al., 2021)

4.1.5 Sex of infant:

Nukpezah and his colleagues reported that in a Tamale Metropolis, a city in the Northern part of Ghana, female children are more likely to be exclusively breastfed than male children. This was also reported by Agho and his colleagues in Nigeria (Nukpezah et al., 2018; Agho et al., 2011).

Also, a study done in two rural districts in the Southern part of Ghana by Nsiah-Asamoah and his colleagues, reported that new born males are more likely to be given other feeds in addition to breast milk during the first six months of life. They reported that nursing mothers claim that feeding males on breast milk alone may not be adequate as they tend to eat more than girls. (Nsiah-Asamoah et al., 2020).

4.1.6 Constitutional factors:

A study done among professional women in cities in the south of Ghana discovered that maternal problems and discomforts such as breast pain and abscesses can make it difficult for a mother to feed her baby with only breast milk from birth to six months (Diji et al., 2017). No other study reporting on this in any other parts of the country was identified. In a descriptive cross-sectional study, done by Dun-Dery and Laar in a regional hospital in the north of Ghana discovered that the mode of delivery of mothers affects the practice of EBF. (Dun-Dery & Laar, 2016). The authors claimed that mothers who went through a caesarean section are less likely to give breast milk alone to their infants compared to their counterparts who had a normal delivery. What the situation is in other health facilities in the southern part was not found.

In Ghana, according to a study, babies who are born before their due time are less likely to be breastfed exclusively, due to an inability to suckle well (Tampah-Naah & Kumi-Kyereme, 2013).

Tahiru and colleagues reported that babies who are admitted to intensive care units are less likely to be given only breast milk, due to psychological problems that the mothers go through, leading to the early introduction of formula feeding to the infants (Tahiru et al., 2020). The study was done in a city in the Northern part of Ghana among mothers with twins. There was no such study identified in the southern part of Ghana with this literature review.

4.2 INDIVIDUAL LIFESTYLE FACTORS

Studies have shown that the practice of exclusive breastfeeding is negatively impacted by the lifestyle choices made by mothers. The authors claimed that some nursing women, particularly the younger ones, try to prevent their breasts from drooping, therefore they opt to stop breastfeeding their children (Fosuaa Boateng, 2018; Asare et al., 2018).

These studies were done in cities but what is happening in rural areas was not found in this study.

Lifestyle factors and educational levels of nursing mothers are linked. Individuals with higher educational levels are more likely to make lifestyle choices that are beneficial for their infants

compared to counterparts who are less educated. Lifestyle factors are also linked with the age of the mother. In this literature review, younger women are less likely to provide only breast milk to their infants, due to the fact that they may be less experienced compared to older women.

4.3 SOCIAL AND COMMUNITY NETWORKS

A cross-sectional study done in the south of Ghana revealed that nursing mothers who receive support from partners and other relatives are more likely to practice exclusive breast feeding than their counterparts (Nkrumah, 2017; Agyekum et al., 2022). What is happening in the other parts of Ghana was not found in this study.

In Burkina Faso, it was reported that involving community members in breastfeeding promotion activities, improves the support that they give to breastfeeding mothers and subsequently improves the practice of EBF (Health et al., 2019).

On the other hand, in Ghana, studies have shown that inadequate support from partners and other family members, imparts negatively on the practice of exclusive breast feeding. Nursing mothers, who receive no support from family members and pressure from other members to give water and other foods to new-borns may decrease the rate of exclusive breast feeding (Grummer-Strawn & Clark, 2020; Tampah-Naah et al., 2019)

Also, in the northern part of Ghana, a study identified that nursing mothers, who receive no support from other members of the family, are less likely to give only breast milk to their infants during the first six months after delivery (Fosuaa Boateng, 2018). This was also reported in the southern part by (Mensah et al., 2017

Again, in the southern part of Ghana, Otoo and colleagues reported in 2009 that the influence of grandmothers has a significant impact on the practice of exclusive-breast feeding. According to the report, grandmothers perceive that giving only breast milk to infants will not satisfy them and, for that matter, they hold on to the traditional practices of feeding the new born with other homemade preparations (Otoo et al., 2009).

Social and community networks have links with the work environment and culture. Nursing mothers, who are not supported at work and those who are culturally pressured to give water, are less likely to give only breast milk to their infants during the first six months of life.

This is also linked to water and sanitation. Breast-feeding women, who do not receive support from family members and have to fetch water from far distances are less likely to provide only breast milk to their infants.

4.4 LIVING AND WORKING CONDITIONS

4.4.1 Agriculture and food production:

Manyeh and colleagues discovered that nursing mothers who are farmers are more likely to give only breast milk to their new born babies compared to women who are unemployed. They claimed that this may be due to the fact that nursing mothers who are farmers are able to go to the fields with their babies (Manyeh et al., 2020).

On the other hand, another study discovered that farming is a hindrance to giving only breast milk to babies in farming communities, because women tend to leave infants at home and walk miles to their farms (Ayawine & Ae-Ngibise, 2015). These studies were done among mothers in the Southern part of Ghana and this current study did not find any studies in the Northern part of Ghana concerning agricultural and food production and its influence on exclusive breast feeding.

4.4.2 Education:

Education is a crucial component of a person's life. It has an impact on a person's knowledge, attitudes, and behaviours. For example, educated women are more knowledgeable about EBF and its importance and have also more access to information on breast feeding and child care practices than uneducated mothers.

Studies have found a positive influence between the practice of exclusive breast feeding and the educational level of mothers. In a study done in a rural area of the Northern part of Ghana by Mogre and colleagues, they discovered that highly educated mothers are able to give only breast milk to their new-borns during the first six months more than their less educated counterparts. They claim that higher-educated mothers might be better able to understand and appreciate the advantages of EBF for their infants and may be more driven to do it (Mogre et al., 2016).

Again, in an urban area of the Southern part of Ghana, Diji and his colleagues found that nursing mothers, who are educated may be more assured and devoted to give breast milk alone to their new born babies than those who are less educated. They claimed this could be due to the fact that they are knowledgeable and can access a lot of information on breast feeding (Diji et al., 2017).

A cross-sectional study conducted in the West Mamprusi district in the Northern region of Ghana found that maternal educational level does not influence the practice of EBF. The author said this could be due to health education on EBF during prenatal care services, making EBF common to all women irrespective of their educational status (Sam, 2016). Again, in the Northern part of Ghana among city dwellers, another study reported that educational status of breast-feeding women does not translate into feeding their babies with only breast milk (Dun-Dery & Laar, 2016).

When it comes to the Southern part of Ghana, concerning education and breastfeeding, Asare and his colleagues as well as Manyeh and his team reported that among rural and city dwellers, nursing mothers with higher educational levels are not likely to give their infants only breast milk. They associated this to the fact that educated women are employed in the formal sector and may discontinue EBF when they return to work. (Asare et al., 2018; Manyeh et al., 2020).

Likewise, in Nigeria, a higher level of education does not translate into the practice of more EBF for the first six months of life (Agho et al., 2011; Ogbe C. et al., 2020).

Education attainment is linked with healthcare services. Higher educated nursing women are more likely to consult medical professionals for advice on breastfeeding because they are more aware that the medical community is one of the best resources for information on breast feeding.

The educational background of nursing mothers also influences their employment situation because those with higher education levels have better employment opportunities, which enhances their income and consequently influences their access to health care compared to those with lower educational backgrounds.

A mother's level of education affects her knowledge and beliefs. Breast feeding mothers with a higher level of education are more committed and convinced of the importance of EBF. Compared to others with less education, they are more likely to have access to breast feeding information. The mother's belief system is also shaped by her level of education. Higher-educated mothers are more confident that they can provide their infant with enough breast milk for the first six months of life.

Breast feeding mothers educational levels and their lifestyle factors are linked. Mothers who have received education are more likely to lead a healthy lifestyle and provide breast milk to their infants, which will benefit their health.

Education also has a link with culture. Unhealthy cultural practices prevent nursing mothers from exclusively breast feeding their babies during the first six months. These cultural practices are likely to be eliminated with education by influencing people's traditional views and offering a better understanding of issues surrounding breast feeding.

4.4.3 Work environment:

The employment sector could be a significant indicator of giving only breast milk to infants. In the Southern part of Ghana, nursing mothers, who work in the informal sector, are more likely to give their infants only breast milk from birth to six months than those in the formal sector. (Nkrumah, 2017; Mensah et al., 2017; Agyekum et al., 2022). This was also reported in the Northern part of Ghana (Saaka, 2012). The authors explained that it could be due to the flexibility of work schedules enjoyed by those who work in the informal sector

In a study done by Chai and colleagues, which included eight (8) West African countries (Nigeria, Liberia, Mali, Senegal, Niger, Sierra Leone, Burkina Faso and Guinea), it was discovered that increasing paid maternity leave by four (4) weeks, improves the practice of feeding infants with only breast milk during the first six months by 5.9% (Chai et al., 2018).

On the other hand, Studies have shown that in Ghana, some mothers are not able to practice EBF because of the short time to resume work and inadequate support from the work place, such as no breast-feeding rooms, no breaks for breast-feeding and busy schedules at work that affect the continuation of exclusive breast feeding when mothers resume work (Tampah-Naah et al., 2019; Alabi & Alabi, 2007).

Other studies conducted in the Northern part of Ghana also reported short time to resume work and inadequate support from the work place as a barrier to the practice of EBF. (Tahiru et al., 2020; Fosuaa Boateng, 2018; Dun-Dery & Laar, 2016). In the Southern part of Ghana, the following studies also reported on the same issue. (Abekah-Nkrumah et al., 2020; Diji et al., 2017).

Work environments are linked with social and community network and employment. Compared to their peers, who receive no support from families and friends, nursing women who receive it are better able to exclusively breastfeed their infants.

4.4.4 Unemployment:

According to Manyeh and colleagues, among rural dwellers in the southern part of Ghana, nursing mothers who are self-employed are able to breast-feed their babies solely on breast milk compared to those working in the formal sector (Manyeh et al., 2020).

Again, among city dwellers, women who are unemployed are less likely to give breast milk alone to their infants. The author reported that nursing mothers believe that due to their financial constraints they are not able to produce enough breast milk due to their poor nutritional status. In addition to this, unawareness about the fact that breast milk is nutritionally adequate for the infant may impact their choice to start mixed feeding within the first six month after birth (Diji et al., 2017).

Saaka (2012) identified that in the Northern part of Ghana, women who are not employed are less likely to practice exclusive breast feeding. The report concluded that mothers who are not employed usually do not attend antenatal care (ANC) services and also do not deliver their babies in health care facilities. These factors (ANC and delivery in health facilities are key factors for the practice of EBF (Saaka, 2012).

In the Enugu state of Nigeria, nursing mothers who are employed in the public sector are less likely to give breast milk alone to their infants for the first six months than their counterparts who are self-employed due to short maternity leave (C. Ogbe et al., 2020).

Unemployment is linked to the education of women. Nursing mothers who are unemployed are more likely to be less educated. This leads to low socio-economic status affecting access to health care where issues with breast feeding are better handled.

4.4.5 Water and sanitation:

In some communities in Ghana, fetching water, impacts negatively on the practice of exclusive breast feeding. According to a study, some nursing mothers have to walk a long way before they can get water for the family. It is difficult for women to take their babies along, and even if they do, it becomes impossible to carry water and breastfeed at the same time (Tampah-Naah et al., 2019).

Water and sanitation are link to the social and community network. Breast-feeding women who are assisted with household chores, particularly fetching water, by their spouses or other household members have more time to breastfeed their babies than those who do not have family support.

There is also a link between water and sanitation and socio-economic status. Families or nursing mothers with high socioeconomic status are better able to provide water facilities in their homes compared to their counterparts with a low socioeconomic status.

4.4.6 Health care services:

Access to health care services improves the rate of exclusive breast feeding in Ghana. According to a study, pregnant women who attend prenatal care services in health care facilities, and pregnant women who give birth at a public health facility, impact positively on the practice of giving breast milk alone in the first six months of life. The authors explained this could be due to education on exclusive breast-feeding during clinic sessions (Tampah-Naah & Kumi-Kyereme, 2013).

In the Northern part of Ghana, studies also found the same results about the positive relationship between access to health care services and the practice of exclusive breast feeding (Sam, 2016; Sam, 2016; Saaka, 2012).

In the southern part of Ghana, according to Mensah and his colleagues, providing women with information regarding breast-feeding, has a positive impact on the practice. In a peri urban district, they reported that nursing mothers, who received information from health care workers were more likely to practice EBF (Mensah et al., 2017).

Agyekum and colleagues reported from the south of Ghana that health education, delivered by health care professionals during contact with mothers on breastfeeding techniques and management during pregnancy, delivery, and post-partum periods has a positive impact on the mother's decision to practice EBF (Agyekum et al., 2022).

Visiting prenatal care and delivery in health-care facilities significantly improves EBF practice as breast feeding education and support are given to mothers during these visits has also been reported in Nigeria, Guinea and Burkina Faso (Agho et al., 2011; Savadogo et al., 2018; Soumah et al., 2021; Cresswell et al., 2017).

Alabi and Alabi noted in 2007 that the practice of EBF suffers during the first six months due to the involvement of health professionals in the promotion of various complementary foods in healthcare facilities (Alabi & Alabi, 2007).

For some mothers, healthcare professionals are role models, and therefore the practice of EBF among health care workers improves the practice in the general public. In a qualitative study done in rural areas of the southern part of Ghana by Nsiah-Asamoah and his colleagues, discovered that some mothers do not practice EBF because health providers who advise them do not practice what they

preach. (Nsiah-Asamoah et al., 2020). There was no other studies reporting about the same issue in other parts of Ghana identified.

In Niamey, in Niger, Moussa Abba and colleagues reported that health care professionals are not well informed about EBF and they do not buy into the idea of giving only breastmilk to new born babies during the first six months after delivery and are involved in the promotion of infant formula in health care facilities, sending conflicting messages to nursing mothers (Moussa Abba et al., 2010).

This is also linked to the socio-economic status, employment status, and education level of the nursing mother. Those who are educated have better jobs, which improves their socioeconomic status and, subsequently, improves their access to health care for breast feeding support.

4.4.7 Housing:

In Guinea, Soumah and his colleagues found that nursing mothers who live in polygamous homes are less likely to give their babies only breast milk due to a tight schedule for household chores (Soumah et al., 2021). There were no studies identified in Ghana relating housing to the practice of EBF.

4.5 GENERAL SOCIO-ECONOMIC, CULTURAL AND ENVIRONMENTAL CONDITIONS

4.5.1 Socio-economic:

According to a study by Manyeh and his team, among rural mothers in southern Ghana, the socioeconomic level does not influence whether she chooses to give only breast milk to her child or not (Manyeh et al., 2020). This current study did not find any other studies in other parts of Ghana.

In Nigeria, mothers with a higher socioeconomic status are more likely to give only breast milk to their babies than their counterparts with a lower socioeconomic status. The authors claimed this may be explained by the fact that those with high socioeconomic backgrounds are mostly those with higher educational backgrounds, who are more likely to have acquired the needed knowledge and understanding of breast feeding (Agho et al., 2011).

A mother's socio-economic status is linked to her employment and level of education. Nursing mothers with low levels of education are likely to be unemployed, leading to low socioeconomic status, which affects access to health care, which supports breast-feeding.

4.5.2 Cultural practices:

Cultural norms may be responsible for suboptimal breast-feeding practices in Ghana. Babies are frequently given water and other liquids by their mothers or other family members as a symbol of introducing the babies to the new world or to supposedly quench their thirst. Tampah-Naah & Kumi-Kyereme, 2013; Alabi & Alabi, 2007; Afro.who.int, 2021). This was also confirmed in a study done in the southern part of Ghana that women, who are breast feeding are culturally under pressure to introduce water and other family foods to the babies before they are due to eat family foods (Nsiah-Asamoah et al., 2020; Diji et al., 2017; Asare et al., 2018).

In Nigeria, according to Agho and colleagues, nursing mothers are culturally required to give water in addition to breast milk to new born infants within the age of three months (Agho et al., 2011).

Culture has a link with education of the nursing mother. Nursing mothers are unable to exclusively breastfeed their infants for the first six months due to harmful sociocultural ideas and practices. These are likely to be eliminated through education.

4.5.3 Environmental conditions:

Environmental factors such as effective marketing of breast milk substitutes have been linked to a reduced prevalence of exclusive breastfeeding.

Reports have indicated that the promotion of infant formula in Ghana has an impact on the practice of EBF (Afro.who.int, 2021; Alabi & Alabi, 2007).

This literature review found compelling evidence that EBF is positively impacted by access to healthcare services. There is also convincing evidence that the practice of EBF in Ghana is negatively impacted by employment in the formal sector, cultural norms, mother's beliefs, and a lack of support. The practice of EBF is unaffected by nursing moms' educational background. Housing has no discernible impact on EBF, according to the findings.

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Discussion

The main objective of this literature review was to examine the barriers and enablers of exclusive breastfeeding in Ghana in order to better understand why the EBF rate is declining and make recommendations for improvement. This section will highlight key barriers or enablers of exclusive breastfeeding using the Dahlgren and Whitehead model (figure 3). Six factors which serve as barriers or enablers of EBF were identified. These are the knowledge and beliefs of the nursing mother, social and community networks, education, work environment, health care services and cultural practices.

Knowledge and belief of the nursing mother. Knowledge and a high level of awareness of EBF generally have some positive impacts on the practice in Ghana. This may be explained by the fact that nursing mothers who are well knowledgeable about the benefits of exclusive breastfeeding are aware that during the first six months after delivery, only breast milk is crucial for the baby's nutritional needs, breast milk alone makes babies strong and healthy and babies have fewer infections.

On the other hand, there was a strong evidence that having knowledge and high awareness on EBF alone do not improve the practice of EBF. There are a number of beliefs which prevents the nursing mother from practicing exclusive breastfeeding.

These are the belief that breast milk alone cannot satisfy babies, they can't produce enough breast milk for their babies during the first six months, their grandparents did not give only breast milk to their new-borns during the first six months yet their new-borns did not die and children cannot survive without water for six months therefore, formula and other homemade porridges are introduced in addition to breast milk before six months. This may be because the significance of providing infants with only breast milk for the first six month of life is not well understood and well appreciated and also because the practice of EBF is a shared responsibility and does not solely depend on the nursing mother.

The knowledge and beliefs of a mother are linked to her educational level. Higher educated nursing mothers are better knowledgeable about the advantages of EBF. Compared to others with less education, they are more likely to know how and where to find the knowledge they need. The mother's belief system is also influenced by her level of schooling. Higher educated women are more confident that they can provide their infant with enough breast milk for the first six months of life.

Utilization of healthcare services is also influenced by a mother's knowledge and beliefs. Traditional medicine adherents are less likely to seek out prenatal care and delivery services where breastfeeding concerns are primarily highlighted.

Social and community networks. Another important factor, which hinders the practice of exclusive breast feeding in Ghana is the lack of support from partners, family members and other individuals in the communities. It was discovered from this study that most nursing mothers receive no support from partners, other relatives, employers and colleagues, with regards to breast feeding their babies. It was also discovered that nursing mothers often face cultural pressure by members of the family, especially grandmothers, to give water, and other homemade preparations to the infants within the first six months with the reason that breast milk alone does not satisfy the baby and they cannot also survive without water. This may be explained by the fact that husbands, other family members and stakeholders are not fully involved in breastfeeding promotion activities.

Social and community networks have a direct link with the work environment as well as water and sanitation. Nursing mothers who are supported at work by employers and colleagues by providing enabling environment and at home by family members for household chores such as fetching water are more likely to give only breast milk to their infants during the first six months of life.

Education. According to studies, the degree of education of mothers and the practice of exclusive breastfeeding are positively correlated. Compared to their peers with lower levels of education, mothers who are educated, are able to exclusively breastfeed their children for the first six months. Higher educated mothers may be more motivated to breastfeed their babies, better able to comprehend and appreciate the benefits of doing so, and have access to a wealth of knowledge on the subject.

On the contrary, this study found that a maternal educational level does not lead to the practice of EBF. This may also be due to the fact that educated women are employed in the formal sector and may discontinue EBF when they return to work as a result of inadequate support from the work place and tight work schedules.

Education attainment is linked with access to healthcare, employment, socioeconomic status, knowledge and beliefs, lifestyle and culture. Higher educated nursing women have better employment which improves their socioeconomic status and subsequently affects their access to health care for advice on breastfeeding. The level of education attained by nursing moms can help to change cultural habits, lifestyles, and beliefs that are detrimental to the practice of exclusive breastfeeding.

The working environment. This impacts negatively on providing infants with only breast milk in Ghana. It was discovered from this literature review that nursing mothers who work in the informal sector are more likely to give their infants only breast milk from birth to six months than those in the formal sector. This could be explained by the fact that those who work in the informal sectors are managers of their work and have their own work schedules and can decide to resume work at their own time.

On the other hand, mothers who work in the formal sectors are less likely to practice EBF, because they receive less support from the work place, that is, no breast-feeding places, little or no breaks for breast-feeding, busy working hours, and short time to resume work.

Work environments are linked with social and community network and employment. Nursing women are better able to breastfeed their infants exclusively when they have assistance from their family and places of employment.

Health care services. The rate of exclusive breastfeeding in Ghana increases with access to healthcare services. According to the findings of this review, access to prenatal care deliveries and post-natal care services in health care facilities impacts positively on the practice of giving breast milk alone to babies in the first six months of their life. This could be explained by the health education and promotion, counselling, management of breastfeeding problems and other support activities that are delivered by health-care professionals during these encounters.

This is linked to the socio-economic status, employment status, and education level of the nursing mother. Education leads to better occupations, which elevates socioeconomic standing and, in turn, increases access to healthcare for breastfeeding assistance.

Cultural practices. Cultural practices which entail giving water, other liquids, and food to new-born babies have an adverse effect on exclusive breastfeeding. According to this literature review, nursing mothers or other family members frequently offer their babies water and other liquids as a symbol of introducing them to the outside world or to quench their thirst. This could be attributed to the fact that other family members are not involved in breast-feeding promotion and may not be aware of the benefits of it.

The nursing mother's education and culture are related. Nursing mothers are unable to exclusively breastfeed their infants for the first six months due to negative sociocultural views and practices. Education is likely to change people's attitudes and behaviour.

5.2 Limitation

The use of the Dahlgren and Whitehead framework was very useful in answering the objectives of this literature review. The different layers helped to identify barriers and enabling factors for EBF. The framework allowed for an analysis of the interconnected linkages between the layers and how they interact with one another to promote or hinder EBF in Ghana.

The framework was limited to answering the question about whether the use of infant formula is a contributing factor to the decline of the EBF rate in Ghana. Despite this, the framework is still useful for identifying barriers and enabling factors of exclusive breastfeeding. But for the influence of infant formula on EBF, further studies with different frameworks and methodology are needed.

There was no data identified in Ghana on the influence of housing on exclusive breast-feeding.

Nevertheless, despite these limitations, the findings of this study hold and are useful to understand the problem of not living up to the rule of six months' EBF.

5.3 Conclusion

According to this study, breastfeeding exclusively is an important public health intervention for children's healthy growth and development. At the individual level, certain beliefs of the nursing mother were identified as a significant barrier to the practice of exclusive breastfeeding in Ghana. Even though knowledge and high awareness of EBF generally lead to an improvement in the practice of EBF, this literature review found otherwise. There are a number of beliefs, such as that mothers cannot produce enough breast milk for their babies during the first six months, breast milk alone is not enough to satisfy babies, and they cannot also survive without water. Therefore, formula and other homemade porridges are introduced in addition to breast milk. These beliefs are believed to prevent nursing mothers from practicing exclusive breastfeeding.

The influence of the family and community on EBF identified were a lack of support and cultural practices. Lack of support from partners, other members of the family and community is a significant barrier to the practice of exclusive breastfeeding in Ghana. This study showed that most nursing mothers do not receive assistance from spouses or other family members to exclusively breastfeed their children during the first six months after delivery.

Exclusive breastfeeding is negatively impacted by cultural practices, that involve giving water, other liquids, and food to new-born babies. according to this review of the literature, nursing mothers or other family members frequently give their babies water and other liquids as a symbol of introducing them to the outside world or to quench their thirst.

The living and working conditions identified as the main enablers or barriers to exclusive breastfeeding were education, work environment and health care services.

This study found that a mother's educational level does not always lead to the practice of EBF in Ghana. Some nursing mothers, even though educated, are not able to practice what they know and what they have been taught because the responsibility of providing breast milk alone to babies during the first six months does not depend on the mother alone. Also, the working environment, in which they find themselves can be an inhibition. Inadequate workplace support, such as short maternity leave, lack of nursing rooms, insufficient breaks, and demanding work schedules, may cause educated women, who work primarily in the formal sectors, to stop EBF when they return to work.

Because they receive less support from their employers and must return to work sooner, nursing moms who work in the formal sectors are less likely to practice EBF than their counterparts who are self-employed.

The practice of exclusive breastfeeding in Ghana is positively impacted by access to health care services like prenatal care, delivery, and postnatal care in health care institutions. During these services, health care experts promote breast-feeding and offer counselling and management of breast-feeding problems.

The use of breast milk substitutes was not clearly identified as a barrier to the practice of exclusive breastfeeding in Ghana during this literature review.

5.4 Recommendation

Based on the findings of this literature review, the following recommendations are made to improve the practice of exclusive breastfeeding in Ghana.

Interventions in the community and health facility levels

To address socio-cultural beliefs and practices affecting exclusive breastfeeding, I recommend that the Ministry of health/Ghana health service, in collaboration with other stakeholders, adopt and implement the Alive and Thrive initiative as was done in Burkina Faso at the facility and community levels at the same time. The initiative, which involves breastfeeding promotion activities, does not target only women; family members and the entire community are involved through education, counselling and other promotional activities as well as advocacy to address these beliefs and practices (Health et al., 2019).

I also recommend the ministry of health/Ghana health service to train health-care workers and community health workers to support women, their families, and the entire community through home visits, mobilization of the community, counselling, mass communication through a variety of communication channels, and advocacy to improve beliefs and cultural practices affecting Ghana's exclusive breast-feeding rate (Health et al., 2019).

Research

The framework did not help to identify infant formula as a significant impediment to the practice of EBF in Ghana and, therefore, I recommend that the Ministry of health/Ghana health service and other researchers should conduct qualitative research to explore the impact of the use of infant formula on exclusive breastfeeding in Ghana.

Policy

Short maternity leaves and lack of support from the work place were barriers to working mothers' practicing exclusive breast feeding. I recommend the ministry of health, in collaboration with policymakers to review the current policy on twelve (12) weeks of paid maternity leave and increase it to sixteen (16) weeks to allow women to have ample time to be with their babies to provide them

with only breast milk before they resume back to work and also provide private space and time for employed mothers to breastfeed their babies while at work (Chai et al., 2018).

Table 1: Implementation plan of the above recommendations

Activity	Time frame	Role	Stakeholders
Dissemination of research findings to MoH/GHS and other stakeholders through meeting, workshops	1 ST Quarter, 2023	Resource person	MoH/GHS, Municipal Assembly, Health committee (Community, religious leaders, representatives of community groups etc.)
Identify health and community workers for training	2 nd quarter, 2023	Resource person	MoH/GHS, Municipal Assembly, Health committee (community leaders, religious leaders, representatives of community groups)
Training of health and community workers	3 rd quarter, 2023	Resource person	MoH/GHS, health committee, Municipal Assembly
Implementation of “Alive and thrive initiative”	4 th quarter, 2023	Resource person	MoH/GHS, health committee, Municipal Assembly, the media, community-based organizations, Non-Governmental Organizations (NGOs)
Monitoring and evaluation	4 th quarter, 2023	Resource person	MoH/GHS, the media, Health committee, community-based organizations, NGOs
Qualitative research on the influence of infant formula on EBF	Second year (2024)	Resource person	MoH/GHS, health committee, Municipal Assembly and other research groups
review of the current policy on twelve (12) weeks of paid maternity leave to sixteen (16) weeks	Third year (2025)	Resource person	MoH/GHS, Municipal Assembly, health committee, Labour organizations and trade unions, policy makers

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APPENDIX

Table 2: Key word combination in literature search process

	PROBLEM/ISSUE TERMS		FACTOR-RELATED TERMS		GEOGRAPHICAL SCOPE TERMS
OR	Breast feeding	AND	Age	AND	Global
	Infant feeding		Sex		LMICs
	Exclusive breast feeding		Constitutional factors		Africa
	Child feeding		Individual lifestyle factors		Sub-Saharan African
	Baby feeding		Social and community network		West Africa
	Young child feeding		Work environment		Ghana
	Infant and young child feeding		Agricultural and food production		
	Young infants feeding		education		
			unemployment		
			Water and sanitation		
			Housing		
			Health care services		
	General socio-economic, cultural and environmental conditions				

Table 3: Summary of Literatures reviewed

Sources	FACTOR RELATED TERMS																	
	Age of mother	Knowledge and beliefs	Marital status	Age of child	Sex of child	Constitutional factors	Lifestyle	Social and community networks	Food production	Education	Work Environment	Unemployment	Water and sanitation	Health care services	Housing	Socio-economic	Culture	Environmental conditions
Asare et al., 2018	X	X					X			X							X	
Manyeh et al., 2020	X								X	X					X	X		
Diji et al., 2017	X					X				X	X	X					X	
Dun-Dery & Laar, 2016	X	X	X			X				X	X							X
Health et al., 2019								X										
Fosuaa Boateng, 2018	X		X				X	X			X							
Mogre et al., 2016		X		X						X								
Sam, 2016		X											X					
Appiah et al., 2021		X		X														
Ayawine & Ae-Ngibise, 2015		X							X									
Mensah et al., 2017		X						X			X		X					X
Otoo et al., 2009		X						X										
Nsiah-Asamoah et al., 2020		X			X								X				X	
Tahiru et al., 2020		X				X					X							
Alabi & Alabi, 2007				X							X		X				X	X
Nukpezah et al., 2018					X													
Tampah-Naah & Kumi-Kyereme, 2013						X					X		X				X	
Nkrumah, 2017								X			X							
Grummer-Strawn & Clark, 2020								X										
Tampah-Naah et al., 2019								X			X		X					
Saaka, 2012											X	X		X				
Abekah-Nkrumah et al., 2020											X							
Afro.who.int, 2021																		X
Agho et al., 2011				X	X					X				X			X	X
Savadogo et al., 2018														X				
Cresswell et al., 2017														X				
Soumah et al., 2021				X									X	X				
Ogbe C. et al., 2020			X							X		X						
Agyekum et al., 2022								X			X		X					
Chai et al., 2018											X							
Moussa Abba et al., 2010													X					