KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

KUMASI, GHANA

COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF POPULATION, FAMILY AND REPRODUCTIVE HEALTH

DETERMINANTS OF EARLY INITIATION OF BREASTFEEDING AMONG PARTURIENTS WITHIN THE FIRST HOUR AFTER DELIVERYIN HEALTH FACILITIES IN THE ASHANTI MAMPONG MUNICIPALITY

BY

REBECCA OMETSE CHURCHILL

JUNE, 2016.

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A THESIS SUBMITTED TO THE DEPARTMENT OF POPULATION, FAMILY AND REPRODUCTIVE HEALTH, COLLEGE OF HEALTH SCIENCES, SCHOOL OF PUBLIC HEALTH, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC HEALTH IN POPULATION, FAMILY AND REPRODUCTIVE HEALTH

JUNE, 2016.

DECLARATION

I hereby do declare that except for references to other people's work which have been duly acknowledged, this piece of work is my own composition and neither in whole nor in part has this work been presented for the award of a degree in this university or elsewhere.

SIGNATURE..... DATE:……

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PROFESSOR KWABENA A. DANSO

SIGNATURE..... DATE:……

(HEAD OF DEPARTMENT)

DEDICATION

I dedicate this piece of work to my lovely daughters Selasie, Yayrah and Delalie Churchill.

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A great many people have contributed to this work and without their aid, my task would have been quite impossible.

First am very grateful to the Almighty God "Jehovah Jireh" who granted me the wisdom, strength and knowledge to produce this work.

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ABSTRACT

Background: In terms of global and national focus and strategies to reduce child mortality, early breastfeeding within one hour after parturition followed by exclusive breastfeeding has proved to increase child survival as the practice gives babies the required

resistance to diseases through mothers' antibodies which in turn lowers the incidence of child morbidity and mortality.

Method: The study was conducted by the use of a hospital-based cross-sectional method to determine the factors that influence early initiation of breastfeeding among parturients. Purposive sampling was used to sample 303 parturients who delivered from 1st June to 30th July 2015. Pre-tested and standardized questionnaires, direct observations and medical record review were used to collect relevant data by trained research assistants. The data were analyzed by the use of descriptive statistics and binary logic regression model.

Results: The logistic regression results revealed that parturients' knowledge on colostrum feeding ($p < 0.001$), knowledge on time of initiation of breastfeeding ($p<0.007$), parity ($p<0.001$), establishing early contact between mother and her baby within thirty minutes of delivery on delivery table ($p<0.000$), sex of baby delivered ($p<0.004$) and time of initiation ($p<0.001$) were statistically significant to early initiation of breastfeeding at1%. The results also showed that duration of labour ($p<0.052$) and ward procedures influenced ($p<0.023$) early initiation of breastfeeding negatively at 5%.

Conclusion: A strong association between breastfeeding and early contact between baby and mother ($p = 0.000$). The findings suggest increasing access to timely initiation of breastfeeding through early contact of mothers and babies irrespective of the mode of delivery.

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ABBREVIATIONS

ANC	Ante-natal Clinic
BFHI	Baby Friendly Hospital Initiative
CHRPE-KNUST	Committee for Human Research, Publications and Ethics of Kwame Nkrumah University of Science and Technology and Komfo Anokye Teaching Hospital.
DHIMS (Dhims 2)	District Health Information Management System 2
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
LBW	Low Birth Weight
MCH	Maternal and Child Health
MMHD	Mampong Municipal Health Directorate
WIFA	Women in Fertility Age
UNICEF	United Nations International Children's Fund
WHO	The World Health Organization

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

One of the strategies that improve infants, child and maternal morbidity and mortality and thus helps to control health cost is breastfeeding. Breastfeeding is defined as a way of feeding an infant with breast milk directly from the mother. Breastfeeding has numerous health benefits to both infant and the mother. Postpartum haemorrhage is controlled by the secretion of the hormone oxytocin with the initiation of breastfeeding (Gartner *et al*, 2005).

Breast milk contains all the essential nutrients a baby needs at the early stage of life. The baby is protected against diarrhoea and pneumonia, and may also have longer-term health benefits for the mother and the baby, such as reducing the risk of a child becoming overweight and obese at both childhood and adolescence stages. Breastfeeding has also been found to improve the intelligence quotient (IQ) of children.

The act of the mothers giving breast milk to infants immediately or within the early hour of birth is referred to as early initiation of breastfeeding and this ensures that the infant receives the colostrum, or the first yellowish milk which is rich in protein and antibodies.

Colostrum, the first milk produced by the mammary glands in late pregnancy and continuous through the early after delivery, contains immunological and nutritious properties that build the baby resistance to diseases and also speed up their normal intestinal functions (Gartner *et al*, 2005). Early initiation of breastfeeding and exclusive breastfeeding practice is said to have been one of the important ways of ensuring child health. However, in these modern times, most nursing mothers do not adhere to these practices. This is believed to be a contributory factor to poor child health in Ghana, (Fosu-

Brefo & Arthur 2015). Harmful practices such as discarding colostrum and prelacteal feeds are deeply rooted in cultural fabric of some societies. (WHO, 2006).

Formulae milk feeds the stomach but the breast milk feeds the soul. Human milk is the preferred food for infants including ill and preterm infants. In Ghana, breastfeeding is a universally acceptable means of feeding. World Health Organization (WHO) and United Nation Children's Fund (UNICEF) recommended that mothers should initiate their infants to breastfeeding within the first hour after delivery and exclusively four to six months and add supplementary food with breastfeeding until the end of the second year of life (Labbok M *et al*, 2007).Exclusive breastfeeding is feeding babies on only breast milk without water or formula for six months.

The Millennium Development Goals four (MDG-4) binds the international community to reducing infant mortality in children aged younger than 5 years by two-thirds between 1990 and 2015. Lawn J E. (2005) argued that, in order to achieve the MDG-4 target (World Health Report 2011), major reductions are going to be required in reducing neonatal mortality. Activities towards the achievement of the MDG-4 will need to ensure a healthy start in life for children and this is obviously the early initiation of breastfeeding.

Timely initiation of breastfeeding is defined as helping and putting the new born to the breast immediately or within the early hour of birth. Timely initiation of breastfeeding is easiest, cost effective and topmost successful life-saving intervention for the health of the newborn (WHO, 2001; Du Plessis, 2009)

Establishment of lactation within one hour after birth releases colostrum which have important consequences on the biological and emotional health of the newborn (Holman DJ, 2003). It could reduce neonatal mortality (Edmond KM *et al* 2006) and is associated with longer duration of breastfeeding (Berra *et al* 2003).The oxytocin released causes

uterine contraction thereby reducing maternal blood loss. This reduces maternal mortality effectively (Ojeda SR, 1996). The early initiation of breastfeeding promotes mother–infant interactions and effectively establishes a strong and healthy relationship between mother and child (Maestripieri D.2001). All these effects could contribute to the achievement of the Millennium Development Goals (MDG 4 and 5). Despite these positive effects of early breastfeeding initiation and its economic advantages, little attention has been paid by health care practitioners and policy-makers to this simple preventive strategy (Hossain MM *et al* 1995).

The environment in which a woman gives birth may have an impact on her breastfeeding outcome (Della A. F and Helen L McLachlan 2010). The WHO and United Nation Children's Fund (UNICEF) global initiative to promote breastfeeding is the Baby – Friendly Hospital Initiative (BFHI) which was started in 1991 in an attempt to ensure if possible that all babies are born in baby-friendly facilities that protects and promotes breastfeeding. (WHO evidence for ten steps to successful breast feeding).

Since all newborn babies are vulnerable, they should be given support to enable them to receive the full benefits of breastfeeding. However, some newborns that are more vulnerable are preterm, low birth weight and HIV infected babies. Feeding such babies with breast milk lowers the incidence of infections and improves neurodevelopment as compared with babies that are fed on formula feeding. (Ornella *et al pp51-61*)

Universally, there is an establishment of fundamental importance of breastfeeding for children's adequate growth and development which promotes their physical and mental health in their stages of development. International organizations such as the WHO, Fund UNICEF, and other related local Non-Governmental Organizations have given importance

to proper development of children. One of such interventions has been argued to be timely initiation of breastfeeding. Policies such as the adoption of the 1991 Baby-Friendly Hospital Initiative (BFHI) and the Ghana Breastfeeding Promotion Regulation 2000 (Legislative Instrument 1667) have been implemented with a focus of improving child health. (Fosu- Brefo & Arthur, 2015).

Infant and young child feeding is crucial for child health and survival. Based on wellestablished evidence, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) recommend that mothers put newborns to the breast within one hour of birth, breastfeed infants exclusively for the first six months and continue to breastfeed for two years and beyond, together with nutritionally adequate, safe, ageappropriate, responsive feeding of solid, semi-solid and soft foods starting in the sixth month.

Early initiation of breastfeeding is one of the steps initiated by the WHO/UNICEF's Baby Friendly Hospital Initiative (BFHI) to achieve a successful breastfeeding of the newborn baby (WHO/UNICEF, 1990). Breast milk is widely known as the optimal form of infant nutrition.

According to Blackburn and Loper (1992) when the infant suckles from the breast, there is an outpouring of nineteen (19) different gastrointestinal hormones in both the mother and the infant, including cholecystokinin and gastrin which stimulate growth of the baby's intestinal villi, increasing the surface area and absorption of calories with each feeding.

The use of colostrum and avoidance of formula feed are the pillars in early infant nutrition and may be prerequisites for the establishment of exclusive breastfeeding WHO (2010)

According to Edmund K M et al (2006) early breastfeeding has been seen to reduce neonatal and post neonatal deaths. Widstrom *et al* (1990) revealed in their studies that early touch of the nipple and the areola within the first hour after delivery improves the maternal infant relationship significantly. It was established that babies who had early breastfeeding had satisfactory body temperature regulation and blood glucose level. (Christensson *et al*, 1992). Perez-Escamila *et al* (1994) asserted that earlier breastfeeding initiation and/or mother-baby contact also result in a preferred longer duration of breastfeeding. According to Tamanna *et al* (2007) one of the causes of malnutrition in young children is proper knowledge in breastfeeding.

This study thus explored the determinants of early initiation of breastfeeding among parturients within an hour after delivery in health facilities in the Ashanti Mampong municipality to inform management to review current breastfeeding practice for future intervention.

1.2 Problem Statement

Although there are well documented evidenced benefits of breastfeeding within the first hour of giving birth for the health and well-being of both the mother and baby, there remains an unacceptable long term options for many women to breastfeed.

According to Edmond K M *et al* (2006) The MDG-4 can be achieved through reducing the neonatal mortality by early initiation of breastfeeding. Globally, over one million newborn infants could be saved each year by initiating breastfeeding within the first hour of life. In developing countries alone, early initiation of breastfeeding could save as many as 1.45 million lives each year by reducing deaths mainly due to diarrhoeal disorders and lower respiratory tract infections in children (Lauer *et al* 2006).

In many parts of the world, the rates of early initiation of breastfeeding are extremely low: 17% in Eastern Europe and Central Asian countries and 33% in Asia-Pacific as published in Better Breastfeeding (2009). The highest rates (about 50%) are in Latin America, the Caribbean, East and North Africa. However, for many countries no data are available. In South Asia, 24%–26% of babies born in Bangladesh, India and Pakistan are breastfed within the first hour of birth, whereas the corresponding rate for Sri Lanka is 75% in World Breastfeeding Report (2009). The effect of these breastfeeding patterns is reflected in the neonatal mortality rates for these countries: 40–50 per 1000 live births for Bangladesh, India and Pakistan, while in Sri Lanka the rate is as low as 11 per 1000 live births (WHO 2009).

The impact of early initiation of breastfeeding on infant mortality and its economic advantages are well known. Yet little attention has been paid by health-care practitioners and policy-makers to this simple preventive strategy, except for annual campaigns that aim to highlight its importance, such as the World Breastfeeding Week (2009).

Although all babies are breastfed in Africa, breastfeeding practices are sub- optimal for majority compared to optimal practices of early and exclusive breastfeeding. According to the Demographic and Health Survey (DHS) data from 29 African countries, the rates ranged from lowest 23% in Senegal to high of 81% in Namibia, thus early breastfeeding within the first hour is not a norm. (Ornella *et al* 2011).

Thaver and Zaidi (2009) found out that a low initiation of breastfeeding raises the risk of neonatal deaths due to infection. In the first hour of life 92% of term and 49% of preterm infants initiated breastfeeding and exclusively breastfed at discharge (White *et al*, 2012).

According to the World Health Organization WHO (2001) the prevalence of timely initiation of breastfeeding in some developing countries was documented as Sudan

(54.2%), Zambia (70%), Jordan (49.5%), Nepal (72.2%), Bolivia (74%) and Ghana (41%).

Tawiah-Agyemang *et al* (2008) asserted that if all babies are fed with breast milk within the early hour after delivery, more than twenty percent (20%) neonatal death could be prevented. Therefore, that is the reason why breastfeeding has become a major issue of concern to local and international healthcare organizations (WHO, 2010).

It is estimated that, globally about four million babies die annually during the neonatal period and vast majority occurs in sub Saharan Africa (Lawn J E *et al* 2005) promotion of early and exclusive breastfeeding are the lead intervention for this mortality and morbidity. Breastfeeding could prevent about 1.3 million of all deaths in children under five (Jones G *et al* 2003).

There is almost six folds risk of non- breastfed infants mortality from infectious conditions than breastfed infants in the first two months of life (WHO, 2000).

Millions of infant mortality could be prevented every year through optimal and exclusive breastfeeding. However, sub-optimal breastfeeding practices begin on the first day (WHO, 2010). Only 25 percent of women initiate breastfeeding within the first hour after birth. Approximately 20 percent of mothers nationwide practice exclusive breastfeeding for the recommended period of the first six months. The Ghana Health Service estimates that sub-optimal breastfeeding practices contribute to about eight percent of infant deaths or about 3,300 infant deaths each year. (Breastfeeding in Ghana statistics, 2012)

Apart from the recognized health benefits, breastfeeding practices throughout the world remain suboptimal. Baby Friendly Hospital Initiative (BFHI) step 4 of the ten steps to successful breastfeeding read “help mothers initiate breastfeeding within one hour of birth”. Documented barriers to the implementation of step 4 of the BFHI, which relates to

early initiation of breastfeeding, have not considered the impact of operative intervention in delivery on achievement of the goal. Breastfeeding is a multifactorial exercise which depends on the individual factors, socio cultural factors of the community and health facilities practices. Mothers who are prepared physiologically and psychologically for birth and well informed about breastfeeding and supported tend to have initiate breastfeeding early and are more successful (LINKAGES 2003). Infants who were initiated to breastfeeding within 24 hour of birth were significantly less likely to die in the neonatal period compared with those who were initiated after 24 hours. The percentage of infants breast-fed in the first hour was 43% (Edmond K M *et al*, 2006) similar to the level estimated for the rest of Ghana (46%). Rates in some sub-Saharan countries are as low as 30% (Setty, 2006).

Unfortunately, much of the focus of breastfeeding advocacy and research, has been on exclusive breast-feeding rather than on early initiation which is also important for the health of the child despite the inclusion in international child feeding recommendations (WHO 1998). In Ghana, (Edmond K M *et al* 2006), breastfeeding initiated within the first day of birth was 71% with 70% exclusively breastfed during the neonatal period.

In the 2008 Ghana Demographic and Health Survey (GHDS) mothers who initiate breastfeeding within one hour of birth have increased from 46% in 2003 to 52% in 2008.

Additionally, the percentage of mothers who started breastfeeding their infants within the first day of birth increased from 75% to 82% in 5 years. Mothers who initiated breastfeeding within the first day of birth were 71% (Edmond *et al* 2006). In Ashanti Mampong Municipality, the study area there has been marginal increase from 57.1% to 76.46% in early initiation of breastfeeding among mothers who deliver in the health facilities since 2011 to 2014 (GHS Annual Reports DHIMS2). Despite the benefits of the

early initiation of breastfeeding not all the mothers who deliver in these Baby-Friendly hospital and clinics in the municipality initiate breastfeeding within the first hour after delivery. Therefore it appears necessary to investigate those factors that seem to influence timely initiation of breastfeeding in the municipality.

1.3 Rational of the study

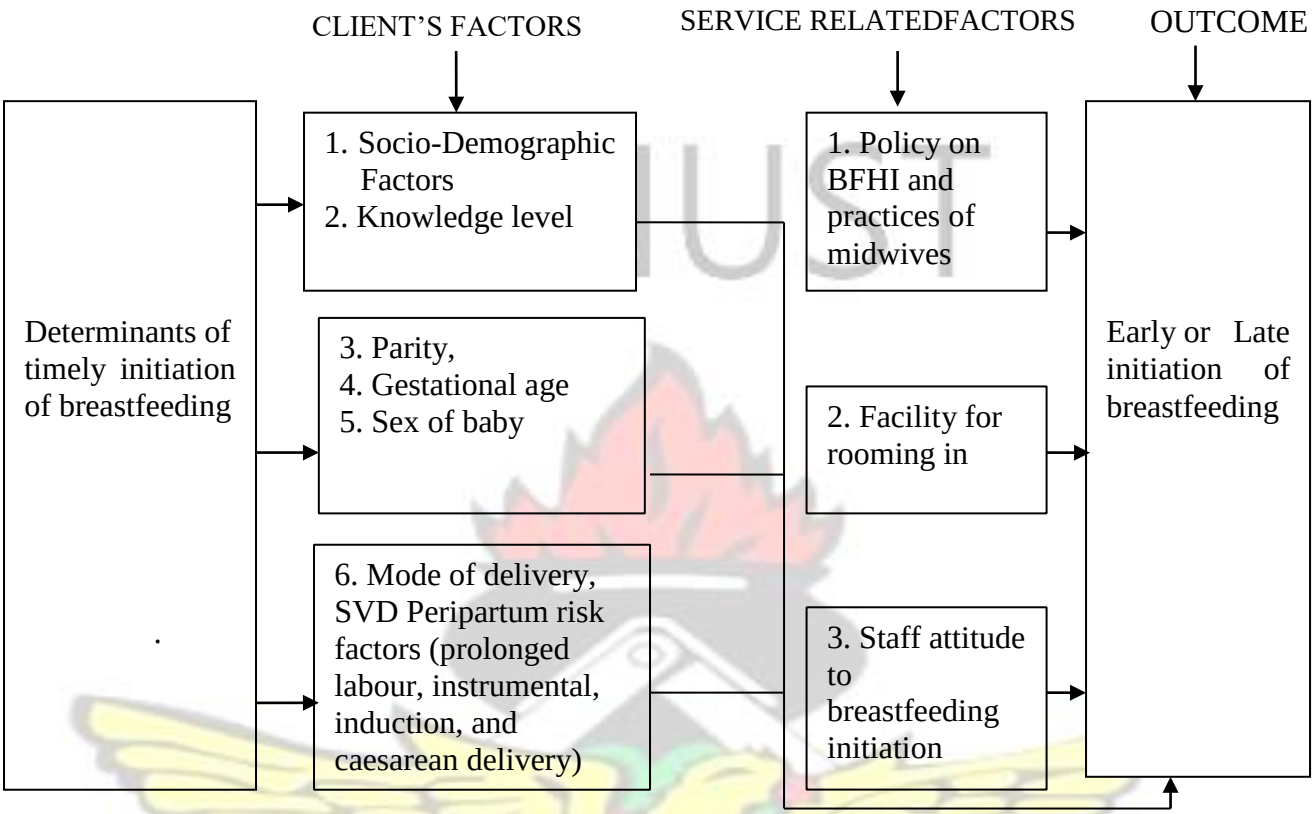
Considering the importance of colostrum to the health of both mothers and infants, it is crucial that mothers are encouraged to initiate breastfeeding within the first hour of delivery to ensure optimal health. However, this cannot be done effectively without indepth understanding of the factors that influence early initiation among mothers. Recent data on the pattern and correlates of the timing of breastfeeding initiation in newborns are scanty in many countries including Ghana as well the study area. This study is aimed at estimating the prevalence of timely initiation of breastfeeding and the factors influencing it.

There is scanty information regarding breastfeeding practice among mothers in Mampong Ashanti making it difficult to address any challenges faced by mothers. This study is being carried out to identify determinants of early initiation of breastfeeding among parturients who deliver in health facilities in Mampong Ashanti municipality.

Information on the factors that promotes early initiation would help the municipal health directorate, management and health professionals of all facilities in the municipality to provide appropriate counselling and supervision on the implementation of early initiation thereby helping to reduce infant mortality as a result of suboptimal breastfeeding practices. Thus, it becomes important to understand the determinants of early initiation of breastfeeding to inform mothers on the importance of breastfeeding for the proper growth of the infant in Ghana.

1.4 Conceptual framework for factors of timely initiation of breastfeeding Figure

1.1 Conceptual framework for factors of timely initiation of breastfeeding.



Source: Authors Construct, 2015.

Figure 1.1 depicts some of the determinants of timely initiation of breast feeding and what it seeks to achieve. It demonstrates that client, care givers and facility policy on BFHI could contribute towards the delay of early initiation of breast feeding.

1.5 Research Questions

1. What is the knowledge level of mothers on early initiation of breastfeeding?
2. Does parity of women determine the time of initiating breastfeeding?
3. Does mode of delivery has influence on timely breastfeeding among mothers in health facilities in the Ashanti Mampong?
4. Do the clients have accessibility to breastfeeding information and practices on the facility?

1.6 General objective

To determine factors that influence timely initiation of breast feeding within the first hour after delivery among parturients in health facilities in the Ashanti Mampong municipality.

1.7 Specific Objective

The general objective of the study would be addressed through the following specific objectives:

1. To assess the knowledge level of parturients on early initiation of breast feeding
2. To identify the parity of the mothers and its influence on early initiation of breastfeeding.
3. To determine mode of delivery on time of initiation of breastfeeding among parturients in health facilities in the Mampong municipality.
4. To evaluate practices that support early initiation of breast feeding within health facilities of the Mampong municipality.

1.8 Operational Definition of Terms.

1.8.1 Timely initiation of breastfeeding

It is defined as putting the new born to the breast either immediately or within an hour of birth. In this study it refers to the act of putting the newborn baby on breast for feeding within half an hour in case of vaginal delivery and within one hour in case of caesarean delivery.

1.8.2 Breastfeeding

It is defined as a practice of feeding an infant with milk directly from the mother's breast.

1.8.3 Parturients

It is defined as women who are in labour or has just delivered

CHAPTER TWO

2.0 LITERATURE REVIEW

Breastfeeding is a procedure that is multifactorial in nature and various factors such as individual circumstances, staff attitudes to infant feeding, facility policies and practices are required to improve positive breastfeeding practices to optimize the health of mother and baby.

2.1 Knowledge Level of Postnatal Mothers on Early Initiation of Breastfeeding. Although breastfeeding is a common practice globally, the impact of knowledge about timely initiation, proper techniques, duration and proper time of weaning is poor (Chaudhary *et al*2011). The major cause of malnutrition in infants is the improper knowledge of mothers on breastfeeding. Infants who are not breastfed appropriately are prone to repeated infections, six times risk of dying within the first month of birth and

stunted growth. (Ghana Demographic Health Survey 2008) proportion of stunted growth in Ghana was 28%.

El-Khedr and Lamadah (2014) reported that less than one fifth of mothers had poor knowledge about breastfeeding in Makkah Al Mukkaramah in Egypt. They also indicated in their study that older mothers and those who are highly educated had excellent knowledge than younger and low educated mothers. They also reported that there is a statistical significant difference between the mothers' employment and their knowledge about breastfeeding, working women had excellent knowledge than housewives. This finding was attributed to the fact that working women have better chances of contact with more experienced persons and to acquire health and social information. Women who had more children had excellent knowledge and positive attitude toward breastfeeding. (Ukegbu *et al*. 2011) found that majority of mothers had good or very good knowledge about breastfeeding.

According to Hall J (2011) family and community support for breastfeeding, mothers' understanding of the breastfeeding consequences, environmental and social factors are the cultural practices that affect the rates of breastfeeding.

A study by Edmund K.M. *et al*, (2006) advances our knowledge of the benefits of early breastfeeding on neonatal survival. Another study by Darmstadt G. L. *et al*, (2006) indicates that the age and educational level of the mother can significantly influence initiation and duration of breastfeeding rates.

In a study carried out among female garment workers Dhaka on knowledge of early initiation of breastfeeding was high (89 to 77%) but revealed 88% had very poor knowledge on proper breastfeeding. According to a study conducted by Chaudhary *et al*

(2011) all mothers (200/200) captured in their study knew they had to breastfeed. However, only ten per cent (10%) knew they had to initiate breastfeeding within thirty minutes and one hour after delivery and only twenty-five percent (25%) knew the benefits of colostrum. (Afrose *et al* 2010) revealed in their study that knowledge on initiation of breastfeeding was very high (89%). Other studies by UNICEF (2012) showed that knowledge on early initiation of breastfeeding was found to be low (43%). Petit (2008) in his study in India reported that mothers had good knowledge on duration of breastfeeding.

Afrose *et al* (2010) indicated in study that majority constituting eighty-nine per cent (89%) have poor knowledge on the benefit of colostrum feeding. (Ahmed S 1999) showed that almost (100%) of all the respondents in his study has poor knowledge on the benefits or advantages of breastfeeding.

Knowledge about advantages of breastfeeding was linked to educational level and occupational background. Mothers mentioning at least one advantage were considered to have some knowledge and having knowledge on more than five (5) advantages of breast feeding were considered to have good knowledge according to the study conducted in 2011 by (Chaudhary *et al*.2011). It was observed that all mothers interviewed could mention at least one advantage of breastfeeding. It was also observed that working mothers were able to mention more than five advantages of breastfeeding. This indicates that working mothers had better knowledge on breastfeeding advantages.

Knowledge of the benefits of exclusive breastfeeding was very poor in a study conducted by (Afrose *et al* 2010) in Bangladesh. However, majority of them had good knowledge regarding the duration of exclusive breastfeeding and breastfeeding.

According to Armar-Klemesu (2000) during informed discussion with the mothers the following reasons were given for delay initiation of breastfeeding: There was no enough

breast milk flowing at the time of delivery so they waited till milk came into the breast before initiation of breastfeeding, the new born did not cry, the mother and the new born had to bath first to remove dirt, both mother and new born were tired after the birthing process and had to rest for a while before breastfeeding.

Early initiation of breastfeeding was influenced by place of residence, institutional delivery, post natal advice and education on breastfeeding and educational level(Setegn *et al*, 2011). Although WHO global and national infant and young child feeding guidelines recommend that all newborns should start breast feeding within the first hour after delivery and feeding of colostrums should be promoted. A study in Goba District in Ethiopia showed that thirty per cent (30%) of mothers squeezed and discarded the colostrums with the notion that colostrums could cause abdominal cramp in the infants (Setegn *et al* 2011). According to LINKAGES (2006) about eighty-nine percent (89%) of the mothers in Bangladesh initiated breastfeeding within three days after delivery and the prevalence of timely initiation breastfeeding in Ghana is about forty-four per cent (44%). WHO (2010) has rated the percentages of breastfeeding initiation in the first hour as poor (0-29%), fair (30-49%) good (50-89%) and very good (90-100%). With these ratings it can be inferred that the prevalence rate of breastfeeding initiation in Ghana is fair (44%).

A number of studies have investigated maternal age and educational level or knowledge in breastfeeding, employment status, family income, and parental harmony, maternal psychological problems within the first year, planned pregnancy and maternal smoking for their impact on early initiation of breastfeeding. According to Setegn *et al* (2011) there is no significant effect of gender of the infant on the timing of initiation of breastfeeding. However, their study also showed that attendance of formal education, being urban mother, institutional delivery and receiving post- natal advice or counselling on breastfeeding were associated factors of timely initiation of breastfeeding in Ethiopia.

Shirima *et al* (2000) also proved that timely initiation of breastfeeding was more common in urban areas than rural areas in Tanzania. On the contrary, Central Statistical Agency of Ethiopia (2005) in their Demographic Health Survey indicated that home delivery has direct relationship with timely initiation of breastfeeding. Initiation of breastfeeding was found to be slightly higher in rural areas than urban areas in Dominican Republic (Shirima *et al*, 2000).

2.2 Parity of the mothers and its influence on early initiation of Breastfeeding A study by Radwan (2012) shown multiparous mothers were likely to initiate and exclusively breastfeed for longer periods than primiparous women. Whiles (Orun *et al*2010) in their study in Turkey also showed a positive relationship between multiparity and early initiation of breastfeeding. Lessen *et al* (2007) also asserted that previous breast feeding experience had a positive influence on both intention and initiation. They also proved that the number of children also had positive influence with early initiation of breastfeeding. (Awi and Alikor, 2006) suggested that older mothers initiate breastfeeding earlier because of the breastfeeding experience they acquire.

Younger mothers in the vaginal delivery group initiated breastfeeding earlier than the older mothers (Scott and Binns, 1999). According to Awi and Alikor early initiation of breastfeeding was practiced more by the young mothers than the older mothers. They further explained that the younger mothers' inexperience and younger age made them received more attention and assistance from the staff to initiate breastfeeding early. The younger mothers may also be eager and willing to learn. The older mothers may be less likely to receive assistance on the assumption that, owing to their better experience, they know what to do. On the contrary, (Twomey *et al* 2000) revealed in their study that older mother initiate breastfeeding earlier because of the breastfeeding experience they acquire. (Scott and Binns1999) showed that precipitous mother fail to initiate breastfeeding early

because of their lack of breastfeeding experience may be that the baby friendly environment which encourages breastfeeding compensate for the absence of lactation experience in the primiparous mother. According to Amakayakul *et al* (1999) in Northern Thailand, where the cultural pattern of breastfeeding on demand, strong family support and traditional practices that encouraged close contact between mother and her newborn were more likely to encourage positive breastfeeding practices, whether or not the mother had previous breastfeeding experience.

2.3 Mode of delivery and early initiation of Breastfeeding.

There is inconsistence evidence regarding the type of birthing and its impact on the timely initiation of breastfeeding and exclusive breastfeeding (Della *et al*2010).

Although some studies had associated caesarean section with late initiation of breastfeeding, (Rajan L 1994) some studies however, did not find any significant difference between who had instrumental vaginal birth and those who had caesarean section in the second stage of labour, (Lawson and Tulloch 1995). However, one type of delivery that has been shown to hamper early initiation of breastfeeding and breastfeeding in general is caesarean section.

Theofilogiannakou *et al* (2006) proved in their study on early initiation of breastfeeding in Athens that caesarean section seemed to be the only barrier to early breastfeeding initiation. Adverse effects of anaesthesia which delays on mother-infant pairs, maternal discomfort and delayed onset of lactation are cited for the late initiation of breastfeeding. It has also been shown that the timing of certain hospital routines such as and routine measurements in all newborns, sedative and analgesic drugs given during labour, sociocultural factors can affect early mother-infant interaction (Kilani, 1998).

According to Rowe-Murray and Fisher (2002) there was delayed mother-infant contact in caesarean group which may be as a result of erroneous practice of regarding a mother with caesarean as too ill to start breastfeeding. They asserted that such practice is detrimental to the establishment of bonding between the mother and her infant, which is crucial for their relationship and for successful breastfeeding.

Caesarean section has been found to decrease duration of breastfeeding. Suboptimal breastfeeding behaviour on the day of birth as well as delayed onset of lactation can lower exclusive breastfeeding rates at discharge (Scott *et al*, 2006). However, other studies have shown no relationship between birth type and breastfeeding outcome

Lawson and Tulloch, (1995).

El-Khedr and Lamadah (2014) found out that large percentage of women in their study who had caesarean section had negative attitude toward breastfeeding. They attributed this to the physical condition such as painful conditions associated with caesarean section after delivery. Other study by the same authors had suggested caesarean section delivery was a risk factor for not initiating breastfeeding.

A stressful birth experience has been linked with poorer breastfeeding outcomes (Dewey *et al*, 2003). Rajan (1994) asserted that mothers with long duration of labour have been found to defer breastfeeding initiation when compared to those with shorter labour duration. Awi and Alikor (2006) suggested that probably mediated through maternal exhaustion in the period immediately after birth making breastfeeding difficult to initiate. They also revealed that mothers who receive episiotomy can successfully initiate breastfeeding early if their babies are brought to them early.

According to Rajan (1994) perineal discomfort after the birth may interfere with early breastfeeding, so perineal suturing is undertaken with minimal delay and any discomfort caused by the stitches should be minimized in the postpartum period.

2.4 Practices that support breastfeeding within Health Facilities

2.4.1 Ante-Natal Clinic

In health facilities, health personnel have been creating awareness and encouraging mothers to start breastfeeding their infants. Attendances at the antenatal clinic and class have been reported to be including early initiation of breastfeeding (Ferri *et al*, 1987).

Kum-Nji *et al* (1999) revealed in their study that the mothers' preparedness and access to breastfeeding information acquired during the antenatal care were significantly and positively correlated with early initiation of breastfeeding. They suggested that mothers who had breastfeeding education would practice timely initiation of breastfeeding or be motivated to seek early assistance to initiate breastfeeding. Regular education on breastfeeding at all stages of maternity care is likely to influence early initiation of breastfeeding positively (Rajan, 1993). Attendance at antenatal clinics, receipt of breastfeeding information showed a positive association with time of initiation. (Awi and Alikor, 2006).

The environment in which a woman gives birth may have an influence on her breastfeeding outcomes. Hospital procedures and practices contribute significantly to breastfeeding initiation as indicated by Kruse *et al* (2005) in their studies in the United States of America. Series of studies have revealed that breastfeeding outcomes have positive relationship with women who give birth in BHFI- accredited hospitals. A Scottish study by Broadfoot *et al* (2005) found that babies born in BFHI-accredited hospitals were 28% more likely to be exclusively breastfed at seven days postpartum. By using a large cross-sectional data, a

study in Switzerland revealed that children born in a Baby-Friendly hospitals were more likely to be breastfed for longer period, particularly in settings where BFHI compliance was high (Merten *et al*,2005). Receiving breastfeeding help in hospitals was found to have strong relationship with a higher initiation of breastfeeding in a study in Italy (Riva *et al*, 1999).

2.4.2 Rooming-In

Steps 7 and 5 of the ten steps to successful breastfeeding are practicing rooming-in thus allowing mothers and infants to remain together for 24 hours a day and showing mothers how to breastfeed, and how maintain lactation even if they should be separated from their infants respectively (WHO, 2007). Early skin to skin contact has the likelihood to enhance breastfeeding duration (Della *et al* 2006). Most healthy newborn infants who are delivered unto their mother's abdomen in between their breast are able to find the nipple without assistance to attach and suckle spontaneously (Righard and Alade1990). According to Scott *et al* (2001) most studies on rooming-in have revealed a positive influence on breastfeeding outcomes with even partial rooming-in making a difference. Recent pieces of evidence indicate that skin-to-skin contact or close contact between mother and infant shortly after birth helps to initiate breastfeeding timely and increases the likelihood of exclusive breastfeeding for one to four months of life as well as the overall duration of breastfeeding. Infants placed in early skin-to-skin contact with their mother also appear to interact more with their mothers and cry less.

2.4.3 Routine Procedures

Routine procedures carried out on the ward as Awi and Alikor (2006) sited in their results that observation of some routine labour ward practices such as cleaning of the newborn, measurement of weight and length, administration of vitamin K have negative impact of early initiation of breastfeeding. They also noted that for mothers who initiated

breastfeeding early, the babies were handed over to their mothers before the episiotomy repair. With effective pain control during suturing, these mothers will be more compliant to breastfeed their babies early. They also demonstrated in their studies that early mother-infant contact is a significant predictor of early breastfeeding. Therefore, to early initiation, mothers should be given their babies even while on the delivery table and of hospital practices that allows such a routine.

Vogel and Mitchell (1998) reported from New Zealand that under-staffing and overworked health-care staff as factors for delayed breastfeeding initiation supports.

El-Khedr and Lamadah (2014) explained that after caesarean section delivery, bottled feeding was initiated directly to feed the baby and this may lead to newborn's refusal of breastfeeding. To achieve effective breastfeeding, it requires proper positioning and attachment of baby to mother's breast.

2.4.4 Help given to mothers to initiate Breastfeeding

Step four of the Ten Steps suggests that health care providers should help mothers initiate breastfeeding within half an hour of birth. A systematic review of breastfeeding initiation, which includes fifty-nine studies, found that hospital initiatives that promote early mother-infant contact result in early breastfeeding initiation.

Ferris et al (1987); Righard and Alade (1990) asserted that the role of assisting mothers initiate breastfeeding early cannot be overemphasized. Most mothers are exhausted after delivery, thus continues assistance to initiate breastfeeding and receiving help on breastfeeding in health facilities has a positive association to initiation of breastfeeding (Riva E, 1999).

Staff attitudes to infant feeding may influence postpartum mothers. According to DiGirolama *et al* (2003) if hospital staff express no preference for type of infant feeding

or if they favour formula, women are less likely to be breastfeeding at six weeks. They also revealed that women perceived that only twenty-four per cent of hospital staff showed preference for type of infant feeding.

Positioning of the baby's body in relation to the mother's by the health-care staff is important for good attachment and successful breastfeeding. Most healthy newborn babies placed between their mother's breasts or on the abdomen are able to find the nipple themselves without any assistance and spontaneously attached to the mother and suck (Righard and Alade, 1990; Varendi *et al*, 1994). Newborn babies are able to identify their mother's breast by smell suggesting that frequent routine washing or cleaning of the breast may confuse the baby and prevent spontaneous breastfeeding initiation (Varendi *et al*, 1994; Mizuno *et al*, 2004). Skin-to-skin contact immediately after delivery for an hour or up to two hours enhances the ability of babies to maintain constant temperature disproving the belief of many care providers that skin-to-skin contact may cause a low temperature in newborns (Carfoot *et al*, 2005; Bystrova *et al*, 2003).

According to Anderson *et al* (2004) early skin-to-skin contact had a positive influence on babies being breastfed at one and three months after delivery. Therefore women should be encouraged by health care providers to have uninterrupted contact with their babies during the first hour after birth.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Area and Setting

3.1.1 Location and Size

Ashanti Mampong Municipality is one of the twenty seven districts in Ashanti region. Mampong which is the district capital is about is about 57 kilometers from the regional capital, Kumasi. It is bounded on the North by Brong Ahafo Region, the South by Sekyere South, the East by Sekyere Central and the North West by Ejura Sekyedumasi Districts. The Municipal covers a total land area of 449 sq km with about 79 settlements. In 2014, the population of the Mampong municipality was projected to be about 97,953 out of which 26,153 were estimated to be women in fertility age (WIFA) (MMHD, 2013). The Municipality is made up of five sub-municipals namely Mampong, Adidwan, Kofiase, Krobo and Yonso. Mampong is the largest with total population of about 46,223 and the lowest is Yonso with a total population of about 8,764.

3.1.2 Social and Economic Activities

About 61% of the population within the municipality is into farming. The level of farming is mainly subsistence with a few households cultivating cash crops such as cocoa, cashew and carrot. Settlements within the municipality are made up of the various ethnic groups within the country. Christians constitute about 87.6% of the religious population whilst Moslems and traditionalists constitute about 10.9% and 1.1% respectively. Those belonging to other religions such as Buddhism, Hinduism and others constitute about 0.4% of the entire religious population.

3.1.3 Health Facilities

Health facilities in the Municipality are Municipal hospital and maternity unit, 32 CHPS Compounds, four private/mission clinics and five health centres. Also, there are five Maternal and Child Health/Family Planning points and 54 outreach points (where Child Welfare Clinics (CWC) is held within the Municipality.

3.1.4 Road Network

Most of the roads in the municipality are not tarred except for Mampong Town. These roads are very deplorable during the rainy season making them difficult for vehicles and motor bike users.

3.1.5 Water Supply:

The most common sources of water within the municipality for both domestic and industrial use are springs, rivers hand-dug wells, about one hundred and sixteen (116) boreholes and pipe borne..

3.1.6 Education:

The municipality is endowed with three tertiary institutions one of which is a university**,** one health educational institution (Midwifery/ Health Assistants Training Institution) and two colleges of education. There four senior high schools, forty three junior high schools and sixty three first primary institutions.

3.2 Study Population

The study population were parturients aged between 15 – 49 years in the Mampong municipality who has had 37completed weeks of pregnancy and above with singleton and delivered in a health facility in the municipality from 1st June to 30th July, 2015.

3.3 Study method and design

The study was a facility based cross - sectional study. A descriptive design was used to determine factors that promote timely initiation of breastfeeding among parturient from 1st June to 30th July, 2015.

3.4 Data collection techniques and Tools.

A structured questionnaire mostly of closed - ended questions, direct observation and medical record review were used for the data collection from the respondents. The questionnaire guide was developed based on the objectives of the study to suit the quantitative nature of the study. It explored the knowledge level of mothers on timely initiation on breastfeeding, parity of women, mode of delivery, sex of babies as well as any information on the practice policy of BFHI in the facilities or any issues that promote or hinder early initiation of breastfeeding.

Data were collected from the respondents by interpreting the questions to them and their responses were recorded accordingly through face to face interview by three research assistants who were health officers drawn from various health institutions based on their rich experience in research work. Their training involved understanding the research questions, ethics in research and administration of questionnaire to participants and quality of data collection. The principal investigator coordinated the data collection to ascertain that the research assistants are on the field and actually collecting the information from the participants.

The completed questionnaires were checked at the end of each day for completeness. After this, they were put in an envelope and sealed confidentiality.

3.5 Study Variables

3.5.1 Dependent Variables

The dependent variable for this study was initiation of breastfeeding, this outcome is dichotomous that is could be early or late, hence the employment of the binary logit regression model.

3.5.2 Independent Variables

Table 3.1 Table of Independent Variables

Variables	Operational Definition	Measure/ Type of variable
Socio- Demographic Factors Age 15-19 (Teens) 20-34(middle age) 35-49 (older age)	Age in complete years at the time of interview	Continuous
Educational status None Basic Secondary Tertiary	Level of formal education obtained	Ordinal
Marital status of Single Married Divorced/Widowed/ Separated	The state of parenthood of the child with whom interview was conducted	Nominal
Parity 0 <2 ≥2	Number of children the respondent had delivered at the time of interview (alive or death)	Discrete
Occupation. Government employee unemployed artisan private own business	The main work of respondent from which she earns income	Nominal
Level of awareness breastfeeding at antenatal Very poor Poor Good Very good	Level of awareness of mothers on the benefits of breastfeeding	Ordinal
Knowledge level Very poor Poor Good Very good	Knowledge level of breastfeeding	Ordinal
Health facility services Attitude of health providers	How health workers behave towards breastfeeding	

Poor Good Very good Excellent		Ordinal

Level of implementation or BFHI Poor Good Very good Excellent	The extent to which the programme is implemented	Ordinal
Mode of delivery Spontaneous vaginal delivery(SVD) Caesarian section (C/S)	The type of delivery the client underwent	Binary
Sex of infant Male Female	The type of sex of the infant	Binary
Birth weight Under weight (<2.5) Normal weight (>2.5)	Weight of in infant as measure at birth (KG)	Categorical
Ward procedures carried out contact between mother and Early	The time baby was brought to mother after post delivery procedure.	Binary

Source: Field data 2015.

3.6 Sample Size

A calculated sample size of 303 parturients was recruited for the study.

The Dhims2 report from the study area indicated that 74% of parturients breastfeed within one hour after delivery. The sample size for this study was therefore computed using the formula below

$$n = \frac{Z\, p^2 (1-p)}{d_2}$$ (Cochrane formula) at a 95% confidence interval and a margin of error of

5%

Where n = Sample size

Z = Confidence Interval (standard value of 1.96)

P = Proportion of estimated prevalence of breastfeeding within one hour after delivery in the population (74%) d = estimated precision (standard value of 0.05).

$$\text{Therefore } n = \frac{1.96^2 \text{ X } 0.74\ (1-0.74)}{(0.05)^2} = 296$$

Therefore n = 296

3.7 Sampling Technique and recruitment.

There are five sub municipals in the Ashanti Mampong municipality with twelve 12 health facilities of which eleven (11) offer MCH services

Multistage sampling method was used to select the study participants. This was employed to ensure fair representation of parturients who use health facilities in the municipality. This was done as follows:

First, a random sampling method by balloting was used to select three sub-municipals out of the five (5) sub-municipals in the Mampong municipality. After this, a second stage simple random sampling was further used to select two facilities from each of the three selected sub-municipals to get a total of six (6) delivery facilities out of the total eleven (11). A non-probability based sampling of convenient sampling was used to select the participants from the selected health facilities.

Now base on the sample size, the respondents (303 parturients) were selected from these health facilities. Deliveries varied from one facility to the other thus, population proportion to size was used to select respondents

3.7.1. Inclusion criteria:

Parturients who have undergone either normal vaginal or caesarean delivery with singleton term delivery in Mampong municipal health facility with baby's weight of ≥2.5 kg who consented to participate were recruited.

3.7.2. Exclusion Criteria:

Parturients who had new born babies with congenital anomalies which made breastfeeding difficult**,** babies who needed special observation such as prematurity and those who were contra indicated to breastfeed.

3.8 Pretesting

Pretesting of the questionnaire and dummy tables was carried out in Nsuta Ashanti where the characteristics are the same. The time needed for the completion of the questionnaire was determined and flaws identified corrected to ensure that the questionnaire were clear and well understood by participants.

3.9 Data Handling

The collected data was validated for completeness and accuracy. The cleaned data were coded and doubled entered using a template that was created into a template created in Statistical Package for Social Scientists (SPSS) Version 16.0. After entry, the data was imported into STATA 11.1 for analysis. Data were checked for completeness and accuracy on a daily basis so that irregularities detected promptly. Data cleaning and statistical analysis was performed in STATA. Descriptive statistics were presented. Binary logistic regression analyses were employed to determine the factors leading to early initiation of breastfeeding. Binary logistic regression approach was used to establish the relationship between the several independent variables and the dichotomous dependent variable.

3.10 Data Analysis

The data collected were validated for completeness and accuracy on daily basis. The data were double entered in to a template created in Statistical Package for Social Scientists (SPSS 16.0). Any difference in the data sets was resolved by referring to the original entry on the questionnaires. The data were exported into STATA (version 11.1) for statistical

analyses. Descriptive analysis was carried out for the independent variables. Binary logistic regression analysis of the various factors was done and those found to be significantly associated (p-value < 0.05) with early initiation of breastfeeding were discussed.

3.10.1 Theoretical Model for Estimating Factors that Influence Early Initiation of Breastfeeding.

Logistic regression model approach was used to describe the relationship of several *X'*s to a dichotomous dependent variable. The fact that the logistic function *f*(*z*) ranges between 0 and 1is the primary reason the logistic model is so popular. The theoretical basis for logistic regression is given as follows:

P_i □ X□□ □$_i$ □ (E1)

Where;

P_i = Probability that the parturients initiated breastfeeding early.

X □ = Some socio-demographic information, parturient's knowledge on breastfeeding, parity, mode of delivery and practices of health facilities on breastfeeding.

□$_i$ = Coefficients of the explanatory variables to be estimated

□ = Error term which captures variables that have influence on early breastfeeding but are not captured in the model.

To obtain the logistic model from the logistic function**,** the *z* is written as the linear sum β_1 plus β_2 times X_2 plus, and so on to βk times Xk, where the *X'*s are independent variables of

interest and β and the β*i* are constant terms representing unknown parameters. Assuming a standard linear regression model;

$$Z = \beta_1 + \beta_2 X_2 + \ldots \beta_K X_K + \varepsilon_K \qquad \text{(E2)}$$

Now the linear sum expression for *z* in the right-hand side of the formula is substituted for *f*(*z*) to get the expression *f*(*z*) equals 1 over 1 plus *e* to minus the quantity plus β_1 the sum of β*i*X*i* for *i* ranging from i to *k*. In logistic estimation, the probability of the occurrence of event is determined by the function:

$$P_i = f(Z_i) = \frac{1}{1 + e^{-z}} \qquad \text{(E3)}$$

Where, P_i = Probability of event occurring.

As Z_i tends to infinity, e^{-z} tends to 0 and *P* has a limiting power bound of 1. Moreover as Z_i tends to minus infinity, e^{-z} tends to infinity and *P* has a limiting lower bound of 0.

Hence there is no possibility of getting prediction of the probability being greater than 1 or less than 0. Maximum likelihood analysis is used to obtain the estimates of the parameters which indicate the magnitude of a percentage change of the explanatory variables on the breastfeeding initiation variables (dependent variables).

However, the probability of an event occurring over not occurring is thus represented as the natural log of odds given as:

$$\ln\left(\frac{P_i}{1 - P_i}\right) = Z \qquad \text{(E4)}$$

$\frac{P_i}{1-P_i}$ Natural log of odds (E5) $\ln\left(\frac{P_i}{1-P_i}\right)$

P_i Probability of early initiation of breastfeeding by parturients'

$(1-P_i)$ = Probability of late initiation of breastfeeding by parturients'

3.10.2 The Empirical Model for Estimating the Factors that Affect Early Initiation of Breastfeeding.

The following equation represents the econometric model of evaluating the effect of socio-demographic factors of parturients', knowledge of parturients' on breastfeeding initiation, parity, mode of delivery and health facilities practices on early initiation of breastfeeding. The independent variables used are in reference to what existing studies have used.

Binary logistic equation was estimated as follows:

$$\text{Log}\left(\frac{BI}{1-BI}\right) = N = \beta_0 + \beta_1 AGE + \beta_2 EDU + \beta_3 KBC + \beta_4 KTI + \beta_5 PA + \beta_6 PBF + \beta_7 LD + \beta_8 MD + \beta_9 CONTACT + \beta_{10} SOB + \beta_{11} HT + \beta_{12} RM + \beta_{13} WP + \beta_{14} TI + \beta_{15} HELP + \varepsilon_t$$

Where BI represents early breastfeeding initiation by parturients

1-BI represents late breastfeeding initiation by parturients.

AGE measures the age of parturients

A study by Darmstadt G. L. *et al*, (2006) indicated that the mothers' age had influence on both initiation and duration of breastfeeding rates.

EDU represents the highest level of education of the parturients. Educational status of a parturients had great influence on early initiation of breastfeeding (Setegn *et al*, 2011).

KBC measures the parturients' knowledge on benefit of colostrum

Ukegbu *et al*. (2011) found that majority of mothers had good or very good knowledge about breastfeeding.

KTI measures the parturients' knowledge on the time of breastfeeding initiation

Although breastfeeding is a common practice globally, the impact of knowledge about timely initiation, proper techniques, duration and proper time of weaning is poor (Chaudhary *et al* 2011).

PA measures the parity.

A study by Radwan (2012) showed multiparous mothers were likely to initiate and exclusively breastfeed for longer periods than primiparous women. Whiles Orun et al (2010) in their study in Turkey also showed a positive relationship between multiparity and early initiation of breastfeeding.

PBI measures previous breastfeeding initiation.

Lessen *et al* (2007) also asserted that mothers who had breastfed in previous delivery are most likely to initiate breastfeeding earlier. Therefore previous breastfeeding experience had positive correlation between both intention to breastfeed and early breastfeeding initiation.

LD measures the labour duration in hours.

Rajan (1994) asserted that mothers with long duration of labour have been found to defer breastfeeding initiation when compared to those with shorter labour duration.

MD measures mode of delivery.

El-Khedr and Lamadah (2014) found out that large percentage of women in their study who had caesarean section had negative attitude toward breastfeeding. However, other

studies have shown no correlation between birth type and breastfeeding outcome (Lawson and Tulloch, 1995).

CONTACT measures the contact between baby and mother immediately after delivery. According to Anderson *et al* (2004) early skin-to-skin contact between the parturient and the baby had a positive influence on babies being breastfed at one and three months postpartum.

SOB is a dummy variable= 1 if baby is a male or 0 otherwise.

According to Setegn et al (2011) there is no significant effect of gender of the infant on the timing of initiation of breastfeeding.

HT is a dummy variable = 1 if the health talk was given to parturients during ante natal visit to health facility or 0 otherwise.

Frequent education and advice on breastfeeding during antenatal care is also likely to help early initiation of breastfeeding Rajan (1993). Attendance at antenatal clinics, receipt of breastfeeding information showed a positive association with time of initiation. Awi&Alikor (2006).

RI is a dummy variable = 1 if rooming-in was provided for the mother and the baby or 0 otherwise.

According to Scott *et al* (2001) most recent studies on rooming-in have revealed positive correlation on breastfeeding outcomes with even partial rooming-in making a difference.

WP measures ward procedures that may delay initiation of breastfeeding by parturients.

Routine procedures carried out on the ward as Awi and Alikor (2006) sited in their results that observation of some routine labour ward practices such as cleaning of the newborn, measurement of weight and length, administration of vitamin K have negative impact of early initiation of breastfeeding.

TI measures time of initiation of breastfeeding after delivery

HELP is dummy variable= 1 if parturients initiated breastfeeding by herself, 2 if helped by a relative and 3 if helped by health personnel.

Ferris et al (1987); Righard and Alade (1990) asserted that the role of assisting mothers initiate breastfeeding early cannot be overemphasized. Most mothers are exhausted after delivery, thus continues assistance to initiate breastfeeding and receiving help on breastfeeding in health facilities has a positive association to initiation of breastfeeding (Riva E 1999).

3.10.3 Statement of Hypothesis

a) H_0:β_1,β_2, β_3, β_4, β_5, β_6, β_9, β_{10}, β_{11}, β_{12}, β_{14}, β_{15}= 0; i.e. age education, knowledge on benefits of colostrum, knowledge on time of breastfeeding initiation, parity, previous initiation of breastfeeding, contact between baby and mother immediately after delivery, sex of a baby, health talk during ante natal care, rooming-in, time of initiation and help given to parturients to initiate breastfeeding have no influence on initiation of breastfeeding

H_1: β_1,β_2, β_3, β_4, β_5, β_6, β_9, β_{10}, β_{11}, β_{12}, β_{14}, β_{15}>0; i.e. age, education, knowledge on benefits of colostrum, knowledge on time of breastfeeding initiation, parity, previous initiation of breastfeeding, contact between baby and mother immediately after delivery, sex of a baby, health talk during ante natal care, rooming-in, time of initiation and help given to parturients to initiate breastfeeding have positive influence on breastfeeding initiation.

b) H_0:β_7,β_8, β_{13}= 0; i.e. labour duration, mode of delivery and ward procedures have no influence on breastfeeding initiation.

H_1:β_7,β_8, β_{13}< 0; i.e. labour duration, mode of delivery and ward procedures have negative influence on breastfeeding initiation.

3.11 Ethical Consideration

Ethical clearance was obtained from KNUST's Committee on Human Research, Publications and Ethics (CHRPE). Administratively, permission was also sought from the Mampong Municipal Health Directorate and the facilities that were used for the study. Participants were informed of the purpose and process of the study, and the right to discontinue at any time. Informed consent was then obtained from the participants.

They were assured of confidentiality and privacy.

3.12 Limitation of the study

1. The study was limited to the Ashanti Mampong municipality.
2. The study only included parturients who came to the health facilities.

3.13 Assumptions of the study

The study assumes that, there were no / minimal recall bias.

CHAPTER FOUR

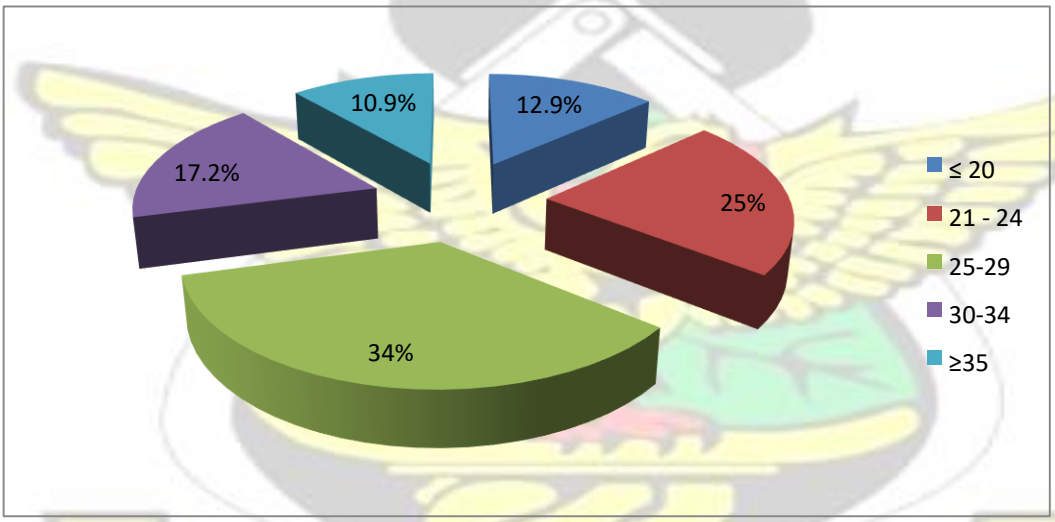
4.0 RESULTS

4.1 Introduction

This chapter presents the results of the study. The results presented in this chapter are the socio-demographic information of parturients, parturients' knowledge on breastfeeding information, parity of parturients', mode of delivery, practices of the health facility and the relationship between initiation of breastfeeding and some selected variables in binary logistic regression.

Figure 4.1 is a graphical presentation of the age characteristics of all the 303 respondents recruited during the study period.

Figure 4.1 Age distribution of respondents (n = 303)



***Source*: Author's Field Data2015**

4.2 Socio-Demographic Information of Parturients

Table 4.1 indicates that about thirteen per cent (13%) were below the age twenty. Eleven per cent (11%) was at the age of thirty-five and above. Majority of them constituting thirty-four percent (34%) were between the ages of twenty-five and twenty-nine.

About seventy-five per cent of the parturients have had some level of education with basic education constituting the highest level of education for majority the (40.3%). Only twenty-five percent (25%) of the parturients have never had any form of formal education.

Most of the respondents were married women constituting about fifty-four per cent (54%) with forty-six per cent being single. Sixty-eight per cent (68%) were Akans by ethnicity with twenty-six per cent (26%) being others (northerners). Majority of the respondents (33%) were unemployed with thirty-three per cent owning their own business.

Table 4.1 Socio-Demographic Information

Variables	**Frequency**	**Percentage (%)**
Age		
≤ 20	39	12.9
21-24	76	25.0
25-29	103	34.0
30-34	52	17.2
≥35	33	10.9
TOTAL	**303**	**100**
Level of Education		
No formal Education	77	25.4
Basic Education	122	40.3
Secondary	67	22.1
Tertiary	37	12.2
TOTAL	**303**	**100**
Marital Status Single		
	138	45.5
Divorced	2	0.7
Married	163	53.8
Widowed	0	0.0
TOTAL	**303**	**100**

Table 4.1 Cont'd

Ethnicity Akan		
	205	67.7
Ewe	8	2.6
Ga	10	3.3

Others	80	26.4
TOTAL	**303**	**100**

Occupation		
Government Employee	37	12.2
Private Business	102	33.7
Artisan	34	11.2
Unemployed	110	36.3
Student	20	6.6
TOTAL	**303**	**100**

4.3 Knowledge of Parturients on Breastfeeding Information

As shown Table 4.2 more than half of the respondents (56%) interviewed revealed that they had knowledge on colostrum feeding. Though majority of them revealed that they had knowledge on colostrum feeding, about fifty-nine percent (59%) of them could not state even one benefit or importance of colostrum feeding. Thirty-seven per cent (37%) of the parturients were able to give one benefit with only one respondent giving three benefits of colostrum feeding. Fifty-six percent (56%) of the respondents had no idea on when breastfeeding should be initiated but twenty-three per cent (23%) of them also believed that initiation can commence any time the baby cries. Fourteen percent (14%) reported that breastfeeding should be initiated before thirty minutes after delivery. Majority of the parturients' constituting seven-three per cent (73%) had knowledge on how long the exclusive breastfeeding should last but twenty-two percent (22%) had no idea on the duration of exclusive breastfeeding.

Table 4.2 Knowledge on Breastfeeding Information

Variables	**Frequency**	**Percentage (%)**
Knowledge on colostrum feeding		
Yes	165	54.5

No	138	45.5
Total	303	100
Knowledge on benefits of colostrum		
None	179	59.1
1 benefit	113	37.3
2 benefits	10	3.3
3 benefits	1	0.3
Total	303	100.0
Knowledge on Time of Initiation of Breastfeeding after delivery		
No idea	171	56.4
Before 30 minutes	43	14.2
After 30 minutes	19	6.3
Hours and Any time baby is awake and cries	70	23.1
Total		
303		100.0
Knowledge on Duration of Exclusive Breastfeeding		
No idea	68	22.4
<6 months	9	3.0
6 months	221	72.9
>6 months	5	1.7
	303	
Total		100.0

4.4 Parity

Table 4.3 presents the parity or the obstetric history of the parturients. Sixty-five percent (65%) of the parturients' had had previous deliveries and out of this forty per cent (40%) were multipara while twenty-five percent were primipara. Majority of the sex of babies of their last deliveries were females. Sixty-two percent (62%) admitted that they breastfed their babies in their previous delivery. Forty-one percent (41%) of the parturients revealed that they initiated breastfeeding within thirty minutes and an hour in their last deliveries but twenty-one per cent (21%) could not recall when they initiated breastfeeding. About 135 parturients, representing forty-five percent (45%), initiated breastfeeding timely and out of this about nineteen percent (19%) were primipara or first-time mothers. Twenty-six

percent (26%) out of those initiated breastfeeding early or timely were multipara or mothers who had had previous delivery.

Table 4.3 Parity/According to Obstetric History

Variables	Frequency	Percentage (%)
Number of previous deliveries (Parity)		
None	105	34.7
1	76	25.1
>2	122	40.3
Total	303	100.0
Sex of last baby		
No previous delivery	105	34.7
Male	78	25.7
Female	118	38.9
Twin delivery	2	0.7
Total	303	100.0
Previous initiation of breastfeeding No previous delivery	105	34.7
Yes	187	61.7
No	11	3.6
Total	303	100.0
Time of previous initiation No previous delivery	105	34.7
30 minutes	38	12.5
1 Hour	86	28.4
1 Day	11	3.6
Cannot tell	63	20.8
Total	303	100.0

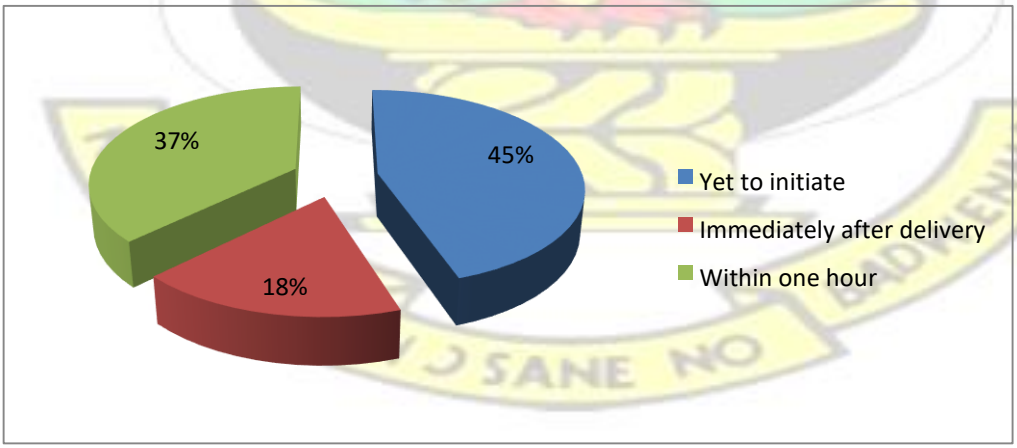
Variables	**Initiated breastfeeding**		**Not initiated breastfeeding**	
	Frequency	**Percentage (%)**	**Frequency**	**Percentage (%)**
First time delivery	56	18.5	49	16.1
1 previous delivery	31	10.2	45	15.0
> 2 deliveries	48	15.8	74	24.4
TOTAL	135	44.5	168	55.5

4.5 Mode of Delivery

Table 4.4 presents the descriptive statistics on mode of delivery of parturients. Fiftythree per cent (53%) of the respondents delivered through spontaneous vaginal delivery and about thirteen percent (13%) also delivered through assisted vaginal delivery and thirty-four percent (34%) delivered through caesarean section. Less than half (39%) of the parturients who delivered through caesarean section were able to initiate breastfeeding within one hour. Out of the sixty-six percent (66%) of parturients who had vaginal delivery, twenty-eight percent (28%) affirmed that their babies were delivered onto their abdomen to establish contact for immediate breastfeeding but thirty-eight per cent (38%) also confirmed that no such practice was done to them. About forty-two percent (42%) had their duration of labour less than or within twelve hours while fiftyeight per cent (58%) had theirs lasted more than twelve hours. Most of the deliveries constituting sixty-four per cent (64%) occurred at dawn and in the morning.

Seventy-four per cent (74%) of the babies delivered were females while about twenty-six were males

Figure 4.2 Period of Breastfeeding Initiation among Parturients.



Source: 2015 Field Data

Table 4.4 Mode of Delivery

Variables	Frequency	Percentage (%)
Duration of Delivery		
≤12 hours	127	41.9
≥12 hours	176	58.1
Total	303	100.0
Mode of delivery		
Caesarean Delivery	103	34.0
Spontaneous Vaginal Delivery	161	53.1
Assisted Vaginal Delivery	39	12.9
Total	303	100.0
Contact		
Caesarean delivery	103	34.0
Yes	85	28.0
No	115	38.0
Total	303	100.0
Time of Delivery		
Dawn	95	31.4
Morning	99	32.7
Afternoon	36	11.9
Evening	73	24.0
Total	303	100.0
Sex of the baby delivered presently Male	78	25.7
Female	225	74.3
Total	303	100,0

Source: 2015 Field Data

4.6 Practices of the Health Facility on Breastfeeding

Table 4.5 depicts the results on practices of the health facility. Seventy-four percent (74%) of the parturients reported that they were not given health talk on breastfeeding during ante-natal period. Eighty-four percent (84%) of them were roomed-in with their babies

while sixteen percent (16%) were not given such practice. More than half (55%) of the respondents admitted seeing posters on breastfeeding displayed in the health facilities.

Cleaning mother up and repair of episiotomy after delivery were the major hospital procedures that delayed initiation of breastfeeding as cited by thirty-six percent (36%) and thirty-two percent (32%) of respondents respectively.

Fifty-five percent (55%) of the parturients were able to initiate breastfeeding within the first hour after delivery with about seventeen per cent (17%) of them initiating breastfeeding immediately after birth.

Thirty-seven percent (37%) of the respondents indicated that they initiated breastfeeding on their own while fifteen per cent (15%) were helped to initiate breastfeeding by health personnel.

Out of the forty-five percent (45%) who were yet to initiate breastfeeding, twenty-nine per cent (29%) gave reasons which were mother related factors such as instructed not to turn in bed for six hours, pain from caesarean section and tiredness. Eleven percent (11%) reported that baby-related factors such as baby being weak and sleeping were some of the reasons why they could not initiate breastfeeding within an hour.

Twenty-six percent (26%) of parturients who delivered through caesarean section were helped to initiate breastfeeding. None of the respondents reported of promotion of any formula feeds.

Parturients were asked to cite reasons that might cause delayed initiation of breastfeeding. Twenty-nine percent (29%) cited reasons that were mother-related such as tiredness from labour and pains from caesarean section and episiotomy repair. Eleven per cent (11%) also cited reasons that were baby-related factors such as sick babies and when baby was asleep.

Table 4.5 Practices of the Health Facility

Variables	Frequency	Percentage (%)
Health Talks on Breastfeeding Yes	78	25.7
No	225	74.3
Total	**303**	**100.0**
Rooming-in Yes	253	83.5
No	50	26.5
Total	**303**	**100.0**
Display of Posters on Breastfeeding Yes	165	54.5
No	138	45.5
Total	**303**	**100.0**
Procedures that delayed breastfeeding		
Weighing of baby	20	6.6
Bathing of baby	18	5.9
Cleaning mother up	109	36.0
Repaired episiotomy/tears	98	32.3
More than 2 or 3 of the above	58	19.1
All the above	0	0.0
Total	**303**	**100.0**
Initiation of breastfeeding Yes	167	55.1
Yet to initiate	136	44.9
TOTAL	**303**	**100.0**
How long it took for initiation of breastfeeding		
Yet to initiate	136	44.9
Immediately after delivery	54	17.8
Within one hour	113	37.3
TOTAL	**303**	**100.0**
Help in Initiation of Breastfeeding Not initiated	136	44.9
Self	111	36.6
Health Personnel	46	15.2
Relative	10	3.3

TOTAL	**303**	**100.0**

Con't: Table 4.5 Practices of the Health Facility

Variables	**Frequency**	**Percentage (%)**
Colour of Breast Milk at Initiation		
Cannot tell	132	43.6
Yellow	85	28.0
White	69	22.8
Any other colour	17	5.6
TOTAL	**303**	**100.0**
Reason for no Initiation		
Initiated	167	55.1
Baby Factors	32	10.6
Mother Factors	89	29.4
Hospital Practices	10	3.3
Two of the above factors	5	1.6
All of the factors	0	0.0
TOTAL	**303**	**100.0**
Assistance to caesarean section mothers in Breastfeeding Initiation		
SVD 142 46.9		
Assisted	79	26.1
Not Assisted	82	27.1
TOTAL	**303**	**100.0**
Promotion of Formula Feed		
Yes	0.0	0.0
No	276	100.0
TOTAL	**303**	**100.0**
Other Reasons for Delay in Breastfeeding In tiation		
No Reason given	126	41.6
Mother Factors	131	43.2
Baby Factors	33	10.9
Health Facilities Practice	5	1.7
Both Mother and Baby Factors	8	2
TOTAL	**303**	**100.0**

Source: Field Data, 2015

4.7 Regression Results

The results of the binary logistic regression analysis for the time of initiation breastfeeding and some variables are present in Table 4.6.

Age of the parturients and their level of education did not influence time of initiation of breastfeeding, ($p < 0.175$ and $p < 0.477$ respectively). Parturients, knowledge on benefits of colostrum and their knowledge on time of initiation of breastfeeding influenced time of breastfeeding initiation, ($p < 0.001$ and $p < 0.007$ respectively).

Parity also influenced time of initiation of breastfeeding with p-value of 0.011. The parturients previous breastfeeding experience did not influence breastfeeding initiation ($p < 0.559$).

Duration of labour influenced time of initiation of breastfeeding, ($p < 0.053$) but mode of delivery did not influence time of initiation of breastfeeding, ($p < 0.687$).

Establishing early contact between mother and her baby within thirty minutes of delivery on delivery table was associated with early initiation of breastfeeding, ($p < 0.000$).
Similarly, the sex of the baby influenced early initiation of breastfeeding, ($p < 0.004$). Health talk given to pregnant women during ante-natal care and rooming-in had no influence on early initiation of breastfeeding, ($p < 0.107$ and $p < 0.384$ respectively). Ward procedures and time of initiation of breastfeeding were significantly affecting early initiation of breastfeeding, ($p < 0.023$ and $p < 0.001$ respectively). Help given to parturients to initiate breastfeeding did not influence initiation of breastfeeding.

Table 4.6 Relationship between the Time of Breastfeeding Initiation and Selected Variables using Binary Logistic Regression

Variables	Regression Coefficient	Z-value	P value
Age	0.227	1.36	0.175
Education	0.109	0.71	0.477
Knowledge on benefits of colostrum	-0.894	-3.20	0.001***
Knowledge on time of initiation of breastfeeding	0.347	2.27	0.007***
Parity	-0.819	-2.55	0.011***
Previous breastfeeding	0.271	0.58	0.559
Labour duration	-0.639	-1.94	0.052**
Mode of delivery	-0.095	-0.40	0.687
Contact between baby and mother	-0.909	-4.82	0.000***
Sex of baby	0.847	2.91	0.004***
Health talk at ANC	0.542	1.61	0.107
Rooming-in	-0.327	-0.87	0.384
Ward Procedures	-0.328	-2.27	0.023**
Time of initiation	-0.581	-3.35	0.001***
Help	0.028	0.16	0.876

***indicates significant at p<0.01, **indicates significant at p < 0.05, ***significant at *p*<0.001**

Source: Field Data, 2015

CHAPTER FIVE

5.0 DISCUSSION

This study intended to determine factors that influence early initiation of breastfeeding among parturients who delivered in health facilities in the Ashanti Mampong Municipality in the Ashanti Region of Ghana. The chapter discusses the implications of data gathered, analyzed and reported in chapter four; their relevance was identified with literature.

5.1 Socio- Demographic Information

It was revealed in this study that majority (59%) of the parturients were between the age of twenty-one and twenty-nine. This constitutes the active reproductive stage of the

population of the study area. However, only thirteen percent (13%) were under the age of twenty which indicates a possible low prevalence of teenage pregnancy in the study area. The ages above thirty-five (35) constitute the least reproductive stage in the study area according to this study. Statistically, the age of the parturients had no influence on breastfeeding initiation though Awi and Alikor (2006) revealed that older mothers initiate breastfeeding earlier because breastfeeding experience. Majority of the respondents had had some form of education with most of them having basic education as their highest level of education. Only twenty-five percent (25%) of them had no formal education. Education had no statistical influence on breastfeeding initiation. However, according to Scott *et al* (1999) better educated women initiated breastfeeding earlier. Dmirci *et al* 2013also proved in their study that increasing education was strongly protective against breastfeeding non-initiative. Adhikari *et al* (2014) also revealed that mothers' education had significant effect on breastfeeding initiation. This study did not conform to the results of the literature quoted above because most of the respondents' highest level of education was basic education.

More than half of the parturients were married women. However, about forty-six per cent (46%) of them were single mothers.

The study was conducted in Ashanti region which happens to be an Akan dominated region. This study revealed that majority of the respondents were Akans constituting about sixty-eight percent (68%) followed by Northerners who constituted twenty-six percent (26%).

Majority of the respondents were unemployed with few of them being government employees. A quite number of them reported that they owned private businesses.

Nevertheless, the result of this study further shows that socio-demographic factors are less important determinants of breastfeeding initiation.

5.2 Knowledge on Breastfeeding Information

Respondents were interviewed to find their knowledge on colostrum feeding, knowledge on benefits of feeding the baby with colostrum, knowledge on time of initiating breastfeeding and the knowledge on exclusive breastfeeding.

5.2.1 Knowledge on Colostrum Feeding

More than half (55%) of the parturients reported that they had some knowledge on feeding the baby on colostrum. The parturients, knowledge on colostrum feeding was highly significant statistically at 1% ($p<0.001$). This means that the parturients, knowledge on colostrum feeding highly influenced initiation of breastfeeding. This study conformed to that of Chaudhary *et al* (2011) that almost all mothers captured in their study revealed that they must feed their babies with colostrum.

5.2.2 Knowledge on Benefits of Colostrum

Unfortunately, more than half (59%) of the parturients captured in this study could not give a single benefit of colostrum to both the baby and the mother. About thirty-seven percent (37%) of them were able to give one benefit of colostrum with only one person giving three benefits of feeding the baby on colostrum. This reveals that though majority of the parturients knew that they should feed their babies with colostrum they did not know the benefits of it. The parturients knowledge on the benefits of colostrum was statistically significance at 1% ($p< 0.007$). According to Chaudhary *et al* (2011), mothers mentioning at least one benefit or advantage of were considered to have some knowledge and having knowledge on more than five benefits of colostrum feeding was considered to have good

knowledge. It could be said that respondents in the study area had some knowledge on the benefits of colostrum feeding and breastfeeding in general.

5.2.3 Knowledge on Time of Initiation

More than half of the respondents (56%) had no idea about the time of initiating breastfeeding. Only few of them (14%) were of the view that breastfeeding should be initiated before thirty minutes after delivery. About twenty-three percent (23%) also believed that initiation of breastfeeding could be done any time the baby cries.

This confirms why more than half of the parturients did not initiate breastfeeding early because it is believed that those who are aware of the time that initiation must commence will surely initiate without delay. (Chaudhary *et al* 2011) revealed in their study that only ten percent (10%) knew they had to initiate breastfeeding within thirty minutes.

5.2.4 Knowledge on Exclusive Breastfeeding

About three-quarters (73%) of the respondents knew that exclusive breastfeeding should last for six months. According to Ukegbu *et al* (2011), majority of parturients had good knowledge on exclusive breastfeeding. Afrose *et al* (2010) also revealed in their study that knowledge on breastfeeding was very high (89%). This revelation conforms to the result obtained in this study. Only twenty-two percent of them had no idea on exclusive breastfeeding.

5.3 Parity

About sixty-five per cent (65%) of the parturients had had previous delivery and out of that forty per cent (40%) were multipara and twenty-five percent (25%) of them were primipara. Parity was highly significance statistically at 1% ($p<0.011$).This showed that parity highly influenced breastfeeding initiation. Orun *et al* (2010) in their study in Turkey also proved that multiparity had statistical significance on breastfeeding

initiation.

Lessen et al (2007) asserted that mothers with previous breastfeeding experience was statistically significance on initiation of breastfeeding. However, this study proved otherwise. Previous experience in breastfeeding had no significance or influence ($p < 0.559$) on breastfeeding initiation. According to Scott and Binns (1999), Awi and Alikor (2006) younger mothers who had spontaneous vaginal delivery initiated breastfeeding earlier than older mothers as the inexperienced young mothers received more attention and assistance from health personnel to initiate breastfeeding. The younger mothers may also be eager and willing to learn. The older mothers may be less likely to receive assistance on the assumption that, owing to their previous experience, they know what to do.

5.4 Mode of delivery

This section discusses the duration of labour, mode of delivery, establishing contact between the mother and the baby, time of delivery and sex of the baby and their influence on breastfeeding initiation.

5.4.1 Duration of labour

Majority of the respondents had a lengthy time of labour as fifty-eight percent (58%) of them had their delivery travelling beyond 12 hours. The duration of labour had significant influence on breastfeeding initiation. Its effect was negative and it could be attributed to mothers getting tired after a lengthy duration of labour. A stressful birth experience has been found to impact negatively on breastfeeding outcomes (Dewey *et al*, 2003). According to Chapman and Perez- Escamilla (1999), a prolonged second stage of delivery is associated with delayed initiation of breastfeeding.

Rajan (1994) asserted that mothers with long duration of labour have been found to defer breastfeeding initiation when compared to those with shorter labour duration. Awi and Alikor (2006) suggested that probably mediated through maternal exhaustion in the period immediately after birth making breastfeeding difficult to initiate. They also revealed that mothers who receive episiotomy can successfully initiate breastfeeding early if their babies are brought to them early.

5.4.2 Mode of Delivery

More than half (66%) of the parturients had spontaneous vaginal delivery while thirtyfour per cent (34%) of delivered through caesarean section. Mode of delivery was not having any statistical significance on breastfeeding initiation. In other words, mode of delivery had no influence on breastfeeding initiation according to this study. Contrary to this finding, Theofilogiannakou *et al* (2006) proved in their study that caesarean section was the only hindrance to early initiation of breastfeeding. They revealed that adverse effects of anaesthesia on mother-infant pairs and maternal discomfort delayed initiation of breastfeeding. It could be explained that most of the parturients in this study delivered through spontaneous vaginal delivery which could not put the mothers into too much distress or discomfort.

5.4.3 Establishing Contact between the Mother and the Baby.

Out of the sixty-six percent (66%) of the parturients who delivered through spontaneous vaginal delivery and assisted vaginal delivery, only twenty-eight percent (28%) had their babies put at their abdomen and initiated breastfeeding immediately. Its effect on breastfeeding initiation was highly significant at 1% ($p < 0.000$). Its effect was found to be negative because majority of them did not have that opportunity to establish early contact.

Establishing a close contact between the mother and the baby immediately after delivery has the likelihood to prolong breastfeeding duration (Della *et al*, 2006). Most healthy newborn infants who are delivered unto their mother's abdomen in between their breast are able to find the nipple without assistance to attach and suckle spontaneously (Righard and Alade, 1990).

Awi and Alikor (2006) revealed that mothers who receive episiotomy can successfully initiate breastfeeding early if their babies are brought to them early

According to Rowe-Murray and Fisher (2002) there was delayed mother-infant contact in Caesarean group which may be as a result of erroneous practice of regarding a mother with caesarean as too ill to start breastfeeding. They asserted that such practice is detrimental to the establishment of bonding between the mother and her infant, which is crucial for their relationship and for successful breastfeeding.

According Scott *et al* (2006) parturients who go through Caesarean section during delivery tend to have decreased duration of breastfeeding and suboptimal breastfeeding behaviour on the day of birth as well as with delayed in breastfeeding initiation and lower exclusive breastfeeding rates at discharge. However, other studies have shown no significant relationship breastfeeding outcome and birth type (Lawson and Tulloch, 1995). The findings from this research have also shown that there is no significant relationship between mode of delivery and early initiation of breastfeeding.

5.4.4 Sex of the Baby

Seventy-four percent (74%) of babies delivered during the period of this study were females bringing the male to female ratio to almost 1:3. The sex of the baby was highly significant at 1% ($p<0.004$). This means that its effect on breastfeeding initiation is enormous. It could be explained that mothers getting the preferred sex of a baby could

motivate initiation. However, contrary to results from GDHS 2008 show that there is no evidence in early initiation of breastfeeding and sex of babies.

5.5 Practices of the Health Facility

This section discusses the practices of health facilities that affect breastfeeding initiation.

5.5.1 Health Talk on Breastfeeding during Ante - Natal Care

Most of the parturients (74%) reported that they had no education or counselling on breastfeeding during antenatal care. There was no significant effect of health talk ($p<0.107$) on breastfeeding initiation. Scott *et al* (1999) asserted that ante-natal classes were not associated with breastfeeding in a study conducted in Perth, Australia. This result was in line with the study of Scott *et al* (1999) that ante-natal health talk had no significant effect on breastfeeding initiation.

Attendances at the antenatal clinic and class have been including early initiation of breastfeeding Ferri *et al*, (1987). Kum-Nji *et al* (1999) revealed in their study that the mothers' preparedness and access to breastfeeding information acquired during the antenatal care were significantly correlated with early initiation of breastfeeding. They suggested that mothers who had breastfeeding education would practice timely initiation of breastfeeding.

5.5.2 Rooming-in

Rooming-in was practiced effectively in the health facilities as eighty-three percent (83%) of the parturients and their babies were room in. It was statistically insignificant ($p<0.384$). This means that it had no effect or influence on breastfeeding initiation.

5.5.3 Ward Procedures

Ward procedures were highly significant statistically ($p<0.023$). Ward procedures had influence on breastfeeding initiation. According to Kilani (1998) timing of certain routines

such as routine measurements in all newborns, sedative and analgestic drugs given during labour have influence on breastfeeding. In this study, thirty-six per cent of the parturient cited that cleaning of the mother was the practice that delayed breastfeeding initiation. Repairing episiotomy was another practice that influenced breastfeeding. Thirty-two percent (32%) of them reported that repairing episiotomy delayed breastfeeding.

5.5.4 Time or Duration before Initiation of Breastfeeding

Majority of the respondent (37%) initiated breastfeeding within an hour and few (18%) of them initiated immediately after delivery. This finding of parturients who initiated within the first hour of delivery (55%) is constituent (52%) with the report from the 2008 Ghana Demographic and Health Survey as initiation in one hour after delivery. Duration before initiation of breastfeeding had a significant influence on breastfeeding initiation statistically ($p<0.001$).

5.5.5 Help given to Parturient to Initiate Breastfeeding

Majority of the parturients (37%) initiated breastfeeding on their own while fifteen per cent (15%) were helped by health personnel. The help given to parturients to initiate breastfeeding was not statistically significant ($p<0.876$). It had no influence on initiation of breastfeeding in this study.

Healthy newborn babies that are placed close to their mother's breasts or on the abdomen are able to find the nipple without any assistance to attach and suck the breast milk spontaneously (Reghard and Alade, 1990; Varendi *et al*, 1994).

Ferris *et al* (1987); Righard and Alade (1990) asserted that the role of assisting mothers initiate breastfeeding early cannot be overemphasized. Most mothers are exhausted after delivery, thus continued assistance to initiate breastfeeding and receiving help on

breastfeeding in health facilities has a positive association to initiation of breastfeeding Riva E (1999).

CHAPTER SIX

6.0 CONCLUSIONAND RECOMMENDATION

6.1 Conclusions

This study has examined the determinants of Early Initiation of Breastfeeding among Parturients within the first hour after delivery in health facilities in the Ashanti Mampong Municipality. Results from the analysis showed that the selected socio demographic factors did not give any statistically significant relationship with breastfeeding initiation. The most important determinant of early initiation was a strong association between breastfeeding and early contact between baby and mother ($p = 0.000$). The findings suggest increasing access to timely initiation of breastfeeding through early contact of mothers and babies irrespective of the mode of delivery. Furthermore, the study also did not find any statistically significant association between antenatal attendance, previous breastfeeding and early initiation of breastfeeding. However, all the parturient significantly attended antenatal clinic.

Although breastfeeding was universal in this community, the knowledge and practice of early initiation of breastfeeding was low. More than half (55%) of the parturients reported that they had some knowledge on feeding the baby on colostrum. The parturients, knowledge on colostrum feeding was highly significant statistically at 1% ($p<0.001$). There is a need to institute interventions aimed at improving the knowledge and practice

of early initiation of breastfeeding and towards achieving the goals of MDG-4 in the study community.

6.2 Recommendations.

Findings of most researches on breastfeeding globally have shown that early initiation of breastfeeding could significantly reduce infant mortality. Therefore there should be more comprehensive efforts and holistic approach to increase the number of infants that are breast-fed within an hour after delivery. Efforts to improve breastfeeding globally can only be effective if policies are based on a strong knowledge on the barriers or hindrances and facilitators for early initiation of breast-feeding.

6.2.1 Practices of the Health Facility

In the short term, there should be mandatory specific assignment to all staff or midwives in the labour wards and theatres to help parturients have early contact with their newborns which can be considered as an approach to address the challenge of access to early initiation of breastfeeding irrespective the mode of delivery. There should be modification of some routine labour ward procedures in favour of timely initiation of breastfeeding.

All healthy newborn babies should be placed close to their mothers' abdomen or chest in order to locate the breast and suck successfully themselves without any assistance. Offer extra support for those mothers with high risk babies. Parturients and their babies should "bedding in" and not be separated for routine procedures that could be performed after. Mothers with episiotomy repair should be taught lying down and breastfeeding or the use of air- ring.

Additionally there should be breastfeeding support groups or written material encouraging mothers to breastfeed soon after birth.

These results reveal that there is a need for public health interventions directed towards improving the awareness of health personnel at the antenatal sessions especially midwives to include importance of early initiation of breastfeeding as well as positions and attachment of baby to breast and to further increase the practice.

6.2.2 Knowledge on Breastfeeding Initiation

In the medium term, there should be health promotion strategies to address the poor knowledge on initiation of breastfeeding among parturients by increasing awareness of the importance of timely and exclusive breastfeeding, widespread health education campaigns and strengthening the health centre facilities and capabilities.

The Municipal Health Directorate should embark on a massive in- service training sections on the BFHI policies on The Ten Steps to Successful Breastfeeding. This should target all health personnel in health facilities in the municipality, including private maternity homes and private clinics, as well as traditional birth attendants.

In the long term, efforts should be made to continuously educate pregnant women and community members on maternal and child health issues with the prime objective of improving the level of knowledge of women on breastfeeding as slight above half of the respondents (55%) had knowledge on colostrum. There should be strengthening of the mandatory first week mother craft lessons by health workers to all expectant mothers during antenatal sessions as a national policy to ensure that there is early and continuous education and demonstration on breastfeeding positions and benefits which will go a long way to prevent most of the neonatal deaths which mostly occurs in the first week of life.

I also suggest that further studies be carried out to determine other factors that may hinder successful breastfeeding especially early initiation in the municipality.

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APPENDICES

APPENDIX I CONSENT

FORM

Statement of person obtaining informed consent:

I have fully explained this research to _____ and have given sufficient information about the study, including that on procedures, risks and benefits, to enable the prospective participant make an informed decision to or not to participate.

DATE: _____ NAME: _____

Statement of person giving consent:

I have read the information on this study/research or have had it translated into a language I understand. I have also talked it over with the interviewer to my satisfaction.

I understand that my participation is voluntary (not compulsory).

I know enough about the purpose, methods, risks and benefits of the research study to decide that I want to take part in it.

I understand that I may freely stop being part of this study at any time without having to explain myself.

I have received a copy of this information leaflet and consent form to keep for myself.

NAME:_____

DATE: _____ SIGNATURE/THUMB PRINT: _____

Statement of person witnessing consent (Process for Non-Literate Participants):

I _____(Name of Witness) certify that information given to _____ (Name of Participant), in the local language, is a true reflection of what l have read from the study Participant Information Leaflet, attached.

WITNESS' SIGNATURE (maintain if participant is non-literate): _____

APPENDIX II

QUESTIONNAIRE

COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

A Questionnaire for Respondents

This is a study being conducted by a resident of School of Public Health in Kwame Nkrumah University of Science and Technology. The study is on Determinants of Early Initiation of Breastfeeding among Parturients within the first hour after delivery, in the Ashanti Mampong Municipality. Requested information on the questions below will help carry out the task ahead basically for academic purpose, hence I will very much appreciate your participation in this study and the information you will provide will be confidentially treated. It will be used for only the intended purpose and will help inform policy to practically timely initiate breastfeeding.

Thank you

Date of Interview ……

Place of Interview……

Instruction: Please put a tick [√] in the box next to the answer of your choice or write in the space provided as the case may be.

SECTION A: SOCIO-DEMOGRAPHIC INFORMATION

1. Age In Years----------
2. Highest level of education

   [ ] No formal education [ ] Basic education

   [ ] Secondary [ ] Tertiary
3. Married status

   [ ] Single [ ] Divorced

   [ ] Married [ ] Widowed
4. To which ethnic group do you belong

[ ] Akan [ ] Ewe

[ ] Ga/ Dangme [ ] Other……

5. What is your main occupation

[ ] Government employee [ ] Private own business

[ ] Artisan [ ] Unemployed

[ ] Student

SECTION B: KNOWLEDGE ON BREASTFEEDING INFORMATION

6. Do you know that you must feed your baby with colostrum (yellow breast milk)?

[ ] Yes [ ] No

7. If yes, what are the benefits of colostrum to the baby and mother? (**Can tick more than one option)**

[ ] Prevents severe bleeding of the mother (PPH)

[ ] Provide immunological protection of the baby

[ ] Clears the gastrointestinal tract of the baby of meconium and stimulates the digestive enzymes

[ ] Prevents allergic reaction in the baby.

[ ] Creates bond between mother and child

8. What time should mothers initiate breastfeeding after delivery, please state.....

9. How long should one exclusively breastfeed …… months

SECTION C: PARITY/ ACCORDING TO OBSTETRIC HISTORY

10. Number of previous deliveries [ ] None [ ] < 2 [ ] > 2

11. What was the sex of your last baby, if any

[ ] Male [ ] Female

12. If you have had previous deliveries, did you ever breastfeed your babies?

[ ] Yes [ ] No

13. If yes to question number 12, can you remember how long it took you to initiated breastfeeding

[ ] minutes [ ] Hour(s)

[ ] day(s) [ ] cannot Tell

SECTION D: MODE OF DELIVERY

14. Delivery duration

[ ] < 12 hours [ ] >12 hours

15. Mode of delivery

[ ] Caesarean Section [ ] Spontaneous vaginal delivery [ ] Assisted vaginal delivery example, vacuum

16. If spontaneous vaginal delivery, was baby delivered unto your abdomen and immediately put to breast?

[ ] Yes [ ] No

17. Time of delivery……..GMT

18. What is the sex of this baby

[ ] Male [ ] Female

SECTION E: PRACTICES OF THE HEALTH FACILITY

19. Were you given health talk on exclusive breastfeeding specifically timely initiation during antenatal sessions?

[ ] Yes [ ] No

20. Did the facility provide rooming in?

[ ] Yes [ ] No

21. Have you seen any posters of a mother breastfeeding her infant in this facility

[ ] Yes [ ] No

22. What procedures were done for the baby/mothers after birth that delayed breastfeeding?

[ ] Weighing of baby [ ] Bathing of baby

[ ] Cleaning mother up [ ] repaired episiotomy/tears.

23. Have you initiated breastfeeding?

[ ] Yes [ ] Not Yet

24. If yes, how long did it take you to initiate breastfeeding?

[ ] Immediately after delivery [ ] within one hour [ ] Hours after birth

[ ] cannot tell

25. Who helped you to initiate breastfeeding [ ] self [ ] relative

[ ] health personnel

26. What is the colour of the breast milk ……

27. If you have not initiated breastfeeding, why?……

28. If were delivered by caesarean section, have you been assisted to initiate breastfeeding?

[ ] Yes [ ] No

29. Has any formulae feeds been promoted on the ward

[ ] Yes [ ] No

30. What else do you think hinder timely breastfeeding among parturients? ……

……

……

APPENDIX III

LETTER OF APPROVAL