FACTORS INFLUENCING BIRTH PREPAREDNESS AMONG PREGNANT WOMEN IN OFFINSO SOUTH MUNICIPALITY

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JULY, 2017
DECLARATION

I, Peter Paul Erefaar declared that this thesis is my original work, except for cited articles and journals which were duly referenced. This work was undertaken under the direction and guidance of Dr. Florence Naab and Dr. John Kuumouri Ganle; at the School of Nursing & Midwifery and School of Public Health, University of Ghana respectively. This work has never been submitted to any other institution or by anyone for any award.

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DEDICATION

I dedicate this thesis to my lovely daughters; Zita, Cindy, and Emily with the hope that this piece of work will inspire them in life.
ACKNOWLEDGEMENT

I am quite delighted to acknowledge my supervisor Dr. Florence Naab for the unreserved guidance and constructive suggestions and comments at every step of the research process; from a very beginning step of proposal development to this end.

I would like to indicate my respect and acknowledgment to Dr. John Kuumouri Ganle, School of Public Health, who helped me a lot throughout the research process.

I am thankful to Mrs. Beatrice Appah, Director of Offinso South Municipal Health Service for permitting me to carry out the study in the municipality. I am also grateful to the five sub-municipalities heads, their staff and my research assistants during the whole process of data collection and processing.

Nevertheless, I also acknowledged the contributions of the authors and publishers of the different journals and articles that were used for the study.

To my wife (Charity Abeikpeng) and my lovely daughters (Zita, Cindy, and Emily), I say thank you for your support, patience and encouragement.

God bless you all.
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<tr>
<td>ANC</td>
<td>Antenatal Care</td>
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<td>BP</td>
<td>Birth Preparedness</td>
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<td>BPCR</td>
<td>Birth Preparedness and Complication readiness</td>
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<tr>
<td>CR</td>
<td>Complication readiness</td>
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<tr>
<td>GHS</td>
<td>Ghana Health Service</td>
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<td>GSS</td>
<td>Ghana Statistical Service</td>
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<td>JHPIEGO</td>
<td>Johns Hopkins Programmes for International Education in Gynaecology and Obstetrics</td>
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<td>OSMHD</td>
<td>Offinso South Municipal Health Directorate</td>
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<td>OSMP</td>
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<td>OSM</td>
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<td>UNDP</td>
<td>United Nation Development Policy</td>
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<td>UNICEF</td>
<td>United Nations Children Emergency Funds</td>
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ABSTRACT

Birth preparedness (BP) is a major factor to reduce maternal morbidity and mortality. The main purpose of the study was to determine factors that influence birth preparedness among pregnant women. A quantitative cross-sectional design was used with a sample size of 395 pregnant women in their third trimester recruited for the study at the Offinso South Municipal. A multistage sampling strategy was used for the study. First, the computed sample size was divided equally among the five sub-municipalities. A simple random sampling technique was then used to recruit respondents attending the antenatal clinics at each sub-municipality. A standardized questionnaire was adopted from the Theory of Planned Behaviour (TPB) and modified to suit the purpose and focus of the study. The data was managed and analysed using the Statistical Package for Social Science (SPSS) software version 21. The data was analysed using descriptive and inferential statistics. Specifically, Pearson (r) correlation was done to determine the relationships between the variables and birth preparedness. Multiple linear regression and mediation analyses were done to control for possible confounding variables. P-values less than 0.05 were taken as showing significant associations at a 95% confidence level. The findings revealed that pregnant women have good attitude, subjective norms, perceived behavioural control and behavioural intention towards birth preparedness. The women were motivated by themselves, their husbands and their peers to do birth preparedness. Moderate and strong positive correlations were established among the study variables. Behavioural intention predicted birth preparedness and partially mediated the relationships between the study variables and birth preparedness. However, minority of the respondents still demonstrated low and poor attitude, socio-cultural beliefs, perceived behavioural control and readiness to do birth preparedness. Therefore, health promotion strategies on birth preparedness are recommended.
CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Birth preparedness (BP) among pregnant women appears to be a challenge due to beliefs, myths, taboos, illiteracy, and poverty, among others associated with planning in advance for the unborn baby. Adequate birth preparedness can reduce the rate of maternal and neonatal deaths, one of the greatest burdens in low resource countries (Moran et al., 2006). Any woman that is pregnant is exposed to the risk of unpredictable complications that can cause injury to her or the unborn baby or even result in her death or the death of the unborn baby (JHPIEGO, 2004). Among pregnant women, birth preparedness is observed to have improved reproductive and child health outcomes.

There is global recognition in improving maternal mortality following its inclusion in the Sustainable Development Goals (SDGs) (Tiku, 2015). A number of health promotion interventions including birth preparedness, have been recommended to ensure increase access to skilled care for maternal and new born health (WHO, 2015). According to Kaur, Kaur, and Kaur (2015), each year, between 500,000 – 600,000 women normally die from pregnancy and childbirth-related complications. Out of this number, 99% of these deaths are normally recorded in low income countries. Maternal mortality ratio in Sub-Saharan Africa is 920 per 100,000 live births and that of lifetime risk of maternal death is 1 in 16 compared to 1 in 2,400 in Europe (Kaur, Kaur & Kaur, 2015).

Birth Preparedness and Complication Readiness (BPCR) is a process of promoting skilled maternal and neonatal care utilization in a timely manner, based on a series of ideas and general principles that being prepared for complications in childbirth reduces delays in obtaining care (Kaur, Kaur & Kaur, 2015). Birth preparedness in a
skilled care approach includes identifying a skilled provider and making the necessary plans to receive skilled care for all births. Complication readiness which also includes the arrangement for emergency funds, transport, blood donor and designated decision-maker is emphasised in emergency obstetric care programmes (JHPIEGO, 2004). A study in the Sisala East District of Ghana also emphasised that birth preparedness is a process of planning for early postpartum care during first and sixth weeks after birth as life-threatening complication can occur during this period (Kuganab-Lem, Dogudugu & Kanton, 2014).

In a low income setting such as Ghana, where there is poor transport system, inefficient infrastructure, prevailing illiteracy and erratic access to skilled care providers, the practice and principle of birth preparedness and complication readiness can lead to a decrease in existing high maternal and neonatal mortality and morbidity rates (Ekabua et al., 2011). Ekabua et al. (2011) further stated that birth preparedness and complication readiness encourages decision making and promotes professional care for every birth before the onset of labour. The birth preparedness and complication readiness matrix increases consciousness of danger signs, thus reducing delay in seeking care and improving problems recognition. The BPCR matrix makes the care-seeking procedure more efficient as it provides information on suitable sources of care (facilities and promoters). BPCR plan encourages communities and households to save money for transportation and service fees. This is particularly important because complications related to pregnancy cannot be predicted, therefore, to overcome such problems BPCR is considered a very important tool in addressing these problems as they arise (JHPIEGO, 2004).

There has been a conscious effort over the years to improve maternal and child health in Ghana. This is in pursuant of efforts to achieve the then Millennium
Development Goals (goals 4 and 5) now SDGs (Goal 3), which in essence seek to improve reproductive and child health. These efforts included the free maternal delivery care policy as highlighted in the 2007 National Development Policy christened Growth and Poverty Reduction Strategy (GPRS). This policy was an effective approach to facilitate birth preparedness and increase the utilization of skilled care for all deliveries. However, the policy yielded low results because even when the delivery-fee-exemption policy was implemented, the utilization of delivery services was not encouraging because of poor attitudes of nurses towards clients (Moyer, Adongo, Aborigo, Hodgson & Engmann, 2014). In addition, poor quality of care, low staff strength, poverty, transportation, long distances to health facilities and socio-cultural barriers were other hindrances to service utilization (Ganle, Parker, Fitzpatrick & Otupiri, 2014; Ganle, 2015). Also, the use of traditional birth attendant still remains a barrier and this hinders access to skilled delivery and discourages birth preparedness (Essendi, Mills, and Fotso, 2010).

The Ghana Shared Growth and Development Agenda which is a national development policy, quite recently tried to minimize some of the problems highlighted by expanding infrastructure to improve access and enhance maternal healthcare invariably encouraging birth preparedness. However, maternal and neonatal mortality still persists and quite pronounced in even one of the national referral hospitals (Komfo Anokye Teaching Hospital) as recently aired in a documentary titled ‘next to die’ in the media (Boateng, 2017).

Following the increasing popularity of birth preparedness as a strategy for promoting access to skilled delivery, there is the need for more research to understand the factors influencing birth preparedness in order to address needless maternal and neonatal/infant deaths. Hence, this study assessed the factors influencing birth
preparedness among pregnant women in the Offinso South Municipality using the theory of planned behaviour (TPB) as an organizing framework.

1.2 Problem Statement

Maternal mortality remains high in Ghana despite all the interventions that have been put in place to curb it (GHS, 2014). As at 2014, Ghana's maternal mortality stands at 380 per 100,000 live births which fall short of the global target of 54 per 100,000 live births (WHO, 2015 & UNDP, 2015). While infant mortality has seen a decline over the years, in 2014 infant mortality for Ghana was reported as 41 per 100,000 live births which also fell short of the target of 22 per 100,000 (WHO, 2015). Records available at the Regional Health Directorate (RHD) in Ashanti Region of Ghana show 184 per 100,000 live births of maternal mortality rate (RHD Annual Report, 2016) while that of the Offinso South Municipal Health Directorate (OSMHD) shows 109 per 100,000 live births (OSMHD Annual Report, 2016). Furthermore, a recent documentary titled ‘next to die’ at Komfo Anokye Teaching Hospital in Ashanti Region of Ghana revealed that on average, about 100 women die on delivery beds annually with four babies dying each day (Boateng, 2017).

The causes of these deaths are mostly preventable causes e.g. severe bleeding (haemorrhage), hypertensive diseases, sepsis and unsafe abortions (GSS, 2015). According to Thaddeus and Maine (1994) cited in Kaso and Addisse, (2014), the causes of maternal mortality are attributable to the three delays; delays in deciding to seek care, delays in reaching care and delays in receiving care. The study further reported that these forms of delays have their foundation on the lack of adequate preparedness among expectant mothers and their families for childbirth and its associated problems.

The level of birth preparedness and complication readiness (BPCR) are said to differ among expectant mothers. In Rural Uganda, a study among postpartum mothers
indicated 53.9% birth preparedness while in Central Ethiopia only 16.5% of the respondents were birth prepared (Kakaire, Kaye, & Osinde, 2011; Kaso & Addisse, 2014). Furthermore, a study in rural Northern Ghana revealed that only 23% of the respondents considered or took into account the steps of BPCR plan (Kuganab-Lem, Dogudugu & Kanton, 2014).

According to Soubeiga, Gauvin, Hatem, and Johri, (2014), birth preparedness could lead to 24% significant reduction of neonatal mortality risk and a 53% maternal mortality risk reduction. Birth preparedness is therefore very essential in preventing maternal and infant mortality because of its role in reducing the three delays that account for the preventable maternal and infant deaths (Essendi, Mills & Fotso, 2011; Kaso & Addisse, 2014).

One of government priorities in health is to employ strategies that will improve maternal health and invariably reduce maternal and neonatal mortality. Apart from expanding health infrastructure to increase access, health promotion/education and other maternal health policies are ongoing to encourage pregnant women to carry out birth preparedness. However, birth preparedness is still an issue among pregnant women in the Offinso South Municipality following the high maternal mortality rate. It is therefore imperative to assess the views of pregnant women in birth preparedness to understand the phenomenon better since there are no available statistics in the study area on the issue.

Despite the fact that BPCR is crucial for the enhancement of reproductive and child health, little is known about the current magnitude and influencing factors in Ashanti, Kumasi. So far this study sighted only two research works done on birth preparedness: Kuganab-Lem, Dogudugu, and Kanton, (2014); Suglo and Siakwa, (2016) in the Sisala East District and Tamale Teaching Hospital of Ghana among postpartum
women and expectant mothers respectively as well as two unpublished research works in Accra-Ghana (Agbodohu, 2013; Kumadi, 2015). It surpasses to say not much has been reported on birth preparedness among pregnant women in Ghana, particularly with a model. The understanding of pregnant women’s attitude, subjective norms, perceived behavioural controls, and intention is important in reducing maternal and neonatal mortality. It is in the light of this that this study resolves to assess the current status and factors associated with birth preparedness among pregnant women in the Offinso South Municipality using the theory of planned behaviour (TPB) as an organizing framework.

1.3 Purpose of the Study

The main purpose of this study was to assess factors influencing birth preparedness among pregnant women in Offinso South Municipality.

1.4 Specific Objectives

The specific objectives of the study sought to:

1. Describe the perceived behavioural controls, subjective norms and attitudes of pregnant women towards birth preparedness.

2. Describe the behavioural intentions of pregnant women towards birth preparedness.

3. Examine the relationships between behavioural intentions and attitudes, subjective norms, and perceived behavioural controls among pregnant women on birth preparedness.

4. Assess the mediating effect of behavioural intentions among pregnant women on birth preparedness.
1.5 Research Questions

To achieve the objectives above, the following research questions were investigated:

1. What are the perceived behavioural controls, subjective norms and attitudes of pregnant women towards birth preparedness?

2. What are the behavioural intentions of pregnant women towards birth preparedness?

3. What is the relationship between behavioural intentions, and perceived behavioural controls, subjective norms, and attitudes among pregnant women on birth preparedness?

4. What is the mediating effect of behavioural intentions among pregnant women on birth preparedness?

1.6 Statement of Hypotheses

1. There are positive relationships between pregnant women’s attitudes, subjective norms and perceived behavioural controls and birth preparedness.

2. There is a positive relationship between behavioural intentions of pregnant women and birth preparedness (behaviour).

3. There are positive relationships between attitudes, subjective norms, perceived behavioural controls and behavioural intentions of pregnant women and birth preparedness (behaviour).

4. There is a positive mediating effect of pregnant women’s behavioural intentions and birth preparedness.
1.7 Significance of the Study

The findings of the study will provide information on the need and importance of birth preparedness among pregnant women in Offinso. The findings of this study may serve as a primary source of information in the Offinso South Municipal in the design and implementation of maternal health programmes especially, those that are focused on antenatal care, skilled delivery and postnatal care. It could also help the midwives and other health professionals to understand the lived experiences of pregnant women in birth preparedness and complication readiness (BPCR).

It will equally be of help to the Ghana Health Service and other Non-Governmental Organisations to educate women on birth preparedness during pregnancy. In addition, the finding of this study may pave way for further research on birth preparedness in order to improve maternal health indicators.

1.8 Definitions of Terms

**Birth Preparedness**: behaviour pregnant women put up in terms of healthcare during pregnancy and immediately after delivery.

**Pregnant Women**: women conceived and attending the antenatal clinic.

**Attitude**: represents an individual’s opinions, beliefs, likes, and dislikes regarding birth preparedness.

**Subjective Norm**: represents an individual's perception of key peoples’ beliefs that support or prevent one from doing birth preparedness.

**Perceived Behavioural Control**: represents a person’s difficulty or perceived ease of doing birth preparedness.

**Behavioural Intention**: denotes a person’s readiness to do birth preparedness.
CHAPTER TWO
THEORETICAL FRAMEWORK/LITERATURE REVIEW

This chapter describes the theoretical framework of the study and empirical literature review. The Theory of Planned Behaviour (TPB) which was used as an organizing framework is described first, followed by the literature review.

2.1 The Theory of Planned Behaviour (TPB)

The theory evolved from the theory of reasoned action (Ajzen and Fishbein, 1988). The theory proposed that intentions are the hallmark of behaviour, propelled by the individual’s attitude, subjective norms and perceived behavioural control. The purpose of these propositions is to predict the occurrence of a behaviour that is of intent (Ajzen, 1991). According to the theory, all these propositions are beliefs-driven.

Ajzen (1991) defined the propositions as follows:

**Attitudes towards the Behaviour:** Attitude towards behaviour depends on the individual’s behavioural beliefs and outcome evaluation. Therefore, an individual’s evaluation of a particular behaviour determines his/her attitudes. This is also reliant on the consequences of the behaviour. An attitude towards the behaviour is also a person’s overall evaluation of the behaviour whether negative or positive (Ajzen, 1991).

**Subjective Norms (about the behaviour):** It involves normative beliefs and motivation to comply. This is how the individual acknowledges the societal pressures in enacting a particular behaviour. Ajzen (1991) further explained that subjective norms show how beliefs about a phenomenon influence the required behaviour as well as the individual’s motivation.

**Perceived Behavioural Control:** Perceived behavioural control is the ability of the individual to exhibit the required behaviour. Perceived behavioural control depends on
the beliefs about that behaviour and inner drive to appreciate that behaviour which can be situational (Ajzen, 1991).

**Behavioural Intentions:** Ajzen (1991) also proposed that intention can be a substitute means of measuring behaviour. However, there is not a clear distinction between behavioural intention and actual behaviour.

The relationships that exist between the constructs of the TPB are presented in the figure 2.1 below.

![Figure 2.1: Theory of Planned Behaviour (TPB), (Source: Ajzen, 1991).](http://ugspace.ug.edu.gh)

The TPB is used to predict desired behaviour. However, considering that pregnant women usually prepare in one way or the other for childbirth, the purpose of applying the theory is to examine the path through which pregnant women prepare for childbirth. Intentions are proxy to the behaviour. Therefore, once the pregnant women prepare for delivery, then they may have some intentions that lead to their preparation in childbirth. Attitudes to the behaviour, subjective norms and perceived behavioural control influence the intentions of the pregnant women in performing the appropriate
behaviour. According to Ajzen (1991), these components are stimulated by beliefs. The beliefs of an individual can stem from different dimensions. It can be learned, acquired or inbuilt. An individual's beliefs can change depending on his /her own ideologies and some external influences. Perceived behavioural control may independently cause the behaviour. In this case, it is the pregnant woman's ability to overcome her beliefs in order to have the confidence in enacting the appropriate behaviour. This normally influences the pregnant woman's ability to believe in herself. However, it could be internal as explained or situational. Situational is when the pregnant woman may have heard negative things about birth preparedness or her perceived behavioural control is due to an experience she had, for example at the ANC or based on her observations.

The pregnant woman's attitude may be dependent on what she expects as an outcome of her behaviour. If the outcome has a positive impact, the pregnant woman may enact that behaviour no matter what the beliefs are. The intentions of the pregnant woman may influence her beliefs and therefore lead to a positive or negative outcome. Similarly, her beliefs may also affect her intention e.g. a woman intent to go and deliver with a midwife but there is a strong belief in the community she lives that only weak women or unfaithful women go to the health facility to deliver. In that sense, the social cost of delivering in a health facility may be so high that this woman will vitiate even though she had the intention. Thus, whether the pregnant woman may prepare for childbirth or not may depend on her beliefs.

With respect to the subjective norms, traditionally, gender depicts the role of an individual that makes it easy for a pregnant woman to be engaged in birth preparedness that is professed as a woman's activity. As a result, it may be very easy for the pregnant woman to be either self-motivated or motivated to indulge in birth preparedness. Subjective norms also deal with the social pressure, socio-economic and socio-cultural
factors that revolve around the pregnant woman. In addition, the pregnant woman may feel that the people she respects and seeks approval from in the society may frown at her if she does not prepare for the childbirth. Nevertheless, if a pregnant woman acknowledges and feels that preparing for childbirth will be accepted and appreciated then that behaviour is more likely to be exhibited. However, social pressures, socio-economic and socio-cultural factors including men's executive power at the family level may also affect the decision of the pregnant woman to prepare for childbirth.

Many researchers in the use of condoms have used the TPB to demonstrate pertinent understandings in health and behavioural attitudinal change (Newby, Brown, French, & Wallace, 2013; Protogerou, Flisher, Wild & Aarø, 2013; Reid & Aiken, 2011). The TPB is a behavioural change model that is used to predict behaviour as demonstrated in the condoms use and social networking among students (Cameron, 2010). Thus, since BP is a behaviour related activity, the TPB was appropriately adopted for the study. In this study, the TPB was used as an organizing framework to examine the attitude, subjective norms, perceived behavioural controls, and behavioural intentions of pregnant women in birth preparedness and complication readiness.

2.2 Literature Review

This section of the chapter reviewed literature relevant to birth preparedness (BP) among pregnant women. The literature was organized according to the objectives. A wide range of sources was consulted such as books, published papers and journals. The following databases were accessed: HINARI, JSTOR, PUBMED, CINAHL, Medline, Sage, Google Scholar, and Science Direct. The search words were birth preparedness, complications readiness, pregnant women, behavioural intentions, subjective norms, prenatal/antenatal care, maternal health, BPCR strategies and key
elements of BP. The literature review was organized according to the constructs of the TPB, and the objectives of the study under the following headings:

- The concept of birth preparedness
- Levels of Birth Preparedness
- Influence of socio-demographic characteristics on birth preparedness
- Attitudes of pregnant women towards birth preparedness
- Influence of socio-cultural factors on birth preparedness
- Influence of perceived behavioural control on birth preparedness
- Behavioural intentions and birth preparedness
- Predictors of birth preparedness among pregnant women

2.2.1 The Concept of Birth Preparedness (BP)

The attitude of pregnant women is one of cheerful optimistic anticipation and self-importance in their changing bodies. Globally, babies are received with countless delights by couples and families, not just only for the delights alone, but with the total guarantee that their family lines will not die out. Adequate BP of a pregnant woman mirrors the positive spirit of her pregnancy with knowledge of what is normal or abnormal about her pregnancy. Many are there who do not experience such delights due to their unpreparedness or having unequivocally no knowledge about the danger signs of pregnancy. Thus, a baby's birth is a major reason for jubilation within many communities worldwide. Societies anticipate women to bear children and respect women for their role as mothers. Yet, pregnancy and childbearing is a perilous journey in most parts of the world (Hiluf & Fantahun, 2008).

The WHO endorsed BPCR as an essential intervention element in the antenatal care (ANC) package. It is universally accepted as a vital component of safe motherhood
programmes to reduce delays for care (JHPIEGO, 2004). A number of health promotion strategies for reproductive and new-born health have been recommended (WHO, 2015). Among these recommendations, BPCR is one of the top most priority interventions in addressing maternal and newborn health issues in low-income countries.

BP among pregnant women is seen as one of the numerous strategies that aim at reducing unnecessary delays in seeking, reaching, and receiving care during child delivery (August et al., 2015). BP is the process of planning for normal birth and anticipating the actions needed in case of any emergency or complication (Maternal and Neonatal Health Report, 2006). According to Moran et al. (2006), BP is advance planning and preparation for delivery which can do much to improve maternal health outcomes. Therefore, BP helps ensure that women can reach professional delivery care when labour begins (Hailu, Gebremariam, Alemseged & Deribe, 2011). In addition, BP can help reduce the delays that occur when pregnant women experience obstetric complications, such as recognizing the complication and deciding to seek care, reaching a facility where skilled care is available and receiving care from qualified providers at a facility (Hailu, Gebremariam, Alemseged, & Deribe, 2011). It also involves preparing and planning for accessing postpartum care during the first week after delivery and at six weeks after delivery (Kuganab-Lem, Dogudugu & Kanton, 2014). Iliyasu, Abubakar, Galadanci, and Aliyu (2010) stated that BPCR is a comprehensive strategy aimed at promoting the timely utilization of skilled maternal and neonatal health care. Mutiso, Qureshi, and Kinuthia, (2008) mentioned that BPCR is a safe motherhood strategy whose objective is to promote the timely use of skilled maternal and neonatal care during childbirth or obstetric emergencies by reducing delays at the first, second and third levels.
The WHO (2015) indicated that BP is often delivered through the health care officers during antenatal care to the woman and might include a visit by the community health officers to the home of the pregnant women. Also, programmes are instituted to improve the efforts of families and the wider communities so as to increase awareness on BPCR and also to enhance the health professionals' expertise towards providing BPCR as part of ANC. These programmes often include education materials and other visual aids with information on BPCR and may implement mass media campaigns with BPCR messages (WHO, 2015).

The obligations for BPCR must be shared among all stakeholders of safe motherhood: policymakers, health facility managers, providers, communities, families, and women (Thaddeus and Maine, 1994). BPCR is therefore an all-inclusive strategy to improve the use of trained providers at birth, a key intervention to reduce maternal mortality. BPCR include a number of elements such as knowledge of danger signs, plan for a place to give birth, plan for a birth attendant, plan for transportation and plan for saving money (Family Care International, 2006). However, three delays serve as obstacles that often lead to avoidable maternal deaths (Kaso & Addisse, 2014). Birth preparedness programmes universally speak of these ‘three delays’ to care-seeking for obstetric emergencies as delay in recognition of a problem, delay in seeking care, and delay in receiving care at a facility.

Strategies aimed at facilitating the use of professional reproductive and child health care services during childbirth especially for women with obstetric complications includes improving the knowledge of BPCR practices (Hussein, Kanguru, Astin & Munjanja, 2011). Three delays itemised by Thaddeus and Maine (1994); “delay in deciding to seek care, in reaching care and delay in receiving care”, guides the provision and use of obstetric services to prevent maternal deaths. Using the BPCR matrix
designed by Maternal and Neonatal Health (MNH) programme of JHPIEGO (2001), these delays have been addressed at various levels including the pregnant woman, her family, her community, health providers, health facilities and policy-makers during pregnancy, childbirth and the postpartum period.

Birth preparedness and complication readiness (BPCR) concept includes knowledge of obstetric danger signs, plan to deliver at a health facility, identify skilled birth attendant, transportation arrangement, identify a blood donor and availability of funds (JHPIEGO, 2006). According to JHPIEGO (2004), birth preparedness involves the following models: preparation for normal birth by choosing a skilled birth attendant (SBA) and place to delivery, preparation of vital items for delivery e.g. clean delivery kit, knowledge of obstetric danger signs for mother and newborn, when to seek help, knowledge of where and whom to go to for assistance, arranging for funds and means of transportation as well as prior identification of blood donors.

The BPCR matrix also outlines the roles of policymakers, health facility managers, health providers, communities, families, and women, ensuring that women and newborns receive the right, effective and timely care during and after delivery (JHPIEGO, 2006). It also outlines plans and actions that each group of stakeholders can implement to build an enabling environment for normal birth and care. The BPCR matrix can be used in a number of ways to introduce and strengthen the concept of BPCR, to demonstrate and back shared obligations and accountability for safe motherhood and to plan proper safe motherhood strategies and activities. Also, advocacy groups can use the matrix to facilitate a process that aids stakeholders to see how to influence barriers and find solutions to seeking, reaching and receiving care. Likewise, programmes planners can use the matrix to organize the needed human and fiscal resources to satisfactorily respond to stated needs and priorities. Furthermore, healthcare
providers can equally use the matrix as a locus to strengthen facility preparedness and to understand their roles and expertise required to deliver better care throughout pregnancy; labour, childbirth and the postpartum/newborn period (JHPIEGO, 2004).

In order to increase the use of professional care during delivery and also increase prompt use of facility care for obstetric and new-born complications, the WHO (2015) recommends BPCR interventions. The WHO further recommended for communities, families, and women to have knowledge about signs on the onset of labour and danger signs during pregnancy and after delivery for the woman and new-born as part of the BPCR interventions. Contrary to the past where BPCR interventions programmes focused basically on care-seeking for the woman, in recent times, programmes have acknowledged the need of deliberating care-seeking for new-born problems (WHO, 2015).

The WHO (2015) emphasized recently that a BPCR plan should include the preferred birth attendant, the desired place of birth, supplies and materials necessary to bring to the facility, the location of the closest facility for delivery in case of complications, an identified labour and birth companion, funds for any expenses related to birth in case of complications, an identified support to look after the home and other children while the woman is away, identification of compatible blood donors in case of complications, and transport to a facility for birth in case of a complication. These recent recommendations further suggested for the preparation for birth and complications for mother and new-born. BPCR have led to the high use of trained birth provider during childbirth and also facility delivery. Other positive impact of the BPCR includes the participation of communities, male partners and other family decision-makers in discussions to improve the quality of service delivery (WHO, 2015). BPCR also promotes choosing trained birth attendants to attend to birth at home, preparing a
delivery place at home, preparing for clean delivery kits, preparation for emergency transportation and essential new-born care (safe cord care, delayed first bathing, drying of neonate before the delivery of the placenta, initiation of breastfeeding within one hour after birth) and also a person to be with the woman for 24 hours in areas where the use of skilled birth attendants is extremely low (WHO, 2015).

2.2.2 Level of Birth Preparedness (BP)

According to Pembe et al. (2009), pregnant women with knowledge on BP will be empowered together with their families for timely decisions to be taken on seeking assistance from trained health personnel. The level of BP varies within regions and countries. Thus, below 50% in many countries in Sub-Saharan Africa and South-East Asia due to socioeconomic circumstances, cultural norms, service provision and accessibility of health institutions (Gabrysch and Campbell, 2009; UNICEF, 2010). Thus, various studies on BP have reported the varying degree of preparation. In India, it was found that 47.8% of women were well-prepared (Agarwal, Sethi, Srivastava, Jha, and Baqui, 2010). A study in Burkina Faso showed that women who had plan for transportation and to save money towards delivery are more likely to give with assistance of a skilled provider (Moran et al., 2006). However, in Duguna Fango District of Ethiopia, 18.3% of pregnant women were well prepared, 46.4% intended to deliver at home and 53.6% planned to deliver at health facilities (Gebre, Gebremariam, & Abebe, 2015). In Uganda, 35% of pregnant women were prepared for birth and its complication (Kabakyenga, Östergren, Turyakira, & Pettersson, 2011).

Additionally, further research in some parts of Ethiopia indicated that only 22% of pregnant women in Adigrat town (Hiluf and Fantahun, 2008) and 17% of pregnant women in Aleta Wondo of the southern region (Hailu et al, 2011) were prepared for
birth and its complication. Studies in Nepal have identified that the mother’s consciousness and active participation in neonatal and child health are imperative (Sharma, Malla, & Thapa, et al., 2011; Upreti, Thapa, Pradhan, Shakya et al., 2011). A study by Nawal and Goli, (2013) in Nepal found that the proportion of women with no birth preparedness in rural areas is 40% higher compared to urban areas. The study also reported poor BP among the women under 20 years and those above 40 years. In terms of educational level, the proportions of women who do not have any BP among the non-educated were 77%, nearly three times greater compared to women who were educated. Hailu et al. (2011) in a community-based cross-sectional study in Southern Ethiopia reported that only 17% of pregnant women were considered as well prepared for birth and its complications. However, the less-prepared pregnant women compared to the well prepared pregnant women tended to be illiterates, live in rural area and did not avail themselves of antenatal care services during their current pregnancy. In Central Ethiopia, it was identified that only 16.5% of the respondents were prepared for birth and its complications (Kaso & Addisse, 2014). Another study in Northern Ethiopian found that only 22% of the respondents were prepared for birth and its complications (Hiluf & Fantahun, 2008). In Tanzania, 58.2% of the respondents were considered as prepared for birth and its complications (Bintabara, Mohamed, Mghamba, Wasswa, & Mpembeni, 2015).

Contrary to these low preparedness in these studies, Karkee, Lee and Khanal, (2015), reported high BP among pregnant women in Nepal. Evidence from Nepal, Burkina Faso and India indicates that BPCR increases preventive behaviours and knowledge of mothers about danger-signs which generally brings improvement in care-seeking at times of obstetric emergency.
However, a study in Northern Ghana among postpartum women indicated 23% of the respondents met or followed the steps of BPCR plan (Kuganab-Lem, Dogudugu & Kanton, 2014). In that study, 58% of the respondents sought prenatal care during the first trimester of pregnancy while 1.5% did not seek prenatal care in the entire duration of the pregnancy and home deliveries formed 63.25%. Factors such as the number of deliveries, wealth index, the level of education, marital status, the number of ANC visits and knowledge of danger signs according to Kuganab-Lem et al. (2014) influenced BPCR. Furthermore, age and socio-economic status of respondents in the study were significantly associated with the use of skilled delivery services.

Factors contributing to delay in receiving skilled obstetric care include inadequate advance planning to access care from skilled birth attendant for normal delivery and poor preparation for rapid action in times of obstetric complications. In many societies in the world, cultural beliefs and lack of awareness inhibit preparation in advance for delivery of the expected baby. Since no action is taken prior to the delivery, the family tries to act only when labour begins. However, the majority of pregnant women and their families do not know how to recognize the danger signs of complications. When complications occur, the unprepared family will waste a great deal of time in recognizing the problem, getting organized, getting money, finding transport and reaching the appropriate referral facility (Mushi, Mpembeni & Jahn, 2010). However, complications like severe haemorrhage, a little time is relevant to save life and for others hours and even days may be bearable, though the prognosis get worse as time passes (Agbodohu, 2013).

Preparation for birth and complication readiness is part of the many programmes that aim to improve maternal health (JHPIEGO, 2004). Identifying where the woman would go in an emergency and issues of transport and costs, as well as considering
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moving closer to care if ‘living far’ from a facility are included in the IMPAC manual ‘Pregnancy, Childbirth, Postpartum and Newborn Care’: A guide for essential practice’ to addressed in ANC (WHO, UNFPA, UNICEF, The World Bank, 2006). However, Greater assistance is required to identify women who should be strongly advised to move closer to care prior to labour and identifying the most suitable facility to attend in the event of an emergency, knowing that it may not be the closest health facility.

The findings of Skinner and Rathavy, (2009) in Cambodia suggests that discussions involving the preparation for birth should include communities support groups that support pregnant women and not just the pregnant women alone. This enhances the education, motivation, cohesion, and mobilization of pregnant women, families, and communities through community participatory approaches in BPCR. This approach was evaluated in Kampong Chang, Cambodia and found that community engagement was a feasible and cost effective way to introduce birth preparedness. The project increased referrals to the hospital by 281% (Skinner & Rathavy, 2009).

The Home Based Life Savings Skills (HBLSS) training programme devised by the American College of Nurse Midwives is another well-evaluated example of a BP intervention which is aimed at increasing access to basic life-saving measures within the home and community and decrease delays in reaching referral facilities where life-threatening problems can be managed (Gisore et al., 2013; Lori, Amable, Mertz & Moriarty, 2012). The programme also took into account the social context of childbirth, focusing on the pregnant woman, her family, caregivers, and the home birth attendant as a team. This programme was evaluated in Uttar Pradesh, India and it was revealed that role-plays and demonstrations lead to knowledge and skill retention for recognising and controlling maternal bleeding and new-born sepsis (Gogia & Sachdev, 2016). The evaluation of this programme yielded the same results in Oromia region of Ethiopia
(Gisore et al., 2013). Despite the great potential of BPCR in reducing maternal and newborn deaths, its status is not well known in most parts of Sub-Saharan Africa (Lassi, Haider, & Bhutta, 2010).

2.2.3 Influence of Socio-demographic Characteristics on Birth Preparedness (BP)

Birth preparedness and complication readiness (BPCR) is generally low among women in low-income countries. It is therefore important to understand and know the socio-demographic characteristics that influence the preparedness of women during and after pregnancy. The literature on BPCR has delineated a number of demographic variables that generally influence women's readiness. Some of these are education, economic/occupational status, marital status, closeness to a health facility, number of births, maternal age, ethnicity, religion and support from spouse among others.

Education: Existing literature suggests that the level of education of mothers plays a significant role on the level of BPCR among women. Generally, women who were educated were found to be more prepared as compared to women who had no education (Debelew, Afework, & Yalew, 2014; Hiluf & Fantahun, 2008; Kaso & Addisse, 2014). For instance, a study by Hiluf and Fantahun, (2008) in Adigrat Town Ethiopia found that women who were literate had higher BPCR as compared to women who were not literate. In a similar vein, Markos and Bogale (2014) found that women who had education in terms of primary, secondary and higher level education were more prepared for birth as compared to women who did not have that level of education. In another study, Debelew Afework, and Yalew (2014) also found that education up to at least primary level accounted for higher BP as compared to those who had no education at all. Kaso and Addisse’s (2014) study on BPCR among women in Robe Woreda, Arsi Zone and Oromia Region in Central Ethiopia discovered that women who had at least secondary education were ten (10) more likely to be prepared as compared to women
who had no education. Bintabara, Mohamed, Mghamba, Wasswa, and Mpembeni, (2015) also found in their study among Tanzanian women who had recently given birth that those who had primary education or better were twice more likely to be prepared for birth as compared to women who did not have education at all. However, Ekabua et al. (2011) indicated that maternal education was the best predictor of awareness of BP but not a good predictor of intention to attend antenatal services. Furthermore, studies conducted in Bangladesh, Cambodia, Cameroon, Nepal, Peru, Senegal and Uganda identified strong predictors of ANC initiation and higher frequency of four or more visits as largely based on woman’s education and level of wealth (Saad–Haddad et al., 2016).

These studies, therefore, highlight the fact that higher level of education was associated with BP among women as compared to women with no education. This suggests that there is the need to improve access to education among girls as this affects their preparation for birth in the future.

**Economic/Occupational status:** Studies also suggest that one’s economic status affects the extent to which one will be prepared for birth and its complication; that is, the higher a woman’s level of income the more prepared the woman will be for birth and its complication. Bintabara et al., (2015) found that women whose spouses were employed were twice more likely to be prepared for birth and its complication as compared to women whose spouses were not employed. Kaso and Addisse (2014) also found in Central Ethiopia that women whose incomes were more than 711 birrs were twice more likely to be prepared for birth and its complications as compared to those who earn less. Neupane and Doku (2013) also found that the use of skilled delivery service at birth is influenced by one’s level of wealth. Thus, women with high incomes used skilled delivery service as compared to women whose source of income are very low. In the
Sisala East District of Ghana, wealth also accounted for BP among postpartum women (Kuganab-Lem et al., 2014). The study found that BP was higher among women with a high source of income as compared to women with a low source of income. This shows that poverty is one of the reasons that account for low BP among women.

**Number of births:** Another factor that plays a key role in BP is the number of births experienced by the pregnant woman. In a study in Southern Ethiopia, findings revealed that women who were pregnant for the first time were more prepared for birth as compared to women who had given birth before (Hailu, Gebremariam, Alemseged, & Deribe, 2011). This was attributed to the perceived risks associated with giving birth for the first time. This finding supported the study of Kuganab-Lem, Dogudugu, and Kanton (2014) who found that women giving birth for the first time in the Sisala East were more prepared as compared to women who had several deliveries. Neupane and Doku (2013) also found that birth parity influenced the level of preparedness of pregnant women. The study emphasised that women who had parity between 2 and 4 were more likely to be prepared for birth as compared to women who have not had such deliveries.

**Maternal Age:** A woman’s age also plays an important role in BPCR (Kuganab-Lem, Dogudugu & Kanton (2014). Age is highly correlated with parity (number of pregnancies) and, in some settings, with educational level (Hagos et al., 2014; Sharma, 2014). The age of a mother may serve as an indirect means for her accrued knowledge in health care services, which would have an influence on BP. Women of high age were more likely to carry out BP plans than younger women (Shahabuddin, Delvaux, Abouchadi, Sarker & De Brouwere, 2015). In a study conducted in Jamaica, teenagers were more likely not to attend antenatal care or to attend it later, when compared to women in their twenties. Babalola and Fatusi, (2009) found that in Nigeria, women in the middle childbearing ages were more likely to prepare for birth than women in early
and late childbearing age. Thus being of older age at marriage is positively associated with BP. One study in rural India also reported that BP was higher among women married at 19 or older compared to those married at less than 19 years (Singh et al., 2012). Early marriage or child marriage is practiced more often in Africa and Southern Asia. In these areas, a higher percentage of young girls is married to men in advanced age, at times as early as 9 or 10 years of age, based on cultural beliefs and religion (Babalola & Fatusi, 2009). The girls may be restricted from birth preparedness because of fear or need for permission from a spouse or in-laws.

**Place of Residence:** Another factor that has been found to influence BP and its complication is the place of residence of the women. Extant literature in this area suggests that women’s levels of preparedness were influenced by whether they are urban, rural and their closeness to a health facility. A study by Dhakal, van Teijlingen, Raja, and Dhakal (2011) in Nepal showed that a distance of more than one hour to the maternity hospital was statistically associated with an increased risk of home delivery. A study by Hailu et al. (2011) revealed that women who lived in urban areas were more prepared for birth as compared to those who lived in rural areas. Similarly, Markos and Bogale (2014) discovered that women resident in urban areas were twice more likely to be prepared for birth and its complication as compared to women who lived in rural areas. These findings imply that urban resident women tend to be more prepared for birth as against their counterparts in rural settings. This may be due to factors related to education as well access to health facilities.

**Ethnicity and Religion:** Ethnicity and religion are often considered markers of cultural background and are thought to influence beliefs, norms, and values in relation to childbirth, service use, and women's status (Hagos et al., 2014). Ethnic identity may also be associated with health beliefs that influence whether care is sought and whether that
care is traditional or biomedical (Sharma, 2014). In a study conducted in Nigeria, it was determined that ethnicity seemed to make no significant difference in the use of some of the components of BP (antenatal care) (Babalola & Fatusi, 2009). However, it made a significant difference in others (use of skilled assistance and post-natal care) (Babalola & Fatusi, 2009). In the same study, it was found that the level of BP was significantly higher among the Igbos (in the south) and the minority tribe compared to the Hausas (in the north). This result reflects the influence of the cultural and religious beliefs in the north. The Islamic religion may have had a strong influence on the cultural beliefs and traditions on childbirth of the Hausas in the north (Babalola & Fatusi, 2009).

**Marital Status:** The status of women within childbearing age has been found to be a predictor of BP among women. In general, women who are married tend to be more prepared as compared to women who are single. The findings of Singh et al. (2012) study in India indicated that married women were more ready in preparing for birth than women who are not married. Also, in Hiluf and Fantahun's (2008) study in North Ethiopia, married women were more prepared for birth as compared to women who were single. This may be due to the fact that married women get support from their spouses since some studies have shown that the employment of spouses played a critical role in the preparedness of women for birth (Debelew et al., 2014). Debelew et al., (2014) further stated that it could also be because married women may have wanted and planned pregnancies which enable them to demand better service and get prepared. Another explanation could be that those who are not married may not want to be known as pregnant especially where the culture frowns on having a pregnancy without being married.
2.2.4 Attitudes of Pregnant Women towards BP

A study in Bangladesh indicated husbands and mothers-in-law were usually the decision makers towards birth preparedness and some women also found the idea of birth preparedness e.g. ANC to be shameful, especially if they felt they would be examined by a male worker (Syed, Khadka, Khan, & Wall, 2008). August et al., (2015) stated that several hindrances to BP in Tanzania have been attributed to the distance between residential areas to where the health facilities have been situated. There is also the issue of poverty among pregnant women, especially among rural folks. Other related issues are; traditional beliefs and stigmatization against single mothers and unmarried women. In a study conducted by Akpan-Nnah (2011) in Ikot Ekpene, Nigeria among pregnant women more than 50% of the women were reported as having negative attitude towards the benefits of the components of birth preparedness (ANC) and 43.3% had positive attitude towards it. Yang, Yoshitoku, Harun, and Junichi (2010) in Kham districts found that 61.9% of their study respondents had a negative attitude towards antenatal care. However, Rosalia & Muhammad, (2011) reported a good attitude level among women of the Orang Asli in Jrempel, Nigeria with 88.5% of the respondents reporting for early ANC booking. Also, a study by Ojong, Uga, and Chiotu (2015) in Calabar, Cross River State, Nigeria discovered that most pregnant women have favourable attitude towards birth preparedness.

Home birth remains a strong preference and often the only option, for many women in the low-income countries. Thus, a large proportion of these home deliveries takes place without professional attendants as a result of poverty and poor attitude of service providers (Agbodohu,2013; Choguya,2015). Provision of a health worker with midwifery skills at every birth is considered a crucial intervention for birth preparedness, yet the WHO estimates that 47% of births in low income countries are
assisted only by TBAs, family members, or no one due to poverty and access to skilled provider (WHO, 2012).

According to a study in Burkina Faso, contrary to the old norm and attitude of rural women giving birth in their homes, most women now resort to the use of health facilities for safe delivery and good healthcare of both mother and newborn (Moran et al., 2006). In this study, the women interviewed stated that they now resort to the use of health facilities because the health personnel there are more qualified and equipped to handle complications rather than the traditional birth attendants (TBA).

The study also revealed that even though these woman show an appreciable level of preparedness towards giving birth in health centres, the challenge has always been how to get to these health centres due to the long distances between their villages and the health centres as well as the poor roads they always have to commute before they could get to the health facility. With regard to transportations, even though these women are very much aware that they would need it at the point of labour to transport them to the health facility, very few of them actually made arrangement for a means of transport. They often assumed that when the time is due, a family member or a neighbour will make transport available for their use. As a result, these women attached little importance to planning for transportation in advance.

2.2.5 Influence of Socio-cultural Factors on Birth Preparedness (BP)

"Tradition" in its technical sense means truths or principles of a divine origin revealed or unveiled to mankind (Marty, 2004). Traditional knowledge or belief is defined as knowledge of local people and their everyday life. Traditional cultural practices reflected values and beliefs held by members of a community for periods often spanning generations. Every social group in the world has specific traditions, cultural practices, and beliefs. Some are based on religious beliefs and probing into religions
further will provide an understanding of a particular culture. Traditional culture plays a major role in the way a woman perceives and prepares for her birthing experience, which may positively or negatively affect the use of her BP plan in general and maternal health in particular (Greene, 2007).

Religious beliefs within the community may act as a barrier for seeking skilled care during childbirth (Yousuf, Ayalew, & Seid, 2011). Syed, Khadka, Khan, and Wall (2008) found that religious beliefs were a barrier to the use of BP components (ANC) in Bangladesh. Husbands and mothers-in-law were usually the decision makers towards BP and some women also found the idea of BP e.g. ANC to be shameful, especially if they felt they would be examined by a male worker. A similar study was done among Ethiopian Afar, where women stated during a focus group discussion that only God and their husband could see them naked (Yousuf et al., 2011). Religious beliefs can also be the main reason for delayed referral to health services and preference for home delivery negating the general idea of birth preparedness among women (Yousuf et al., 2011).

Pregnant women may prefer consultation with local spiritual heads, traditional birth attendants (TBAs) and traditional healers, over seeking care from qualified health providers. In rural Gambia, older menopausal women are seen as specialists on pregnancy and labour (Yousuf et al., 2011). When turn to during labour, they usually take the decision and that is accepted. For example, an older woman may advise a woman in labour to wait until the next Muslim praying time before seeking care since labour and childbirth take place at certain times and these times correspond with the Muslim praying times (Cham, Sundby & Vangen, 2009). Another example is a study among Ugandan women who felt embarrassed to give birth in a health facility because other members of the community would think they were not brave enough to give birth on their own (Okumu & Bbaale, 2016). In a study among the women of Benin, birth
represented a rare opportunity for a woman to demonstrate pride, courage, and bring honour to her and her husband’s families by her stoic demeanour (Raman, Nicholls, Ritchie, Razee & Shafiee, 2016). The woman who managed to deliver without indication that she was in labour and without calling for assistance until the child was born was especially respected (Raman, Nicholls, Ritchie, Razee & Shafiee, 2016).

Other harmful traditional practices that impact on BP include female genital mutilation (FGM), early marriage, early pregnancy, traditional birth practices such as pushing on the abdomen to hasten delivery and the use of certain surgical procedures (Sanjel, Ghimire & Pun, 2012; Kanu, Tang & Liu, 2014). There are, however, some traditional practices that are beneficial to the pregnant women, mothers, and babies (Donaldson, Kratzer, Okutoro-Ketter & Tung, 2010). For instance many cultures in Africa encouraged women to breastfeed their infants for over a year, thus encouraging the practice of birth spacing invariably doing BP (Kanu, Tang, & Liu, 2014).

Beckingham (2013) also identified the autonomy of women to be a factor which influences the uptake of skilled delivery services. He found that women in India find themselves in subordinate positions to men socially, economically and culturally. They are economically dependent on men. Women are largely excluded from making decisions, have limited access to and control over resources, are restricted in their mobility and are often under threat of violence from male relatives.

In Tanzania, a study by Mrisho et al., (2009), found ethnicity, the gender of the household head, maternal education level, maternal age at childbirth, socio-economic and quality of services status as significant independent factors in determining the choice of delivery place. The study also identified the sudden onset of labour or short labour as some factors that affect decisions towards selecting the delivery place. Selecting health facility for delivery was perceived to be more desirable for prolonged
labour. Some Studies from Ghana and India by Sato (2012) and Singh, Rai, Alagarajan, and Singh, (2012) respectively have also pointed out that the low BPCR was due to low levels of household income, high illiteracy, ignorance and a host of traditional factors. According to Finlayson and Downe (2013), in many societies in the world, cultural beliefs and lack of awareness inhibit preparation in advance for delivery and the expected baby. Since no action is taken prior to the delivery, the family tries to act only when labour begins.

2.2.6 Influence of Perceived Behavioural Control on Birth Preparedness (BP)

Pregnant women perceived ease or difficulty of preparing for childbirth can be attributed to several factors. The level of education of a woman according to Bitew, Awoke and Chekol (2016) enabled her to be prepared for birth and its complications compared with one who does not have formal education. Having many children may also limit women in terms of resources and make it difficult for an effective BP among pregnant women and serves as an important predisposing factor for preparation for childbirth (Kuganab-Lem et al., 2014). Women from large families also underutilize various health care services including BP because of too many demands not only on their time but also on their limited resources (Kawakatsu et al., 2014).

According to Kakaire, Kaye, and Osinde (2011) and Sikder et al. (2015), occupation is an indirect means for wealth and social status. The studies revealed that differences in BP by work-related groups illustrate that occupation is a predisposing factor. On the other hand, viewing occupation as an indirect means to income, enables one’s achievement of more and better preparation for childbirth. Women with secondary education and those in higher wealth quintiles were also more likely than other women to afford and acquire a number of the BP component tags (Sikder et al., 2015).
A woman's age, the number of pregnancies carried and marital status were factors that also play an important role in the BP process (Kuganab-Lem et al., 2014; Abor et al., 2011). Therefore, women who were pregnant for the first time, married and older were more motivated to prepare (Singh et al., 2012). Subsequently, the study further revealed that as a woman endured more pregnancies, she would rely on her experience and draw from that knowledge. In addition to that, Kabakyenga, Östergren, Turyakira, and Pettersson, (2011) in their study among postpartum women in rural Mbarara district, Uganda found that women who lived far away from facilities that render maternal health services were less likely to utilize those services. The time taken to reach a health facility is perceived to influence the use of trained birth attendance (Kabakyenga et al., 2011). In cases where the women made the final decision in consultation with their husbands, the perceived ease of opting for assistance by trained birth attendants was significantly higher than cases in which women made the decision alone on where to give birth. Public health facility and transport availability are largely perceived to influence the choice of institutional delivery (Nawal & Goli, 2013).

In a similar study by Hailu, Gebremariam, Alemseged, and Deribe (2011), a low level of transportation readiness was reported at 7.7% resulting in 87.9% of the respondents intending to deliver at home and only 8% planning to deliver at health facilities. Antenatal care attendance during pregnancy is perceived to enhance skilled delivery. A study by Tura, Afework, and Yalew, (2014) revealed that 30.6% used skilled care during delivery out of a total of 35.4% ANC visits. Traditional beliefs and practices among a number of societies are also perceived to influence health-seeking behaviours of pregnant women. Religious beliefs could be the main reasons for delayed health care and choice for non-facility delivery among women (Yousuf et al., 2011). Among the Ghanaian societies, early marriages, early pregnancies and traditional practices that
either facilitate or hinder delivery such as a push on the abdomen to accelerate delivery and certain surgical practices originate from traditional beliefs (Offor, 2010). However, Offor (2010) also stated that some traditional beliefs and practices like breastfeeding infants for over a year encourage the births spacing which is beneficial to both the pregnant mother and the unborn child. A study in Ethiopia among antenatal clients shows that knowledge of key danger signs of pregnancy, labour, delivery and postpartum were the key factors perceived to influence birth preparedness and complication readiness (Tiku, 2015). The study reported that about 56.3 % of the women were considered as prepared for birth and its complication. Thus, the pregnant woman's perception of the said factors can either positively or negatively influence her level of birth preparedness among others.

2.2.7 Behavioural Intentions of Pregnant Women towards Birth Preparedness (BP)

Major findings point to the fact that majority of pregnant women in Sub-Saharan Africa do not prepare adequately for delivery, despite the fact that general knowledge and counselling on BP are provided during ANC (Agbodohu, 2013). What could be the possible reason behind this? Are women really counselled on the need for BP during ANC? In view of this, some studies have found a low knowledge of BP among pregnant women (Hiluf & Fantahun, 2008; Markos & Bogale, 2014). Hiluf and colleagues further argued that most pregnant women do not know how to adequately prepare towards child delivery due to a low level of education and financial challenges.

Notwithstanding, a recent study in Tanzania identified several factors as being the possible ways of increasing BP among pregnant women and minimizing maternal mortality (August et al., 2015). These include availability of skilled attendance for pregnancy and childbirth, access to emergency obstetric care, the knowledge and use of family planning (Filippi et al., 2006). Other behavioural intentions of pregnant women
that propel their BP include individual counselling of pregnant women on BP from the first day of pregnancy till delivery, the ability of pregnant women and families to make appropriate decisions before and during labour in the event of obstetric complications, which will go a long way to determine the safety of the newborn and the mother (Agbodohu, 2013; Gabrysch & Campbell, 2009). Other factors enumerated by Bogale and Markos, (2015) are:

**Knowledge of danger signs:** Whether or not a pregnant woman or her relatives can identify a danger sign of pregnancy is key to BP. Where such dangers are identified, the probability of the woman rushing to a health facility for immediate attention is high. Whereas, where such knowledge is lacking, the reverse may be true.

**Identifying a mode of transport:** In most rural areas where access to transport to a health care facility is not immediately available, BP is seen to be poor. Especially in the event where the pregnant woman experiences force or premature labour. Unfortunately, in most cases, pregnant women do not have an identifiable mode of transport until the day of labour. In situations where there is a readily available mode of transport to the health facilities, BP tends to be high.

**Saving enough money towards delivery:** In Tanzania, it was found that pregnant women who visited the health facilities for deliveries were required to bring certain items such as consultation fees, drugs, and gloves (August et al., 2015). It was further established that women who had saved enough towards the provision of these items happened to be women who were highly prepared for birth. On the other, where there are no savings made towards delivery, BP tend to be low.

**Identifying where to go in case of complications:** Some pregnant women do not attend ANC throughout their pregnancy period and so do not know where to turn to in times of
complications. However, those who frequently visit the health care centres do not find this as a challenge as they are aware of what to expect in the course of their pregnancies and where and when to rush to a health centre in times of complications.

**Identifying a blood donor:** It is the duty of every pregnant woman and her family to identify a potential blood donor in anticipation of the need for blood transfusion in case the need arises (WHO, 2014). BP tends to be high where a blood donor is identified and readily available in anticipation of the need for blood transfusion. Where such donors are not identified and prepared before hand, birth preparedness tends to be low.

### 2.2.8 Predictors of Birth Preparedness among Pregnant Women

Birth preparedness and complication readiness (BPCR) is generally low among women in low-resource countries. It is, therefore, necessary to understand and know the factors or predictors that influence the preparedness of women during and after pregnancy. The literature on BPCR has outlined a number of variables that generally predict women's readiness. Some of these include the use of antenatal care services, knowledge of danger signs among others.

**Use of antenatal service:** In order for awareness of BPCR to result in improved access to skilled attendance, Ekabua et al. (2011) stated that there has to be an action plan and service use. The type of action plan undertaken by women in preparation for childbirth as reported by their study will depend on right intention and appropriate behaviour. The study showed that intention and plan to use maternity services were positively correlated.

The use of antenatal services has been found to be a predictor of BPRC among women of childbearing age (Hailu, Gebremariam, Alemseged, & Deribe, 2011; Kaso & Addisse, 2014; Kuganab-Lem, Dogudugu & Kanton, 2014). Availability of antenatal
services was found to be a predictor of BPCR in a study of pregnant women in Southern Ethiopia (Hailu, Gebremariam, Alemseged, & Deribe, 2011). Those who were well prepared for birth had the antenatal services available around them as compared to those who had no antenatal service.

Visits to antenatal care were also found to be one of the factors that influence BP among women within childbearing ages. The WHO (2007) stipulates that pregnant women should visit antenatal care service four (4) times during pregnancy. However, Ekabua et al. (2011) indicated that plan to attend at least four ANC visits with a skilled provider were not good predictors of intention and BP. Debelew et al. (2014) findings however revealed that women who frequently visited health facilities were more prepared for birth as compared to those who did not frequently visit health facilities during pregnancy. Similarly, Bintabara et al. (2015) found that women who had antenatal care visit four or more times were more prepared for birth and its complication as compared to women whose visit to antenatal care was less. A study in Central Ethiopia suggests that women who frequently visited health facilities for antenatal care services were more prepared as compared to women who did not frequently use antenatal care services (Kaso & Addisse, 2014). In another dimension, Dhakal et al., (2011) found that women who attend ANC are more likely to deliver in a hospital. Another study in Oromia Region Ethiopia also found that antenatal follow-ups were key predictors of BP (Markos & Bogale, 2014). Women who had follow-ups from antenatal care were found more prepared for delivery as against women who did not attend antenatal care follow ups. Hiluf and Fantahun (2008) added that women who had education during antenatal follow-ups were more prepared for birth as compared to those who did not have these follow ups. This means that it is not enough to have antenatal follow but education during these follow-ups is very important in BP.
Booking for antenatal care was also found to be a predictor of BP. A study in the Chamwino District of Tanzania by Bintabara et al. (2015) found that women who had booked for antenatal care were more prepared for birth and its complication as compared to women who had not booked for antenatal care. Additionally, the study found out that the period of booking for antenatal care during pregnancy was linked to BP. Pregnant women who booked for antenatal services during their first trimester were more likely to be prepared as compared to women who booked after the first trimester. BPCR was found to be twice better in women who booked during the first trimester as compared to women who booked after the first trimester (Bintabara et al., 2015). This predictor shows that availability of antenatal service, the number of visits to antenatal care as well as the period for visit during pregnancy played a key role in the level of preparedness for birth and its complication.

**Knowledge of obstetric danger signs:** Another predictor that has been found to play a significant role in predicting preparedness for birth is knowledge of the danger signs of birth. The study findings in the Oromia Region of Ethiopia revealed that the knowledge of the key danger signs at the period of pregnancy and postpartum explained preparedness of women for birth (Bogale & Markos, 2015; Markos & Bogale, 2014). The study indicated that women who had no knowledge of the danger signs were not prepared while those who had knowledge of the danger signs were prepared. Kuganab-Lem et al., (2014) also found in the Sissala East District of Ghana that knowledge of danger signs was a key predictor in the preparedness of birth control and birth among postpartum women. Thus, women who had knowledge of the signs were more prepared as compared to those who did not have.

However, the extent to which knowledge of the obstetric danger signs affect the level of readiness and preparedness of women have differed across studies. In the
Oromia Region of Central Ethiopia, Kaso and Addisse (2014) reported that mothers who had knowledge of the obstetric danger signs were three times more likely to prepare as compared to mothers who do not have the knowledge of obstetric danger signs. In the Chamwino District of Tanzania, Bintabara et al., (2015) also discovered that women who had knowledge of the danger signs were four times more likely to prepare as compared to mothers who do not have knowledge of key danger signs. Furthermore, Debelew et al. (2014) also found that women who had knowledge of danger signs were more ready for birth as compared to women who did not have such knowledge in Jimma Zone, Southwest Ethiopia.

From the reviewed literature, most of the above studies conducted were purely qualitative in nature. Although a qualitative study explores the reasons behind individuals’ actions, it fails to account for the statistical significance between the sample(s) used. Therefore, the above studies did not account for the statistical significance of the sample studied.

Ghana, like other low-resource countries, has a high maternal mortality rate. The literature shows that BPCR is one of the strategic services that have a prospect to influence on the high maternal mortality. In many low resource countries, the high patronage for antenatal care services could be used as an entry point for providing vital BP information such as obstetric care and planning for deliveries. More rigorous examinations of BPCR are therefore desired in order to identify specific problems and develop strategies to improve and reduce maternal death.

The uniqueness of this study is based on the use of the TPB to examine factors influencing birth preparedness in OSM. This theory predicts behaviour on the basis of certain situational and precipitating factors among which are personality, religious commitment, ethnic background, cultural norms/values, the level of education, belief
system and others. The overview of related studies across the globe, and especially in Ghana, identifies some studies exploring the influence of education and cultural norms in predicting women's preparation for birth. Other related studies explored the socioeconomic background, available transport systems, and others in predicting preparation for birth. It is worth stating that studies on attitudes, subjective norms, perceived behavioural control and behavioural intention in predicting BPCR is limited. In the same vein, most studies conducted used a qualitative approach failing to consider the statistical significance and generalizability of findings. Also, most of the studies did not use theories to justify the understanding of these factors influencing birth preparedness among pregnant women. Thus, there is a gap in the literature, which serves as the impetus for the current study.

The current study, therefore, proposes to study women's preparedness for birth and readiness for complications from the quantitative perspective and also, exploring the possible factors that predict BP using the constructs of the theory of planned behaviour (TPB).
CHAPTER THREE

METHODS

This section describes how the research problem was investigated and why particular design and techniques were used. It also describes the setting in which the study was conducted. The chapter also describes sample size determination, sampling technique, tool for data collection, data collection procedure, data processing and analysis, validity and reliability, and ethical issues in the study.

3.1 Study Design

This study used a quantitative approach. The quantitative approach was chosen based on the belief that there can be an objective study of human phenomena (Parahoo, 2014). According to Babbie, (2015), quantitative research uses a fixed design that organizes in advance the research questions and a detailed method of data collection and analysis.

A cross-sectional study design was used. This design enabled the researcher to obtain a snapshot description of the status and relationships of pregnant women on BP within the period of the study (Polit & Beck, 2013). A cross-sectional study design was also economical and relatively manageable (Babbie, 2015), and also allowed for the collection of original data sufficient enough for generalization to the population of interest (Babbie, 2015; Parahoo, 2014; Polit & Beck, 2013).

3.2 Research Setting

Empirical research was conducted in the Offinso South Municipal (OSM). The OSM is one of the new municipalities created in Ashanti Region in 2007. The municipality lies at latitude 7°15N and 6°95S and longitude 1°35E and 1°50W. To the West of this municipality is the Ahafo Ano South Districts and Atwima Nwabiagya,
East and South is the Afigya-Kwabre, North is the Offinso North District. The municipal capital is New Offinso, which comprises about 22 suburbs. The municipality has a total land area of about 600km. The main Tamale - Kumasi road passes through the municipality. It is endowed with a good number of social amenities such as schools, markets, churches, mosques, among others.

The municipality has a total population of about 87,852, with a growth rate of 2.7% (GSS, 2010). About 72% of the population is rural. It has 82 communities and hamlets with the majority of the populace engaged in farming and trading. The municipality has five (5) sub-municipals within which health services are organized. There are three clinics, four health centres and one fully established municipal hospital making a total of 8 health institutions delivering healthcare services to the people. In addition, there are three (3) functional Community Health Planning Services (CHPS) compounds and 30 CHPS zones with their respective Community Health Officers (CHOs) assigned to render health services. There are also 76 trained Traditional Birth Attendants (TBAs) and 61 Community–Based Surveillance Volunteers (CBSVs) who support healthcare delivery in the municipality.

The municipality has a total fertility rate of 4.0 and a general fertility rate of 116.7 births per 1,000 women aged 15-49 years. However, the crude birth rate (CBR) is 28.9 per 1,000 population and crude death rate (CDR) stands at 5.9 per 1,000. Accident, violence, homicide, and suicide accounts for 11.6% of all deaths while other causes constitute 88.4 percent of the deaths (OSMP, 2010). The municipal marital status statistics for the entire population stands at about 37% for married individuals aged 12 years and older, 42.8% have never married, 10.9% are in consensual unions, 5% are widowed, 3.2% are divorced and 1.4% are separated (OSMP, 2010). According to the 2016 Offinso South Municipal Health Directorate Annual Report (OSMHD Annual
Report, 2016) common maternal health problems in the municipality include high maternal and neonatal morbidities/mortalities due largely to haemorrhage/DIC, sepsis, anaemia and hypertensive crisis, late reporting for antenatal care, teenage pregnancies, and delay referrals of pregnant women to the municipal hospital for delivery by clinics/health centres. The performance in maternal health indicators were maternal mortalities 109 per 100,000 live births; neonatal mortalities 1.8%; contraceptive/receptor uptake 32%; and skilled delivery rates 156% (OSMHD Annual Report, 2016).

According to the municipal profile (2010) Christians made up of Catholics (13.3%), Protestants (12.3%), Pentecostals/charismatics (17.6%) and other Christians (18.3%) constitute 61.5% of the population. This is followed by Islam (27.0%), and those with unidentified religion (8.2%) whilst the traditionalists formed 2.7% of the population (OSMP, 2010). However, a culture which also plays an important role in shaping the lives of people, including their beliefs, attitudes, and behaviour is dominant of Asante's traditional practices in the municipality. Cultural practices displayed by the native people are easily seen in the use of the kente cloth as traditional dress code, adowa and kete as popular dances and fufuo as the most staple food. The main language is the Asante Twi, which is widely spoken by both indigenes and other ethnic groups within the municipality. These groups, consisting mostly of Gurunshi, Dagaaba, Kusasi, Mossi and Dagomba from Northern Ghana and Ewes from Volta, however, have their own cultures and traditions and practice them together with the indigenous Asante's culture and tradition. The population is diverse in terms of religious affiliations. Though Christianity dominates, there are other religions like Islam, whose followers constitutes more than a quarter of the total population. Fetishism is also commonly practiced as a form of traditional religion. Funerals provide the most common podium for the display of culture. However, Offinso has one key festival - the Mmoaninko Festival. When
approved by the Paramount Chief and his sub-chiefs/elders, the festival is celebrated by
the people and chiefs of the traditional area to remember their ancestors and also bring
home citizens from far and near.

Literacy and education are two inseparable factors which influence the social
outlook of the population in terms of the appreciation and understanding of issues
affecting them. Education and literacy bring enlightenment and transformation resulting
in human resource development. About 70.4% of the population in the municipality are
literate in both English and Ghanaian Language (OSMP, 2010). The profile however
shows that only 18% of the entire population in the municipality can read and write in
English despite the fact that English is a lingua franca in Ghana.

Poverty is quite endemic and categorized in the municipality. The average
annual household income in the municipality is estimated at GH¢126.52 with the
municipal poverty estimated at 20% of the population. This means that 20% of the
population earn below GH¢126.52 a year, making it difficult for them to meet their
basic needs including health (OSMP, 2010).

3.3 Study Population

The municipal health services as noted earlier is organized around the five sub-
municipalities; Bonsua, Abofour, OffinsoCentral, Anyinasuso, and Kwagyekrom. The
study was conducted in the five sub-municipalities’ hospital/clinics/health centres
antenatal clinics using the projected expected pregnancies target for the year 2015. This
was done to ensure a good representation of both rural and urban settings in the study.
However, the study was limited to these areas because of proximity and limited
resources to the researcher.

The study population was made up of women who were pregnant and were
attending antenatal clinics in the various sub-municipalities and were within the last
trimester of their pregnancies. This is because they would have put in place all the measures required for childbirth and could readily recall. These pregnant women constituted the study population irrespective of parity, age, educational and economic status.

### 3.4 Sample Size Determination

The Offinso South Municipal Health Directorate (OSMHD) has a projected expected pregnancies target of 3,514 (OSMHD, 2015). Using the projected expected pregnancies target as the accessible population and an alpha level of 0.05, the sample size was calculated using Yamane's (1967) simplified sample size formula below;

\[
n = \frac{N}{1 + N \cdot e^2}
\]

Where:

- \( n \) = required sample size
- \( N \) = Accessible population
- \( e \) = alpha level or significance level

Thus;

\[
n = \frac{3,514}{1 + 3,514(0.05)^2} = 359.
\]

The sample size calculated was 359. However, a 10% upward adjustment (i.e. 36) was made to cater for non-response. Thus, the final sample size was 395 respondents.

### 3.5 Sampling Technique

Sampling is the investigation of a part of the whole population to draw conclusion that may be generalized to the whole population in which the sample was
drawn (Leedy & Ormrod, 2005). There are many types of sampling techniques that can be used in quantitative studies.

For this study, a multistage sampling technique was used. As noted earlier the municipality has five sub-municipalities and these served as the research outlets points. The total sample size of 395 was divided equally among the five sub-municipalities. This gave an average of 79 respondents per sub-municipality. Then each of the sub-municipality was visited.

The researcher used a simple random sampling method for selecting individual pregnant women within the last trimester. All the antenatal clinics maintained current registers, which had the names and registration numbers of the pregnant women who attended the clinics to receive antenatal care services. The register for each of the sub-municipality was obtained and all the pregnant women within the last trimester listed and given numbers. Using this information, an electronic or computer-based number generator was then used to randomly select the required number of respondents for each sub-municipality.

Following this section, the researcher and his assistants then visited the sub-municipalities and administered the questionnaire to the randomly selected pregnant women individually on the days that such women attended the antenatal clinics. Before administering the questionnaire, the sampling procedures and purpose of the study were thoroughly explained to each of the selected pregnant woman. However, where a randomly selected woman was unable to take part in the study, the selection procedure was repeated to get a replacement.
3.6 Inclusion Criteria

The inclusion criteria were aged 18 years and above pregnant women and within the last trimester of their pregnancies who are attending antenatal clinics.

3.7 Exclusion Criteria

Pregnant women within the last trimester of their pregnancies and attending antenatal clinics but had complications such as antepartum and pre-eclampsia were excluded from the study.

3.8 Data Collection Tool

A standardized questionnaire was adopted from the TPB questionnaire for use as the main data collection tool. Babbie (2015) contends that questionnaires are the best possible means of data collection in survey designs. The questionnaire that was adopted for this study was developed based on the constructs of the TPB but were modified to measure the use of social networking among college students by Cameron (2010). In Cameron’s work, constructs of Ajzen’s TPB were modified to suit his work, which yielded the planned behaviour (PB) questionnaire. However, in the context of the current study, the PB questionnaire as modified by Cameron was adopted and further modified to suit the study. The key features of this adoption and modification included re-wording and replacement of some of the items/wordings of the questionnaire to reflect the focus of the current study (e.g. social networking for birth preparedness).

The questionnaire had four sections: Section (A) - the socio-demographic information, Section B – birth preparedness motivational factors, Section C – predictors of birth preparedness (attitudes, subjective norm, perceived behavioural control and behavioural intention) and Section D – birth preparedness (behaviour).
The first section (A) of the questionnaire was made up of eleven (11) socio-demographic items. The sections: B C and D items were measured on a 10-point scale, ranging from low (1) to high (10). There were nine (9) items for the birth preparedness motivational factors, twenty (20) items on predictors of birth preparedness and five (5) items on birth preparedness (behaviour). The scores obtained from interviews were then categorized to indicate the level of birth preparedness among pregnant women.

3.9 Data Collection Procedure

After ethical approval from the Institutional Review Board (IRB) of Noguchi Memorial Institute at the University of Ghana (Protocol number (040/16-17), the researcher also obtained an introductory letter from the School of Nursing to the management of the OSMHD to seek permission to conduct the study. Also, a copy of the research questionnaire was sent to each of the sub-municipalities for the staff to know what the researcher was doing as well as seek their support and assistance to conduct the study.

Five research assistants (one in each sub-municipality) were trained to help the researcher in data collection. The researcher and his assistants went to each sub-municipality; explained the purpose/significance of the study to each selected respondent and the time required to administer the questionnaire. In addition, respondents who met the inclusion criteria and agreed to participate in the study were individually given a voluntary consent form to sign or thumbprint, indicating that she was not coerced to take part in the study.

3.10 Data Management

Obtained data from the survey were kept under lock and key and only the researcher and his supervisors had access to the raw data. The researcher also used
storage devices such as pen drives, files and a personal computer which are password protected to store the data. The anonymity of respondents was ensured by assigning codes. Names and personal descriptive data were also omitted to ensure anonymity and confidentiality.

3.11 Data analysis

According to Parahoo (2014), data analysis is an integral part of the research design, and it is a means of making sense of data and presenting them in an understandable manner. In this study, the data analysis process involved several stages. Data collected were coded, entered, cleaned and analysed using the Statistical Package for Social Science (SPSS) version 21 software. The researcher employed descriptive statistics, correlation, regression and mediation tests to answer the research questions. The descriptive statistics were presented in tables, means, mode, standard deviations, frequencies and percentages for the socio-demographic characteristics.

Data were further analysed using Pearson (r) parametric test to find the correlations between attitude, subjective norms, perceived behavioural control and behavioural intention on birth preparedness. Multiple linear regression was used to test for the relationship between behavioural intentions and BP. Furthermore, the relationships between the study variables and BP were also tested using multiple linear regression analysis. The indirect relationship (mediating effect) of behavioural intention on BP was also tested for by mediation analysis. These relationships were tested at 95% confidence level and p – values less than 0.05 were deemed statistically significant.

Before the correlation, regression and mediation analysis however, the total mean score for Attitude, Subjective Norms, Perceived Behavioural Control, Behavioural Intentions and Behaviour (i.e. Birth Preparedness) – which were measured during the data collection - were determined as follows.
The items on ‘Attitudes’ were recorded on a unipolar scale of 1 to 10 so that higher score represents high/positive attitudes towards birth preparedness. The overall attitude score was obtained by multiplying the number of items by 10 or summing up the items scale resulting in the total attitude mean score (50). A median split of the maximum attitudes score was calculated and a total mean score of 25 and above was taken to indicate high/positive attitudes toward birth preparedness while a total mean of score below 25 represented low/negative attitudes towards birth preparedness. This approach was based on experiences from literature.

The items measuring ‘Subjective Norms’ were also recorded on a unipolar scale 1 to 10 so that higher score depicts greater social pressure to perform birth preparedness. The overall subjective norm score, and the total subjective norms mean score were calculated using the same procedure as indicated for ‘Attitude’. A median split of the maximum score was calculated and a total mean score of 25 and above represented high/positive subjective norms towards birth preparedness and a score below 25 indicated low/negative subjective norms towards birth preparedness. This approach was also based on experiences from literature.

‘Perceived behavioural control’ items were also recorded on a unipolar scale 1 to 10. Higher scores denoted greater amount of control or perceived ease towards birth preparedness. The overall perceived behavioural control score and the total mean score for perceived behavioural control were similarly calculated as indicated above. A median split of the maximum score was calculated and an overall perceived behavioural control total mean score of 25 and above was taken to indicate high perceived behavioural control and a score below 25 represented low perceived behavioural control over the performance of birth preparedness.
The ‘Behavioural intentions’ items were also recorded on a unipolar scale 1 to 10 with higher scores representing high/readiness to do birth preparedness. The overall behavioural intention score and the total mean score for behavioural intention were calculated using the procedures described earlier for Attitudes. A median split of the maximum score was calculated and an overall behavioural intention total mean score determined. A total behavioural intentions mean score of 25 and above represented high/positive behavioural intentions and a score below 25 indicated low/negative behavioural intentions towards birth preparedness.

Finally, ‘Behaviour’ (i.e. birth preparedness) items were equally recorded on a unipolar scale of 1 to 10. The higher scores represented high/good birth preparedness. The overall birth preparedness score and total mean score were determined following the procedures already described above. A median split of the maximum birth preparedness score was calculated and a total mean score of 25 and above depicted high/good birth preparedness while a score below 25 represented low/poor birth preparedness.

3.12 Validity and Reliability

The extent to which an instrument measures what it is planned or purposed to measure according to Polit and Beck (2013) is a questionnaire validity. Parahoo (2014) stated that the most frequent issues reported on literature about validity are the content validity and face validity. Reliability of a questionnaire denotes that quality of measurement method that suggests that the same information would have been collected each time in repeated observations of the same phenomenon (Babbie, 2015).

The original instrument that was adopted for this study is one that has been widely used for similar studies in healthcare settings and therefore is considered valid.
and reliable (Abualrub & Alghamdi, 2012). The standard instrument that was modified and adopted for this study was developed based on the TPB constructs and was used to study social networking among college students (Cameron, 2010). Hence it is deemed valid and reliable with an alpha coefficient of 0.80 cronbach’s report, which is within the acceptable level for adaptation. However, this study reported an alpha coefficient of 0.97.

To enhance validity, the researcher thoroughly conceptualized the constructs of the study to ensure full capturing of the content domain. Also, the researcher conducted extensive literature review since the adopted questionnaire was made up of sections that covered all the variables of the TPB for investigation. A pre-test of the research instrument was carried out in Afigya-Kwabre District on ten (10) pregnant women to identify and modify areas of misunderstanding in the instrument as well as helped forestall cultural and settings differences.

3.13 Ethical Considerations

Babbie (2015) states that ethics is mostly associated with morality and deals with issues of right and wrong among groups, society or communities. It is therefore important that everyone who is engaged in research should be aware of ethical concerns related to the research. The researcher endeavoured to follow sound ethical principles in this study. Opoku (2000) and Polit and Beck (2013) identified the basic ethical consideration for research as: participants being fully informed about the aims, methods, and benefits of the research, granting voluntary consent and maintaining the right of withdrawal. Babbie (2015) also highlighted the importance of ensuring anonymity of the participants and the protection against any physical or psychological harm.

In this study, an informed consent of the respondents was sought and in the consent form, general information about the research, possible risks/discomforts and
possible benefits of the study were clearly stated and explained to the prospective respondents. The respondents were given the free will to decide whether to take part in the study or not. Consent forms were given to respondents who accepted to take part in this research to sign or thumbprint after meeting the inclusion criteria. The respondents were also informed that they could decline to take part in the study or withdraw from the study without any consequences even after signing or thumb printing the consent form.

Anonymity and confidentiality of the actual source(s) of information obtained for the study were ensured by not indicating the names of the facilities and individuals who took part in the study. Names were not also provided on the data collection tools and therefore no clues were provided for someone to trace the source of information. Thus, no identifiable information was collected on the respondents. Consent forms were separated from the data to prevent any possible identification through the forms.

Privacy was enhanced by administering the questionnaire to individual respondent in the facility head’s office or self-created improvise office and without interruption by both staff and clients.

In terms of confidentiality, all materials such as simplified/raw data, and consent forms were kept under lock and key, softcopies password protected to prevent access by other persons either than the researcher and his supervisors.

In summary, a quantitative approach, cross-sectional design was used for the study. A sample size of 395 pregnant women within the last trimester of their pregnancies was recruited for the study at Offinso South Municipal. A multistage sampling strategy was employed in the study. First, the computed sample size of 395 was divided among the five sub-municipalities in the municipality. This was followed by a simple random sampling technique based on an electronic or computer-based
number generator to randomly recruit pregnant women within the inclusion criteria visiting the antenatal clinics at each sub-municipality.

A standardized questionnaire with Cronbach's alpha 0.80 was adopted for use from the theory of planned behaviour (TPB) modified by Cameron (2010) and further modified to suit the objectives and focus of the study. About 391 respondents took part in the study, representing a 99% response rate. The data were managed and analysed using tools embedded in the SPSS software version 21. The data was analysed into descriptive and inferential statistics as well as relevant associations. Pearson (r) correlation was done to examine the associations between the study variables and birth preparedness at 0.01 significant level. Mediation and multiple linear regression analyses were also done to control for possible confounding variables. A confidence level of 95% and p-values less than 0.05 were used to affirm significant associations in the study.

For validity and reliability, a pre-test of the data collection instrument was carried out at Afigya-Kwabre District to identify and modify areas of misunderstanding with an overall Cronbach's alpha coefficient of 0.97. Sound ethical principles such as ethical clearance, institutional approval, consent form, freedom to participate/withdraw, risk/benefits of the study, anonymity, and confidentiality as well as the privacy of the respondents were duly followed in carrying out this study.
CHAPTER FOUR

RESULTS

This chapter presents the findings of the study. The socio-demographic characteristics of respondents are described, followed by a description of birth preparedness motivational factors, attitudes, subjective norms, and perceived behavioural controls of pregnant women towards birth preparedness. Also, the behavioural intentions of pregnant women towards birth preparedness and the relationships between attitudes, subjective norms, perceived behavioural controls and behavioural intentions among pregnant women on birth preparedness are described. The chapter further establishes the mediating effect of behavioural intention among pregnant women on birth preparedness.

4.1 Socio-demographic Characteristics

Out of a total of 395 questionnaires that were administered, 391 were fully completed and returned, giving a 99% response rate. Table 4.1 below shows the socio-demographic characteristics of respondents. The mean age of the respondents was 27.3 years (SD ± 4.5). Out of the total number of 391 respondents, 53% (n=208) were within the age category of 26-30 years. It is also observed from Table 4.1 that majority of the respondents 90% (n=352) were married. Monogamous type of marriage was common: majority 93% (n=364) of the respondents practiced this type of marriage.

Also, majority of the respondents 76% (n = 297) were Christians while 21% (n= 81) were Muslims. A few of them 3% (n=13) practiced African Traditional religion. The respondents were basically of three different ethnic groups: Akan 69% (n=270), Dagomba 13% (n=54) and Ewe 3% (n=12). Other tribes included Gurunshi, Dagaaba, Kusasi, Mossi and Dagomba, and together they constituted 14% (n=55) of the sample.
All the respondents have had some formal education. The majority 42% (n=164) had primary education. This was followed by 38% (n=149) who had Junior High School level education. The least 3% (n=12) had some tertiary level education with 1% (n=5) being illiterates. Also most of the respondents 69% (n=269) resided in rural areas while 25% (n=98) were residents in urban areas. The remainder 6% (n=24) were residents in peri-urban areas.

The data also shows that 47% (n = 184) of the respondents were housewives while 25% (n=98) of them were farmers. Only 8% (n=29) were formerly employed. The mean number of pregnancies was 3.93 (SD ±1.55). Nearly half (48.8%) of the respondents had been pregnant between 3 to 4 times. Also, 29.2% (n=114) had been pregnant between 5 to 6 times. Furthermore, 17.4% (n=68) and 4.6% (n=18) have also been pregnant between 1 to 2 times and 7 to 8 times respectively.

The mean number of household members was 5.01 (SD ±1.75). Majority of respondents 60.9% (n=238) had between 4 to 6 number of household members. Again the mean number of deliveries was 2.67(SD ±1.46). Half of the respondents 50.4% (n=197) had 2 to 3 deliveries.
## Table 4.1: Socio Demographic Characteristics of the Respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (Years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Than 20</td>
<td>23</td>
<td>6</td>
</tr>
<tr>
<td>21-25</td>
<td>89</td>
<td>23</td>
</tr>
<tr>
<td>26-30</td>
<td>208</td>
<td>53</td>
</tr>
<tr>
<td>31-35</td>
<td>56</td>
<td>14</td>
</tr>
<tr>
<td>36-40</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>40+</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td><strong>Mean (SD±)</strong></td>
<td>27.3 (SD ±4.5)</td>
<td></td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/Cohabitation</td>
<td>352</td>
<td>90</td>
</tr>
<tr>
<td>Single</td>
<td>36</td>
<td>9</td>
</tr>
<tr>
<td>Separated/Divorced</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Marital Type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monogamous</td>
<td>364</td>
<td>93</td>
</tr>
<tr>
<td>Polygamous</td>
<td>27</td>
<td>7</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African traditional religion</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Christianity</td>
<td>297</td>
<td>76</td>
</tr>
<tr>
<td>Islam</td>
<td>81</td>
<td>21</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asante</td>
<td>270</td>
<td>69</td>
</tr>
<tr>
<td>Dagomba</td>
<td>54</td>
<td>13</td>
</tr>
<tr>
<td>Ewe</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>55</td>
<td>14</td>
</tr>
<tr>
<td><strong>Educational Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>164</td>
<td>42</td>
</tr>
<tr>
<td>JHS</td>
<td>149</td>
<td>38</td>
</tr>
<tr>
<td>SHS</td>
<td>61</td>
<td>16</td>
</tr>
<tr>
<td>Tertiary</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Illiterates</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td><strong>Residence/Location</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>98</td>
<td>25</td>
</tr>
<tr>
<td>Peri-urban</td>
<td>24</td>
<td>6</td>
</tr>
<tr>
<td>Rural</td>
<td>269</td>
<td>69</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housewife</td>
<td>184</td>
<td>47</td>
</tr>
<tr>
<td>Public sector</td>
<td>29</td>
<td>8</td>
</tr>
<tr>
<td>Farming</td>
<td>98</td>
<td>25</td>
</tr>
<tr>
<td>Private sector</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>Traders</td>
<td>55</td>
<td>14</td>
</tr>
</tbody>
</table>
4.2 Pregnant Women and Birth Preparedness

The primary objective of the study was to describe birth preparedness motivational factors, attitudes, subjective norms and perceived behavioural controls of pregnant women on birth preparedness. This section examines birth preparedness motivational factors among pregnant women, the attitudes of pregnant women towards birth preparedness, subjective norms of pregnant women towards birth preparedness, perceived behavioural controls of pregnant women towards birth preparedness, and the behavioural intentions of pregnant women towards birth preparedness.

4.2.1 Birth Preparedness Motivational Factors among Pregnant Women

One objective of the study was to investigate birth preparedness motivational factors among pregnant women. Table 4.2 below indicates the details of these motivational factors. The results suggest that while 69.5% (n=272) of the respondents considered self-motivation as a birth preparedness motivational factor, 53.7% (n=210)
were motivated by their peers carrying out birth preparedness. The number of times in-laws encouraged one to do birth preparedness was also a birth preparedness motivational factor and 51.7% (n=202) of the respondents were motivated by this. Also, 65.9% (n=257) of the respondents were motivated by their husbands encouraging them to do birth preparedness. Again, 53.7% (n=210) were motivated by assisting sibling on BP. Another birth preparedness motivational factor was help from grandparents by answering questions about how to do birth preparedness plan and 46.8% (n=183) were motivated by this. Also, 51.4% (n=201) were motivated by helping parents/guardian in answering questions about how to carry out birth preparedness. Last but not the least, 59% (n=231) were motivated by helping friends to answer questions about how to do birth preparedness. However, self, husbands, and peers among others representing 69.5%, 65.9%, and 53.7% respectively are the highest ranking birth preparedness motivational factors among pregnant women. This suggests that the women were motivated by themselves, their husbands and their peers to do birth preparedness.

Table 4.2: Birth Preparedness Motivational Factors among Pregnant Women

<table>
<thead>
<tr>
<th>Motivational Factors</th>
<th>Motivated</th>
<th></th>
<th>Not Motivated</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent (%)</td>
<td>Frequency</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>Self</td>
<td>272</td>
<td>69.5</td>
<td>119</td>
<td>30.4</td>
</tr>
<tr>
<td>Peers</td>
<td>210</td>
<td>53.7</td>
<td>180</td>
<td>46</td>
</tr>
<tr>
<td>In-Laws</td>
<td>202</td>
<td>51.7</td>
<td>189</td>
<td>48.3</td>
</tr>
<tr>
<td>Husbands</td>
<td>257</td>
<td>65.9</td>
<td>133</td>
<td>34.1</td>
</tr>
<tr>
<td>Close friends</td>
<td>189</td>
<td>48.7</td>
<td>200</td>
<td>51</td>
</tr>
<tr>
<td>Assisting sibling on BP</td>
<td>210</td>
<td>53.7</td>
<td>181</td>
<td>46.3</td>
</tr>
<tr>
<td>Answering parent/guardian questions on BP</td>
<td>201</td>
<td>51.4</td>
<td>190</td>
<td>48.6</td>
</tr>
<tr>
<td>Answering grandparent questions on BP</td>
<td>183</td>
<td>46.8</td>
<td>208</td>
<td>53.1</td>
</tr>
<tr>
<td>Answering friend questions on BP</td>
<td>231</td>
<td>59</td>
<td>160</td>
<td>41</td>
</tr>
</tbody>
</table>
4.2.2 Attitudes of Pregnant Women towards Birth Preparedness

The attitude was one of the variables on birth preparedness. A total mean score of 25 and above is a measure of high attitudes, indicating good attitudes towards birth preparedness. The total mean score for attitudes was 37.0052 indicating a good attitude towards birth preparedness among the pregnant women. Several factors were considered in measuring the attitude of pregnant women towards birth preparedness as indicated in Table 4.3. Thus, benefits of BP (76.2%, n=298), a positive impact of BP on delivery outcomes (75.6%, n=296) and the importance of BP towards childbirth (75.4%, n=295) were the highest ranking attitudinal factors. As part of the assessment of the attitude, 76.2% of the women believed that attitude enhances the benefits of BP. This suggests that the women had a good attitude towards BP. Also, about 76% of the women believed that attitude has a positive impact on delivery outcomes. Likewise, 75.4% of the women believed that attitude encourages essential preparation towards childbirth. Table 4.3 below, presents details of these attitudinal factors.

Table 4.3: Attitudes of Pregnant Women towards Birth Preparedness

<table>
<thead>
<tr>
<th>Attitudinal Factors</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>Positive impact of BP on delivery outcome</td>
<td>296</td>
<td>75.6</td>
</tr>
<tr>
<td>Importance of BP towards childbirth</td>
<td>295</td>
<td>75.4</td>
</tr>
<tr>
<td>Benefits of BP</td>
<td>298</td>
<td><strong>76.2</strong></td>
</tr>
<tr>
<td>BP prevents complications</td>
<td>280</td>
<td>71.7</td>
</tr>
<tr>
<td>Goodness of BP for childbirth</td>
<td>284</td>
<td>72.6</td>
</tr>
<tr>
<td>Total Mean Score</td>
<td><strong>37.0052</strong></td>
<td><strong>SD = 7.11</strong></td>
</tr>
</tbody>
</table>
4.2.3 Subjective Norms of Pregnant Women towards Birth Preparedness

Subjective norm was one of the assessment variables for birth preparedness. A total mean score of 25 and above is an indication of high (good) subjective norms among the pregnant women. The results indicate that the total mean score for subjective norms was 34.7878 indicating positive cultural beliefs about birth preparedness among the pregnant women. For instance, the belief that BP is typical for a particular age group was held by 72.2% (n=282) of the respondents, the belief that their acquaintances practice BP was held by 67.3% (n=263) of the respondents and 66.7% (n=261) believed that the opinions of others about the safety of BP were an important subjective norm factor. These socio-cultural beliefs and perceptions by the women indicate that they had good subjective norms or cultural beliefs towards BP. Details of these subjective norms are presented in Table 4.4 below.

Table 4.4: Subjective Norms of Pregnant Women towards Birth Preparedness

<table>
<thead>
<tr>
<th>Subjective Norms Factors</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>BP is typical for my age group</td>
<td>282</td>
<td>72.2</td>
</tr>
<tr>
<td>Safety of BP by others opinion</td>
<td>261</td>
<td>66.7</td>
</tr>
<tr>
<td>Acquaintances do BP</td>
<td>263</td>
<td>67.3</td>
</tr>
<tr>
<td>Approval of BP by significant others</td>
<td>241</td>
<td>61.6</td>
</tr>
<tr>
<td>Significant others recommendation/encouragement</td>
<td>222</td>
<td>56.8</td>
</tr>
<tr>
<td><strong>Total Mean Score</strong></td>
<td>34.7877</td>
<td><strong>SD = 8.06</strong></td>
</tr>
</tbody>
</table>
4.2.4 Perceived Behavioural Controls of Pregnant Women towards Birth Preparedness

Perceived behavioural control was also a variable used in assessing birth preparedness. A total mean score of 25 and above is a measure of high (good) perceived behavioural controls indicating that the respondents have good perceptions towards BP. The perceived behavioural control had a total mean score of 34.9616 suggesting good perceived behavioural control of pregnant women towards BP. However, a majority (66.8%, n=261) of the women agreed to the absence of challenges associated with the performance of BP as a perceived behavioural control factor. This was followed by knowledge on BP (66%, n=258) and the women asserting that they were capable enough to prepare for childbirth (64.7%, n=253). Therefore, the perceived ease of the said perceived behavioural control factors among the pregnant women suggests good perceived behavioural control towards BP. Details of these perceived behavioural control factors are presented in Table 4.5 below.

Table 4.5: Perceived Behavioural Controls of Pregnant Women towards Birth Preparedness

<table>
<thead>
<tr>
<th>Perceived Behavioural Controls Factors</th>
<th>High</th>
<th></th>
<th>Low</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent (%)</td>
<td>Frequency</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>Have knowledge on BP</td>
<td>258</td>
<td>66</td>
<td>133</td>
<td>34.1</td>
</tr>
<tr>
<td>Rarely meet challenges on doing BP</td>
<td>261</td>
<td>66.8</td>
<td>129</td>
<td>33.1</td>
</tr>
<tr>
<td>Have capacity for childbirth</td>
<td>253</td>
<td>64.7</td>
<td>138</td>
<td>35.3</td>
</tr>
<tr>
<td>Have competence on components of BP</td>
<td>236</td>
<td>60.3</td>
<td>153</td>
<td>39</td>
</tr>
<tr>
<td>Easy to do BP</td>
<td>231</td>
<td>59.1</td>
<td>160</td>
<td>40.9</td>
</tr>
<tr>
<td><strong>Total Mean Score</strong></td>
<td><strong>34.9616</strong></td>
<td><strong>SD = 8.75</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.2.5 The Behavioural Intentions of Pregnant Women towards Birth Preparedness

Behavioural intentions with a total mean score of 25 and above is a measure of a high score. The behavioural intentions of pregnant women on BP as one of the specific objectives of the study had a total mean score of 36.6496 implying a good behavioural intention of pregnant women towards BP. In assessing the behavioural intention of the pregnant women, 77.2% (n=302) of the women indicated their intent to practice BP, 74.5% (n=291) indicated their intent to practise BP now and any time pregnant, and 73.3% (n=287) planned to continue BP after delivery. Thus, the pregnant women readiness in the said behavioural intentions implies that the women had a good behavioural intention about BP. See Table 4.6 for details of the behavioural intentions of these pregnant women.

Table 4.6: Behavioural Intention of Pregnant Women towards Birth Preparedness

<table>
<thead>
<tr>
<th>Intentional Factors</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>Practice BP now and any time pregnant</td>
<td>291</td>
<td>74.5</td>
</tr>
<tr>
<td>Intend to do BP as I do now</td>
<td>302</td>
<td>77.2</td>
</tr>
<tr>
<td>Intend to share BP plan with other</td>
<td>279</td>
<td>71.3</td>
</tr>
<tr>
<td>pregnant women</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan to continue BP after delivery</td>
<td>287</td>
<td>73.3</td>
</tr>
<tr>
<td>Plan to communicate with other pre-</td>
<td>276</td>
<td>70.6</td>
</tr>
<tr>
<td>pregnant women doing BP</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Mean Score</strong></td>
<td>36.6496</td>
<td><strong>SD = 7.49</strong></td>
</tr>
</tbody>
</table>
4.2.6 Birth Preparedness of Pregnant Women

A total mean score of 25 and above is a measure of high birth preparedness. Birth preparedness in this study had a total mean score of 35.1821 indicating good birth preparedness among the pregnant women. Majority 70.3% (n=275) of the respondents updated their BP plan before birth, 66.6% (n=260) communicated with others who were practicing BP, 66% (n=258) checked with health professionals to see how beneficial BP is and approximately 65% (n=252) actually carried out their BP plan. Details of these birth preparedness factors are presented in Table 4.7 below.

<table>
<thead>
<tr>
<th>Behavioural Factors</th>
<th>High Frequency</th>
<th>High Percent (%)</th>
<th>Low Frequency</th>
<th>Low Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update of BP plan</td>
<td>275</td>
<td>70.3</td>
<td>110</td>
<td>28.2</td>
</tr>
<tr>
<td>Communicate with others doing BP</td>
<td>260</td>
<td>66.6</td>
<td>124</td>
<td>31.8</td>
</tr>
<tr>
<td>Check to see how beneficial BP is from health professionals and those who do it</td>
<td>258</td>
<td>66</td>
<td>130</td>
<td>33.2</td>
</tr>
<tr>
<td>Carry out BP plan</td>
<td>252</td>
<td>64.5</td>
<td>135</td>
<td>34.5</td>
</tr>
<tr>
<td>Check for BP plans from significant others</td>
<td>251</td>
<td>64.2</td>
<td>138</td>
<td>35.3</td>
</tr>
<tr>
<td><strong>Total Mean Score</strong></td>
<td><strong>35.1821</strong></td>
<td></td>
<td><strong>138</strong></td>
<td><strong>35.3</strong></td>
</tr>
</tbody>
</table>

4.3 Relationships between Attitudes, Subjective Norms, Perceived Behavioural Controls, Behavioural Intentions and Birth Preparedness

One of the primary objectives of the study was to examine the relationships between attitudes, subjective norms, perceived behavioural controls and behavioural intention among pregnant women on birth preparedness.

The study investigated the relationships between attitudes and birth preparedness, subjective norms and birth preparedness, perceived behavioural controls
and birth preparedness, and behavioural intentions and birth preparedness among pregnant women. The Pearson Product Moment Correlation was used to investigate these relationships. The results of the Pearson Product Moment Correlation Coefficients in Table 4.8 shows that there were moderate and strong significant positive relationships among the variables assessed.

**Table 4.8: Relationships between Attitudes, Subjective norms, Perceived Behavioural Controls, Intention and Birth Preparedness**

<table>
<thead>
<tr>
<th>Variables</th>
<th>R</th>
<th>p-value (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>0.638</td>
<td>0.000</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>0.692</td>
<td>0.000</td>
</tr>
<tr>
<td>Perceived Behavioural Controls</td>
<td>0.756</td>
<td>0.000</td>
</tr>
<tr>
<td>Behavioural Intention</td>
<td>0.797</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Criterion level 0.01

The results revealed that there was a moderate positive relationship between attitude and birth preparedness \((r = 0.638, p = 0.000)\). This means that pregnant women with high level of attitude (i.e. good attitude) are associated with corresponding high level of birth preparedness (BP). Similarly, a moderate positive relationship was found between subjective norms and birth preparedness \((r = 0.692; p = 0.000)\). This implies high subjective norms (i.e. good subjective norms) outcome is associated with high level of BP among pregnant women. Also, perceived behavioural control was found to have a strong positive correlation with the birth preparedness of pregnant women \((r = 0.756; p = 0.000)\). This suggests that high levels of perceived behavioural control (i.e. good perceived behavioural control) are associated with correspondingly high levels of birth preparedness. Furthermore, a strong positive relationship was found between behavioural intention and birth preparedness of pregnant women \((r = 0.797; p = 0.000)\). This correlation result also suggests that high levels of behavioural intention (good
behavioural intention) are associated with correspondingly high levels of birth preparedness.

Thus, the hypotheses that there are positive relationships between attitudes, subjective norms, perceived behavioural controls, behavioural intentions of pregnant women and birth preparedness were supported.

4.3.1 Predictors of Birth Preparedness

A hierarchal multiple linear regression was performed to determine if socio-demographic characteristics and proposed predictors of birth preparedness (BP) account for the variance in birth preparedness among these pregnant women.

In the first model, the socio-demographic characteristics of the pregnant women (age, number of pregnancies, number of household members and number of deliveries) were fed into the model and these jointly explained only 1.4% of the variance in birth preparedness ($R^2 = .014, F(4, 385) = 1.381, p = .033$). However, the number of household members of respondents is significant with a p-value of .033.

In the second model, the predictor (TBPMF – total birth preparedness motivational factors) explained a significant variance in BP predicting 35.1% of the variance in BP ($R^2 = .351, F(5, 382) = 41.299, p = .000$).

In the third model, the predictor (TA- total attitude) accounted for 43.8% of the variance in BP ($R^2 = .438, F(6, 381) = 49.549, p = .000$).

In the fourth model, the predictor (TSN- total subjective norms) accounted for 46.4% of the variance in BP ($R^2 = .464, F(7, 380) = 46.941, p = .000$).

In the fifth model, the predictor (TPBC- total perceived behavioural control) explained 54.8% of the variance in BP ($R^2 = .548, F(8, 379) = 57.530, p = .000$).
In the sixth model, total behavioural intention (TBI) was added and it accounted for 70.7\% of the variance in BP ($R^2 = .707, F_{(9, 378)} = 101.165, p = .000$). From the final model, TBPMF ($\beta=0.107, p=0.007$), TPBC ($\beta=0.291, p<0.001$) and TBI ($\beta=0.553, p<0.001$) emerged significant predictor of BP. This suggests that the constructs in TPB which predict BP in this study are motivational factors, perceived behavioural control of pregnant women and their intention to perform BP. Details of the regression analysis are indicated in table 4.9 below.
<table>
<thead>
<tr>
<th>Models</th>
<th>Predictors</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>35.211</td>
<td>2.605</td>
<td>13.519</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>.035</td>
<td>.107</td>
<td>.020</td>
</tr>
<tr>
<td></td>
<td>N0. of Pregnancies</td>
<td>.391</td>
<td>.772</td>
<td>.078</td>
</tr>
<tr>
<td></td>
<td>N0. Household members</td>
<td>-.693</td>
<td>.325</td>
<td>-.155</td>
</tr>
<tr>
<td></td>
<td>N0. of Deliveries</td>
<td>.356</td>
<td>.837</td>
<td>.067</td>
</tr>
<tr>
<td>Model 1 Summary: $R^2 = .014$, $F(4, 385) = 1.381$, $p = .033$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>19.973</td>
<td>2.381</td>
<td>8.387</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>.017</td>
<td>.088</td>
<td>.010</td>
</tr>
<tr>
<td></td>
<td>N0. of Pregnancies</td>
<td>.529</td>
<td>.628</td>
<td>.105</td>
</tr>
<tr>
<td></td>
<td>N0. Household members</td>
<td>-.176</td>
<td>.267</td>
<td>-.039</td>
</tr>
<tr>
<td></td>
<td>N0. of Deliveries</td>
<td>-.871</td>
<td>.686</td>
<td>-.163</td>
</tr>
<tr>
<td></td>
<td>TBPMF</td>
<td>.275</td>
<td>.020</td>
<td>.601</td>
</tr>
<tr>
<td>Model 2 Summary: $R^2 = .351$, $F(5, 382) = 41.299$, $p = .000$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>(Constant)</td>
<td>11.066</td>
<td>2.502</td>
<td>4.423</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>-.012</td>
<td>.082</td>
<td>-.077</td>
</tr>
<tr>
<td></td>
<td>N0. of Pregnancies</td>
<td>.673</td>
<td>.585</td>
<td>.133</td>
</tr>
<tr>
<td></td>
<td>N0. Household members</td>
<td>-.237</td>
<td>.249</td>
<td>-.053</td>
</tr>
<tr>
<td></td>
<td>N0. of Deliveries</td>
<td>-.751</td>
<td>.639</td>
<td>-.140</td>
</tr>
<tr>
<td></td>
<td>TBPMF</td>
<td>.183</td>
<td>.022</td>
<td>.399</td>
</tr>
<tr>
<td></td>
<td>TA</td>
<td>.390</td>
<td>.051</td>
<td>.355</td>
</tr>
<tr>
<td>Model 3 Summary: $R^2 = .438$, $F(6, 381) = 49.549$, $p = .000$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4.9: Predictors of Birth Preparedness (cont’d)

<table>
<thead>
<tr>
<th>Models</th>
<th>Predictors</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>(Constant)</td>
<td>9.675</td>
<td>3.918</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>-.020</td>
<td>-.111</td>
<td>-.250</td>
<td>.803</td>
</tr>
<tr>
<td></td>
<td>N0. of Pregnancies</td>
<td>.726</td>
<td>.144</td>
<td>1.268</td>
<td>.206</td>
</tr>
<tr>
<td></td>
<td>N0. Household members</td>
<td>-.155</td>
<td>-.035</td>
<td>-.637</td>
<td>.524</td>
</tr>
<tr>
<td></td>
<td>N0. of Deliveries</td>
<td>-.804</td>
<td>-.150</td>
<td>-.1285</td>
<td>.200</td>
</tr>
<tr>
<td></td>
<td>TBPMF</td>
<td>.152</td>
<td>.331</td>
<td>6.704</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>TA</td>
<td>.260</td>
<td>.236</td>
<td>4.456</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>TSN</td>
<td>.223</td>
<td>.231</td>
<td>4.245</td>
<td>.000</td>
</tr>
</tbody>
</table>

Model 4 Summary: \( R^2 = .464 \), \( F(7, 380) = 46.941, p = .000 \)

| 5     | (Constant)   | 9.681                        | 4.266                     | .000  |         |
|       | Age          | -.010                        | -.006                     |-.141  | .888    |
|       | N0. of Pregnancies | .673               | .133                      | 1.278 | .202    |
|       | N0. Household members | -.104              | -.023                     |-.464  | .643    |
|       | N0. of Deliveries    | -.708                        | -.132                     |-.1232 | .219    |
|       | TBPMF         | .082                         | .179                      | 3.667 | .000    |
|       | TA            | .092                         | .084                      | 1.612 | .108    |
|       | TSN           | .041                         | .043                      | .776  | .437    |
|       | TPBC          | .457                         | .513                      | 8.430 | .000    |

Model 5 Summary: \( R^2 = .548 \), \( F(8, 379) = 57.530, p = .000 \)

| 6     | (Constant)   | .565                         | .292                      | .771  |         |
|       | Age          | .062                         | .036                      | 1.043 | .298    |
|       | N0. of Pregnancies | .579               | .115                      | 1.363 | .174    |
|       | N0. Household members | .048               | .011                      | .266  | .790    |
|       | N0. of Deliveries    | -.820                        | -.153                     |-.1767 | .078    |
|       | TBPMF         | .049                         | .107                      | 2.705 | .007    |
|       | TA            | -.034                        | -.031                     |-.719  | .473    |
|       | TSN           | .024                         | .025                      | .559  | .577    |
|       | TPBC          | .260                         | .291                      | 5.662 | .000    |
|       | TBI           | .575                         | .553                      | 14.279| .000    |

Model 6 Summary: \( R^2 = .707 \), \( F(9, 378) = 101.165, p = .000 \)

Dependent Variable: TBP  Criterion = 0.05
4.4 Mediation effect of Behavioural Intentions on Birth Preparedness

The behavioural intention was evaluated to examine the mediating effect on the relationships between attitudes, subjective norms and perceived behavioural controls on birth preparedness.

The mediating effect was tested using Baron and Kenny (1986) four step approach in which several regression analyses were carried out and significance of the coefficients examined at each step. The steps are:

Step 1: Simple regression analysis of attitudes, subjective norms and perceived behavioural controls predicting BP (i.e. Path c).

Step 2: Simple regression analysis of attitudes, subjective norms and perceived behavioural controls predicting behavioural intention (i.e. Path a).

Step 3: Simple regression analysis of behavioural intention predicting BP (i.e. Path b).

Step 4: Multiple regression analysis of attitudes, subjective norms and perceived behavioural controls on behavioural intention predicting birth preparedness.

Below is a diagrammatic representation of the mediating relationships in figure 4.1;

![Mediation Relationship Diagram](image-url)

**Figure 4.1: Mediation Relationship Diagram**
Step 1, 2 and 3 are to establish that relationships exist among the variables and so are not reported as part of results of the study. According to Baron and Kenny (1986), some form of mediation is supported in step 4 if the effect of attitudes, subjective norms and perceived behavioural controls remains significant after controlling for behavioural intention (Path b). When attitudes, subjective norms or perceived behavioural controls are not significant in predicting BP after controlling for behavioural intention (mediator), then the result supports full mediation. However, if attitudes, subjective norms and perceived behavioural controls are still significant (i.e. both either attitudes, subjective norms or perceived behavioural controls and behavioural intention significantly predict BP), then the result supports partial mediation.

4.4.1 Mediation Effect of Behavioural Intention on the Relationship between Attitudes and Birth Preparedness

The regression coefficients of the mediation analysis revealed that, there was an initial significant relationship between attitudes and BP (β = .642, p< .05) in the first model with attitudes accounting for 41.2% (R² = .412, F(1, 382) = 267.966, p< .05) of the variance in BP. When behavioural intention was controlled for in the second model, attitudes was still significant (i.e. both attitudes and behavioural intention significantly predicted BP) (R² = .653, F(2, 381)= 357.927, p< .05). This finding suggests that behavioural intention partially mediates the relationship between attitudes and BP. These findings also indicate that behavioural intention (p< 0.05) is a significant partial mediator of the relationship between attitudes and BP among pregnant women. Details of the mediating effect of behavioural intention is shown in table 4.10 below.
### Table 4.10: Mediation effect of Behavioural Intention on the relationship between Attitudes and Birth Preparedness

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant) 10.958</td>
<td>1.533</td>
<td>7.150</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Attitudes .660</td>
<td>.040</td>
<td>.642</td>
<td>16.370</td>
</tr>
</tbody>
</table>

**Model summary:** $R^2 = .412$, $F_{(1, 382)} = 267.966$, $p < .05$

<table>
<thead>
<tr>
<th>Model 2</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(Constant) 2.164</td>
<td>1.298</td>
<td>1.667</td>
<td>.096</td>
</tr>
<tr>
<td></td>
<td>Attitudes .186</td>
<td>.043</td>
<td>.181</td>
<td>4.363</td>
</tr>
<tr>
<td></td>
<td>Intention .717</td>
<td>.044</td>
<td>.673</td>
<td>16.237</td>
</tr>
</tbody>
</table>

**Model 2 Summary:** $R^2 = .653$, $F_{(2, 381)} = 357.927$, $p < .05$

Dependent Variable: Birth Preparedness, Criterion: .05

#### 4.4.2 Mediation Effect of Behavioural Intention on the relationship between Subjective Norms and Birth Preparedness

The regression coefficients of the mediation analysis revealed that there was an initial significant relationship between subjective norms and BP ($\beta = .706$, $p < .05$) in the first model with subjective norms accounting for 49.9% ($R^2 = .499$, $F_{(1, 378)} = 376.133$, $p < .05$) of the variance in BP. When behavioural intention was controlled for in the second model, subjective norm was still significant (i.e. both subjective norms and behavioural intention significantly predicted BP) ($R^2 = .683$, $F_{(2, 377)} = 406.310$, $p < .05$). This implies that behavioural intention partially mediates the relationship between subjective norms and BP. These results also suggest that behavioural intention ($p < 0.05$) is a significant partial mediator of the relationship between subjective norms and BP among pregnant women. Details of the mediating effect of behavioural intention is shown in table 4.11 below.
Table 4.11: Mediation effect of Behavioural Intention on the relationship between Subjective Norms and Birth Preparedness

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>11.376</td>
<td>1.273</td>
</tr>
<tr>
<td>1 Subjective norms</td>
<td>.685</td>
<td>.035</td>
</tr>
</tbody>
</table>

**Model 1 Summary:** $R^2 = .499$, $F_{(1, 378)} = 376.133$, $p < .05$

| (Constant) | 2.023 | 1.194 | 1.694 | .091 |
| 2 Subjective norms | .287 | .039 | .296 | 7.388 | .000 |
| Intention | .634 | .043 | .594 | 14.808 | .000 |

**Model 2 Summary:** $R^2 = .683$, $F_{(2, 377)} = 406.310$, $p < .05$

Dependent Variable: Birth Preparedness, Criterion: .05

4.4.3 Mediation Effect of Behavioural Intention on the relationship between Perceived Behavioural Controls and Birth Preparedness

In assessing the regression coefficients of the mediation effect of behavioural intention on the relationship between perceived behavioural controls and BP, the first model indicated a significant relationship between perceived behavioural controls and BP ($\beta = .766$, $p< .05$). When perceived behavioural controls was entered first, it accounted for 58.7% ($R^2 = .587$, $F_{(1, 385)} = 546.498$, $p< .05$) of the variance in BP. When behavioural intention was controlled for in the second model, perceived behavioural control was still significant (i.e. both perceived behavioural controls and behavioural intention significantly predicted BP) ($R^2 = .712$, $F_{(2, 384)} = 475.013$, $p< .05$). This means that behavioural intention partially mediates the relationship between perceived behavioural controls and BP. These results also imply that behavioural intention ($p<$
0.05) is a significant partial mediator of the relationship between perceived behavioural control and BP among pregnant women. Detail results of the analysis are presented in table 4.12 below.

### Table 4.12: Mediation effect of Behavioural Intention on the relationship between Perceived Behavioural Controls and Birth Preparedness

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>13.105</td>
<td>.993</td>
<td>13.198</td>
</tr>
<tr>
<td></td>
<td>Perceived Behavioural Controls</td>
<td>.642</td>
<td>.027</td>
<td>.766</td>
</tr>
</tbody>
</table>

**Model 1 summary:** \( R^2 = .587, F(1, 385) = 546.498, p < .05 \)

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>3.825</td>
<td>1.097</td>
<td>3.487</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Perceived Behavioural Controls</td>
<td>.327</td>
<td>.033</td>
<td>.390</td>
<td>9.766</td>
</tr>
<tr>
<td></td>
<td>Intention</td>
<td>.551</td>
<td>.043</td>
<td>.517</td>
<td>12.937</td>
</tr>
</tbody>
</table>

**Model 2 summary:** \( R^2 = .712, F(2, 384) = 475.013, p < .05 \)

Dependent Variable: Birth Preparedness, Criterion: .05

### 4.5 Summary of Results

The mean age of the respondents was 27.3 with a modal age of 27 years. Most of the respondents were married 90% (n = 352) and into a monogamous family type 93% (n = 364). Majority of the respondents were Asante 69% (n = 270) and practiced Christianity 76% (n = 297) as their religion. The highest educational level attainment among most of the respondents was primary level 42% (n = 164). Sixty-nine 69% (n = 269) of the respondents reside in rural setting with 47% (n = 184) being housewives. The means for the number of pregnancies, deliveries and household members were (M = 3.8, SD = 1.568), (M = 2.45, SD = 1.513) and (M = 4.36, SD = 2.63) respectively.

The results indicated high total mean scores for the study variables implying that pregnant women have a good attitude, subjective norm, perceived behavioural control
and behavioural intention towards birth preparedness. This means that the women had good opinions, socio-cultural beliefs, perception and intention towards birth preparedness. With regard to birth preparedness motivational factors, approximately 70% (n = 272) of the pregnant women were self-motivated to do birth preparedness, followed by husbands and peers 65.9% (n = 257) and 53.7% (n = 210) respectively.

The attitudes and subjective norms were found to moderately correlate with birth preparedness while perceived behavioural control and behavioural intention strongly correlate with birth preparedness.

The motivational factors, perceived behavioural control and behavioural intention with p-values less than 0.05 were identified as significant predictors of birth preparedness.

The results also indicated partial mediations of behavioural intention on the relationships between attitude, subjective norm, perceived behavioural control and birth preparedness among pregnant women.
CHAPTER FIVE

DISCUSSION

This chapter discusses the results of the study. The prevalence of birth prepared among pregnant women is discussed first followed by other results.

5.1 Birth Preparedness of Pregnant Women

The results indicate that birth preparedness among the respondents was generally good. This was measured based on a number of factors. However, the major factors included updating BP plan before birth (70.3%), communicating with others who were practicing BP (66.6%), checked with health professionals to see how beneficial BP is (66.6%) and actually carrying out their BP plan (64.5%) with checking BP plans from significant others as the least factor (35.3%) towards BP. The possible reason why birth preparedness was generally good among the respondents was probably because of the provision of general knowledge and good counselling services on birth preparedness during the antenatal care services. The results here are inconsistent with that of Markos and Bogale (2014), who claimed that many women in Sub-Saharan Africa are often not adequately prepared for childbirth. The findings here also do not seem to support Kariuki and Seruwagi (2016) and Natoli, (2012) claim that most families often believe it is either impossible to plan for an event like pregnancy that is unpredictable or that preparations for childbirth may invite misfortune. Be that as it may, the results suggest the need for more educational and counselling support services for pregnant women during ANC to enable them appreciate the importance of BP and ways to effectively prepare.

Also, while it has been argued that birth preparedness is not easy to achieve in low-income countries where the majority of the people are relatively poor (Markos and
BP among Pregnant Women (Bogale, 2014), evidence from this study suggests that it is indeed possible to achieve higher rates of birth preparedness. This suggests that although socio-economic status may be an important determinant of birth preparedness, better birth preparedness outcomes could still be achieved if supportive policies and interventions are put in place to enable women and couples appreciate the need for birth preparedness. In this study, it is possible that policies such as the maternal healthcare policy and the regular health education given at ANC (pregnancy schools) could have helped to understand the importance of birth preparedness. This could account for the relatively high birth preparedness rate found in this study even though the majority of respondents do not fall into the higher socio-economic status bracket in the context of Ghana.

5.2 Birth Preparedness Motivational Factors among Pregnant Women

The study investigated possible birth preparedness motivational factors among pregnant women. A number of factors were seen as motivational factors. However, self (69.5%), peers (53.7%) and husbands (65.9%) were the key factors motivating pregnant women to prepare for birth while answering grandparents’ questions on birth preparedness was the least motivating factor (53.1%) among others. This was probably influenced by the fact that most of the respondents have attained some level of education which was identified earlier as a key factor that could influence birth preparedness. This is consistent with Kaso and Addisse (2014) who asserted that education increases the likelihood that women will be self-motivated to implement a birth plan. The fact is that educated pregnant women are likely to be exposed to information which boosts their understanding of health related matters including birth preparedness and hence becomes self-motivated in carrying out birth preparedness. But the findings here also underscore the important roles husbands and peers could play in ensuring birth preparedness. It is therefore important maternal health policies and service delivery strategies include ways
to actively involve men, for the more men get involved and get to understand the importance of birth preparedness, the more likely they are to support the partners in preparing adequately for birth. Peers also are important motivators, and this could be explained by the fact in many rural settings in Ghana, ANC services including pregnancy schools are delivered within a group setting. This means that pregnant women have the chance to meet their peers from whom they could learn new things, including birth preparedness. Grandparents appeared to provide little source of motivation for respondents in this study to undertake BP. This could be explained by the fact that family structures in Ghana, especially in many urban and peri-urban contexts such as the Offinso district, have become more nucleated. This means that the role of extended family members, including grandparents and mothers-in-law, in matters of childbearing may be diminishing, and this could have accounted for the limited influence grandparents had on birth preparedness in this study.

5.3 Attitudes of Pregnant Women towards Birth Preparedness

The attitude of pregnant women towards birth preparedness was an important variable in measuring birth preparedness among the respondents. A number of factors were relied on in measuring the attitude of pregnant women towards birth preparedness. The results revealed that benefit of birth preparedness (76.2%), the positive impact of birth preparedness (75.6%) and the importance of birth preparedness (75.4%) were the highest attitudinal factors influencing the attitude of pregnant women towards birth preparedness. However, the least attitudinal factor towards BP was the goodness of BP for childbirth (27.4%). Thus, most of the respondents believed attitude enhances the benefits of birth preparedness, impact on delivery outcomes and encourages essential preparation towards childbirth implying that the respondents generally had a good attitude towards birth preparedness. This could possibly be because of the education
they received during ANC. Even by implication, if one has a good attitude towards something, then that individual is likely to do or practice it. Therefore, birth preparedness among the respondents was high partly because they had positive attitudes towards birth preparedness. This supports the assertion of Ojong et al. (2015) that most pregnant women have favourable attitude towards birth preparedness. It is also in consonance with Rosalia and Muhammad (2011) assertion of good attitude among women on ANC services, a component of birth preparedness.

5.4 Subjective Norms of Pregnant Women towards Birth Preparedness

The values and beliefs of people can influence their everyday lives including health care. These values and beliefs can influence pregnant women positively or negatively in their health care generally including maternal health care (Greene, 2007; Offor, 2010). The socio-cultural beliefs (subjective norms) of the pregnant women were used in assessing their level of BP. The socio-cultural beliefs that influenced the respondents’ level of BP included the belief that BP is typical for a particular age group (72.2%), the belief that their acquaintances practice BP (67.3%) and belief in the opinions of others about the safety of BP (66.7%). The results indicated that these socio-cultural beliefs and perceptions by the pregnant women influenced positively their level of BP. These results are therefore consistent with the claims by Kanu et al. (2014), Greene (2007) and Offor (2010) that socio-cultural beliefs and practices play a major role in the way women perceive and prepare for their birthing experience.

5.5 Perceived Behavioural Controls of Pregnant Women towards Birth Preparedness

The study also assessed birth preparedness among the respondents using perceived behavioural control. A number of factors can influence pregnant women
perception about childbirth: the level of education, family size, occupation, age, the number of pregnancies, knowledge of obstetric danger signs, use of antenatal care services and the distance of a health facility, among others. In this study, the factors that suggested the pregnant women had good perceived behavioural control towards birth preparedness included the absence of challenges associated with the BP performance (66.8%), followed by knowledge on BP (66%) and the assertion that they were capable enough to prepare for childbirth (64.7%). These perceived behavioural controls had a great impact on the respondents’ BP plan. These factors, as the results revealed, are deduced to be grounded on the respondents' level of education, family size, age, the number of pregnancies, knowledge of obstetric danger signs, use of antenatal care services and the distance away from a health facility, among others. This is consistent with a number of studies. According to Bitew, Awoke and Chekol (2016), pregnant women with higher education are more likely to be prepared for childbirth than those with lower education. It is also claimed by Kuganab-Lem et al. (2014) and Kawakatsu et al. (2014) that large family sizes may cause constraints on resources and limit the preparation for childbirth. Again, Abor et al. (2011) indicated that the age of pregnant women and the number of pregnancies can influence the use of maternal healthcare and invariably influence BP. Kabakyenga, Östergren, Turyakira, and Pettersson (2011) also concluded that pregnant women living far away from health facilities were more likely not to seek childbirth services compared to those who are closer. Furthermore, Bogale and Markos (2015), Kuganab-Lem et al. (2014), and Markos and Bogale, (2014) indicated in their findings that knowledge of birth preparedness (obstetric danger signs) and use of antenatal care services played a significant role in predicting birth preparedness during the periods of pregnancy and postpartum.
5.6 Behavioural Intentions of Pregnant Women towards Birth Preparedness

General knowledge and counselling on birth preparedness are mostly provided during antenatal care services, a component of birth preparedness. The behavioural intentions of pregnant women can influence birth preparedness. As a result, the study investigated the behavioural intentions of pregnant women towards birth preparedness. A number of factors were used in measuring the behavioural intentions of the respondents towards BP. The most influencing factors included the intend to practice BP (77.2%), the intend to practise BP now and any time pregnant (74.5%) and the plan to continue BP after delivery (73.3%) while plan to communicate with other pregnant women doing BP was the least (28.7%) intentional factor. The readiness of the pregnant women to execute these intentional behaviours resulted in good behavioural intention about BP among pregnant women. This finding is consistent with Agbodohu (2013), Bogale and Markos (2015), and Gabrysch and Campbell, (2009) who assert that a number of behavioural intentions of pregnant women such as counselling of pregnant women, ability to make appropriate decisions before and during labour in the event of obstetric complications, knowledge of obstetric danger signs, among others propel birth preparedness among pregnant women. However, the result in this study is inconsistent with the finding of Markos and Bogale (2014), which indicated that majority of pregnant women in Sub-Saharan Africa do not prepare adequately for delivery because they do not know how to adequately prepare for child delivery due to low education and financial challenges.

5.7 Relationships between Attitudes, Subjective Norms, Perceived Behavioural Controls, Behavioural Intentions and Birth Preparedness

One of the primary objectives of the study was to examine the relationships between attitude, subjective norm, perceived behavioural control and behavioural
intention among pregnant women on birth preparedness. A number of relationships were established: attitude and BP, subjective norm and BP, perceived behavioural control and BP and behavioural intention and BP among pregnant women as well as the mediating effect of behavioural intention on BP.

The pregnant women assessed in this study reported good attitude towards BP. The results showed a positive moderate correlation ($r = 0.638; p = 0.000$) between attitude and BP. This means that high level of attitude (good attitude) is associated with an equivalent high level of BP (good BP) among pregnant women. This finding supports the view of Rosalia and Muhammad (2011) that good attitude of pregnant is positively related to adequate BP. Also, attitude, according to Ojong et al. (2015) and Whitley, (2011) can be an expression of favour or disfavour towards a person, place, thing, or event. Thus, an improvement in the likes and opinions of pregnant women will result in good/adequate BP among pregnant women.

Similarly, the assessment of the pregnant women on subjective norm reported good subjective norm towards BP among the pregnant women. The results showed that there is a positive moderate correlation ($r = 0.692; p = 0.000$) between subjective norm and BP. This implies a good subjective norm outcome is associated with good BP among pregnant women. Thus, an increase in subjective norm will lead to an equivalent increase in BP among pregnant women. In other words, socio-cultural practices and traditions that support BP will result in better BP among pregnant women. This is consistent with the assertion by Ilo (2015) that cultural norms and beliefs that support certain types of preparation, such as saving funds to prepare for birth, often result in good BP.
Assessment of the pregnant women in this current study on perceived behavioural control also reported good perceived behavioural control towards BP among pregnant women. The results showed a strong positive correlation \( (r = 0.756; \ p = 0.000) \) between perceived behavioural control and BP among pregnant women. This suggests that good perceived behavioural control outcome will result in a corresponding good BP among pregnant women. This means that as the level of perceived ease of doing BP improves, the level of BP also improves among pregnant women. This would suggest the need for service providers to institute more supportive interventions at both the facility and community levels to help pregnant women develop skills that will enable them overcome fears related to the difficulty or impossibility of doing birth preparedness.

A further assessment of the pregnant women in this study reported good behavioural intention towards BP among pregnant women. The results indicated strong positive relationship \( (r = 0.797; \ p = 0.000) \) between behavioural intention and BP. This also suggests that a good behavioural intention is associated with good/adequate BP among pregnant women. This means that pregnant women’s readiness to do BP will lead to good preparation for childbirth.

The high level of BP (good BP) associated with attitude, subjective norm, perceived behavioural control and behavioural intention among pregnant women could be attributed to a number of factors. As noted earlier in this current study, the educational level of respondents, knowledge on BP (awareness of obstetric danger signs, use of antenatal care services), and location of health facilities jointly contribute to the high level of BP (good BP) among pregnant women. These are evidenced in the assertions of Bogale and Markos (2015); Kaso and Addisse (2014); Kuganab-Lem et al. (2014); Markos and Bogale (2014). Similarly, preparing for childbirth requires
experience in pregnancy and delivery as most of the study respondents in this current study indicated to have had approximately 4 pregnancies and 3 deliveries respectively. This is supported by Singh, Rai, Alagarajan & Singh (2012) finding that women who endure more deliveries, tend to rely on their past experience in doing BP.

Results also showed that demographic characteristics were not significant predictors of BP. Demographic characteristics of pregnant women (age, the number of pregnancies, the number of household members and the number of deliveries) collectively explained an insignificant 1.4% of the variance in BP among pregnant women. However, the number of household members was a significant predictor ($p < 0.033$). This means that in the determination of BP among pregnant women, demographic characteristics of the number of household members plays a key role.

Thus, since most of the respondents on average have 5 household members, which predicted BP in this study, it does support the claim that large family size may cause constraints on resources and limit the preparation for childbirth (Kawakatsu et al., 2014; Kuganab-Lem et al., 2014). However, the demographic finding of the number of births (Mean = 3) in this study does not support a number of studies findings which indicated that the number of births experienced by pregnant women predicted BP (Hailu, Gebremariam, Alemseged, & Deribe, 2011; Kuganab-Lem et al., 2014). Also, maternal age and number of pregnancies on average reported approximately 27 years and 4 pregnancies and these appeared to have influenced BP negatively and therefore could not predict BP. While it is expected that most of them would have gained experience of birth preparedness and childbirth, this did not predict birth preparedness in the study. The finding, nonetheless, is inconsistent with the finding of Kuganab-Lem et al. (2014) who claimed that the number of pregnancies plays a significant role in birth preparedness process.
However, the significant predictors identified for BP in this study were motivational factors, perceived behavioural control and behavioural intention among pregnant women. The amount of variance accounted for in BP by motivational factors, perceived behavioural control and behavioural intention were 35.1%, 54.8%, and 70.7% respectively. This means BP is predicted by motivational factors, perceived behavioural control of pregnant women and their intention to perform BP. The huge variance contribution in BP by the behavioural intention suggests that in the determination of BP among pregnant women, their intentions play a major role. Generally, these results conform to a number of studies in which knowledge of BP (obstetric danger signs and use of antenatal care services) grounded in perceived behavioural control played a significant role in predicting BP (Bintabara et al., 2015; Kaso & Addisse, 2014; Kuganab-Lem et al., 2014).

The study further assessed whether behavioural intention mediates the relationship between attitude and BP. The results indicated a partial mediation of behavioural intention on the relationship between attitude and BP. The results also revealed that behavioural intention (p < 0.05) is a significant partial mediator of the relationship between attitude and BP among pregnant women. These findings mean that the extent to which the attitude can be responsible for good BP will depend on the extent of behavioural intention association with BP.

The study also assessed the behavioural intention mediation effect on the relationship between subjective norm and BP. The results showed a partial mediation of behavioural intention on the relationship between subjective norm and BP. These results also indicated that behavioural intention (p< 0.05) is a significant partial mediator on the relationship between subjective norm and BP among pregnant women. This implies that behavioural intention partially mediates the relationship between subjective norm and
BP. These results also suggest that the extent to which subjective norms can be responsible for good BP depend on the extent of behavioural intention association with BP.

Furthermore, this study assessed whether behavioural intention mediates the relationship between perceived behavioural control and BP. The results reported a partial mediation of behavioural intention on the relationship between perceived behavioural control and BP. The results also reported behavioural intention (p< 0.05) as a significant partial mediator on the relationship between perceived behavioural control and BP among pregnant women. This means that behavioural intention partially mediates the relationship between perceived behavioural control and BP. Similarly, these results indicate that the extent to which the perceived behavioural control can be responsible for good BP will depend on the extent to which behavioural intention is associated with BP.

The partial mediation of behavioural intention on BP can be explained using the TPB process model by Ajzen, (1991) which was the guiding framework for this study. According to the TPB process model, intentions are the hallmark of behaviour (BP) propelled by attitude, subjective norm and perceived behavioural control. In other words, attitude, subjective norm, and perceived behavioural control explain the relationship between behavioural intention and BP. According to the model, the variability in BP predicted by behavioural intention depends on the levels of attitude, subjective norm and perceived behavioural control association with the behavioural intention. Thus, the behavioural intention may influence levels of attitude, subjective norm and perceived behavioural control. The levels of attitude, subjective norm and perceived behavioural control impacted by behavioural intention may determine the level or extent of birth preparedness.
CHAPTER SIX

SUMMARY, IMPLICATIONS, LIMITATIONS, CONCLUSION, AND RECOMMENDATIONS

This chapter presents the summary, implications, limitations, conclusion and recommendations of the study.

6.1 Summary of the Study

This study examined factors that influence BP among pregnant women. Pregnant women attending antenatal clinics at the sub-municipalities within the municipality were recruited as the study participants.

The theory of planned behaviour (TPB) by Ajzen (1991) was the guiding framework for the study. A quantitative cross-sectional survey using questionnaire, was used to gather data from a total of 391 randomly selected pregnant women who were within the last trimester of their pregnancies and were attending ANC clinics in selected health facilities. The data were analysed using descriptive statistics, Pearson Product Moment Correlation Coefficients and the hierarchical multiple linear regression for predictors and mediation effects.

The results of the study showed a high total mean scores for all the study variables. In other words, there is good attitude, subjective norm, perceived behavioural control and behavioural intention among pregnant women on BP. Thus, a higher number of pregnant women had high total mean scores on all the study variables of TPB. On BP motivational factors, the women were motivated by themselves, their husbands and their peers to do BP.

Pregnant women expressed higher amount of attitude with a larger number of benefits of BP (76.2%), the positive impact of BP on delivery outcomes (75.6%) and the
importance of BP towards childbirth (75.4%). Also, pregnant women expressed higher amount of subjective norms, with a higher proportion believing that BP is typical for a particular age group (72.2%), the belief that their acquaintances practice BP (67.3%) and believed in the opinions of others about the safety of BP (66.7%). In perceived behavioural control, pregnant women expressed higher amount with a larger number in the absence of challenges associated with the performance of BP (66.8%), have knowledge on BP (66%) and the capacity to prepare for childbirth (64.7%). The pregnant women also expressed higher amount of behavioural intention with larger numbers intending to practice BP (77.2%), 74.5% in intending to practice BP now and any time pregnant, and 73.3% in planning to continue BP after delivery. However, when BP was evaluated on its own merits, a higher amount was expressed with larger numbers in update of BP plan before birth (70.3%), communicate with other pregnant women practicing BP (66.6%), check with health professionals for the benefits of BP (66%) and carry out BP plan (65%).

The attitude and subjective norm of pregnant women were found to have a significant positive moderate correlation with BP. Likewise, a strong significant positive correlation was found between perceived behavioural control and behavioural intention with BP. These correlation results are associated with improved/adequate BP among the pregnant women. The demographic characteristics of pregnant women jointly explained 1.4% of the variance in BP in this study. Meanwhile, motivation, attitude, subjective norm, perceived behavioural control and behavioural intention explained 35.1%, 43.8%, 46.4%, 54.8% and 70.7% of the variance in BP respectively. Thus, the identified significant predictors were motivational factors, perceived behavioural control and behavioural intention with 10.7%, 29.1% and 55.3% contributions to the models respectively. Behavioural intention was found to partially mediate the relationships
between attitude and BP, subjective norm, and BP and perceived behavioural control and BP.

In brief, most of the study results were consistent with the constructs of the TPB model, the guiding framework for this study. For instance, the behavioural intention of pregnant women significantly predicted BP, accounting for 70.7% of the variance in BP and partially mediated the relationships between the study variables and BP. However, socio-demographic features, with the exception of the number of household members, did not have any significant impact on BP among pregnant women. Perceived behavioural control and behavioural intention were found to have a strong positive correlation with BP. Hence, there is the need to address beliefs, perceptions and intentions of pregnant women on BP. Furthermore, motivation significantly contributed 60.1% to the model of the study. Therefore, it is imperative to develop appropriate motivational measures to support and encourage pregnant women to prepare for childbirth.

6.2 Implications of the Study

The results of this study have implications for midwifery/nursing practice, and health education/promotion on birth preparation.

6.2.1 For Midwifery/Nursing Practice

Results of this study showed that most of the pregnant women attending antenatal clinics in the Offinso South Municipality have good attitude, subjective norm, perceived behavioural control and behavioural intention towards BP. Thus, it is good to continue to encourage and support pregnant women in their quest to prepare for their births. Healthcare providers and the larger society should also be mindful of motivational factors that enhance women’s birth preparation. Healthcare providers and
other stakeholders involved in maternal and child health activities need to appreciate and acknowledge the power of good (positive) attitude, subjective norm, perceived behavioural control and behavioural intention on the birth preparation of pregnant women. Therefore, health professionals, particularly midwives who have considerable knowledge on BPCR, must continue to provide health education/promotion intervention activities and programmes. This will encourage pregnant women and their families at the community levels to prepare for birth and avoid needless deaths, in cases of emergency obstetric complications, which appear to be responsible for the high maternal mortalities in the study area.

6.2.2 For Health Education/Promotion on Birth Preparation

The study’s results may be indications of good health education/promotion activities at the facilities levels on BPCR. Therefore, health education/promotion at health facilities through mass media campaigns such as radio vans, and social media can promote BPCR among pregnant women and at the community levels. This will also help create awareness of BPCR among community members to prevent maternal and neonatal deaths during obstetric emergencies.

The results of the study revealed that attitude, subjective norm, perceived behavioural control and behavioural intention correlate positively with BP among pregnant women. These results suggest that improved attitude, subjective norm, perceived behavioural control and behavioural intention leads to an improved sound BP among pregnant women. In other words, these findings imply that there is the need for health professionals and community stakeholders to educate pregnant women on good attitude, subjective norm, perceived behavioural control and behavioural intention on elements of BP to facilitate adequate BP.
The study particularly demonstrated that motivational factors such as selves, husbands, and peers aid pregnant women to adequately prepare for childbirth. Thus, interventions aimed at maximizing the use of motivation in reproductive health programmes could be of great assistance to pregnant women in their quest to prepare for births. In particular, motivational intervention for pregnant women should be culturally-based as well as take account of women’s specific needs in Offinso.

6.3 Limitations of the Study

Though steps were taken to ensure bias and limitations were addressed during study design, sampling, data collection and analysis, there were some limitations. Therefore, the results of this study should be interpreted in the light of its limitations. First, this study relied on self-reported measures which are subject to socially desirable effects. Hence, there is the possibility of respondent-bias due to the self-reported nature of the data. Thus, the data collected on BPCR might not have provided a true reflection of the actual experiences/feelings of the pregnant women due to the perceptual nature of the study.

Again, only pregnant women attending antenatal clinics were recruited for the study and this may not reflect the general experiences/feelings of pregnant women in the entire communities of Offinso South Municipality. Furthermore, this empirical study confines itself to a correlational survey method. This gives room for speculation with regard to the actual status of BP and the relationships of the study variables. Also, the study could not establish cause and effect relationship because of its cross – sectional nature.
6.4 Conclusion

Increasingly, healthcare practitioners, researchers, and stakeholders in maternal health are recommending BP as a health promotion intervention for maternal and newborn health. Preparation for birth however is both a cause and an end of the health of the pregnant women.

The findings of the study have revealed that pregnant women attending antenatal clinics in the Offinso South Municipality have good attitude (likes, beliefs and opinions) towards BP. The findings further showed that the women have good perceptions of significant others’ beliefs on BP, and indicated their perceived ease and readiness to perform BP. In other words, they had good preparation for their pregnancies/births. Motivational factors such as themselves, their husbands and their peers were found to influence the pregnant women to do BP. However, minority of the respondents still demonstrated low and unfavourable attitude, socio-cultural beliefs, perceived behavioural control and readiness to perform BP. These are factors that could potentially hinder BP, and therefore need addressing.

6.5 Recommendations

The following recommendations are hereby made to Ministry of Health (MOH), Ghana Health Service (GHS), health facilities managers and researchers.

To Ministry of Health (MOH)

The MOH should;

- Develop culturally sound motivational interventions to promote BPCR among pregnant women.
• Prioritize BPCR as a health promotion intervention in maternal and newborn health in Ghana.

To Ghana Health Service (GHS)

GHS should;

• Promote culturally appropriate motivations on BPCR activities at the facilities levels.

• Promote and sustain attitudinal, socio-cultural beliefs, perceptions and intentional behaviours/changes on BPCR at all levels of service delivery.

To Health Facility Managers

The Health Facility Managers should;

• Use these findings as baseline information to promote local reproductive health messages/activities for BPCR

• Encourage healthcare providers to continue to promote good motivations, attitudes, socio-cultural beliefs, perceptions and intentional factors that facilitate BPCR among pregnant women.

• Mandate all health facilities to put in place culturally-appropriate sound motivational measures to support and motivate pregnant women on BPCR.

To Researchers

Researchers in the area of maternal health should;

• Investigate the prevalence of BPCR among pregnant women

• Carry out a community-based survey on BPCR among pregnant women
• Employ a qualitative research approach to gain insight into how attitude, subjective norm, perceived behavioural control and behavioural intention are actually formed/practised, and how these interact to impact BPCR.
REFERENCES


https://doi.org/10.11604/pamj.2014.19.272.4244


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APPENDICES

Appendix A: Ethical Clearance

NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH
Established 1979
A Constituent of the College of Health Sciences
University of Ghana

INSTITUTIONAL REVIEW BOARD
Post Office Box LG 581
Legon, Accra
Ghana

Phone: +233-302-916438 (Direct)
+233-289-522574
Fax: +233-302-502182/513202
E-mail: nirb@noguchi.mimcom.org
Telex No: 2556 UGL GH

My Ref. No: DF:22
Your Ref. No:

2nd November, 2016

ETHICAL CLEARANCE

FEDERALWIDE ASSURANCE FWA 00001824
NMIMR-IRB CPN 040/16-17
IRB 00001276
IORG 0000908

On 2nd November, 2016, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) at a full board meeting reviewed and approved your protocol titled:

TITLE OF PROTOCOL: Factors influencing birth preparedness among pregnant women in Offinso South Municipality

INVESTIGATOR: Peter Paul Erefaar, MPhil Cand.

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 1st November, 2017. You are to submit annual reports for continuing review.

Signature of Chair: ____________________________
Mrs. Chris Dadzie
(NMIMR – IRB, Chair)
Appendix B: Introductory Letter – School Of Nursing

November 18, 2016

The Municipal Director
Ghana Health Service
Offinso South Municipal
Kumasi
Ashanti Region

Dear Sir/Madam,

INTRODUCTORY LETTER: PETER PAUL EREFAAR

I write to introduce to you Peter Paul Erefaar, M.Phil Year II student of the School of Nursing, University of Ghana, Legon. As part of the M.Phil programme, he is conducting a research on “Factors Influencing Birth Preparedness among Pregnant Women in Offinso South Municipality.” Your sub-municipalities have been chosen as his data collection outlets.

I would be grateful if you could kindly offer him the necessary assistance needed to enable him collect data for his thesis.

Thank you.

Yours faithfully,

Dr. Florence Naab
SUPERVISOR

Cc: The Regional Director
Ghana Health Service
Kumasi
Ashanti Region
Appendix C: Introductory Letter – GHS

1023\[In case of the reply the number
And the date of this letter
DIRECTORATE
Should be quoted\]

GHANA HEALTH SERVICE
MUNICIPAL HEALTH

P. O. BOX 237
OFFINSO.

My Ref. No.: DHA/OFF/

Your Ref. No.

23rd November, 2016

All Facility Heads

RE: LETTER OF INTRODUCTION
MR PETER PAUL EREFAAR.

This is to introduce to you Mr. Peter Paul Erefaar, a final year Masters of Philosophy (MPhil) in Nursing Student of the School of Nursing and Midwifery, College of Health Services, University of Ghana, Legon.

He has approval from the Municipal Health Directorate to enable him conduct a research on the topic “Factors Influencing Birth Preparedness among Pregnant women in Offinso South Municipality” in your facility as per the attached.

Kindly assist him with the needed requirements to enhance a successful completion of his research.

Thank you.

For:

Beatrice Appah (Mrs.)
Municipal Director of Health Services
Offinso.
Appendix D – NMIMR – IRB Consent Form

NMIMR-IRB CONSENT FORM

Title: Factors influencing birth preparedness among pregnant women in Offinso South Municipality.

Principal Investigator: PETER PAUL EREFAAR

Address: School of Nursing, University of Ghana, Legon

General Information about Research

This research seeks to understand how you prepare for childbirth. You are invited to be part of the study because you are currently pregnant, just about to deliver and you can speak English and Twi. If you agree to participate, you will be required to sign or thumbprint a form and fill out a form with responses to questions asked. It will take you about 15 – 30 minutes to answer the questions. You have the right not to answer questions which make you uncomfortable. You also have the right to refuse to participate in the study without any change in your care.

Possible Risks and Discomforts

You will not be exposed to any harm or discomfort. However if any question makes you uncomfortable, you have the right not to answer.

Possible Benefits

There will not be direct benefits for you but your responses will benefit future pregnant women

Confidentiality

You will not be required to provide any personal information during the period of data collection. Meanwhile you will be required to provide your name on the consent form. However, only the researcher and supervisors will have access to this information. All materials such as simplified/raw data, and consent forms will be kept under lock and key for a minimum period of five years before being destroyed.

Compensation

You will be given a cake of guardian soap to compensate for the time you spent answering the questions.

VALID UNTIL
01 NOV 2017
Voluntary Participation and Right to Leave the Research

Participation in this research is voluntary and you have the right to opt out at any point without any change in care.

Contacts for Additional Information

For further information on this study, contact the following:

Peter Paul Erefaar, 0209341031, erefaarpeterpaul@yahoo.com
Dr. Florence Naab, 0204522332, fnaab@ug.edu.gh
Dr. John Kumour Ganle, 0249957505, johnganle@yahoo.com

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirm@noguchi.ug.edu.gh
VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research title (factors influencing birth preparedness among pregnant women) has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

______________________________  ________________________________
Date  Name and signature or mark of volunteer

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

______________________________  ________________________________
Date  Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

______________________________
Date  Name Signature of Person Who Obtained Consent
Appendix E: Departmental Approval Letter

The Executive Secretary
NMIMR -- iRB
P.O. Box LG 5&1
Univ. of Ghana
Legon.

Dear Sir/Madam,

DEPARTMENTAL APPROVAL LETTER

This is to introduce you, Peter Paul Erefaar, an M.Phil student of the above School, Dept. Maternal and Child Health and to inform the Institutional Review Board of the approval of the thesis topic: “Factors influencing birth preparedness among pregnant women in Offic South Municipality.”

Counting on your usual co-operation.

Thank you.

Yours faithfully,

Dr. Florence Naab
SUPERVISOR
**Appendix F: Data Collection Instrument**

**NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH (NMIMR)
COLLEGE OF HEALTH SCIENCES, UNIVERSITY OF GHANA, LEGON**

**INSTITUTIONAL REVIEW BOARD**

**APPENDIX B:**

**DATA COLLECTION INSTRUMENT**

The purpose of this study is to determine factors influencing birth preparedness among pregnant women in Offinso South Municipality.

**Interview Date:**

**Name of Community:**

**Sub-district:**

**Name of Interviewer:**

**Respondent Number:**

**Section A: Socio-demographic Information:** - Please tick (✓) the appropriate box below.

1. Age
   - 2. Marital status
     - 1. Married / cohabitation
     - 2. Single
     - 3. Separated/divorced
     - 4. Others (Specify)

2. Marital type
   - 1. Monogamous
   - 2. Polygamous
   - 3. Others (Specify)

3. Religion
   - 1. African traditional religion
   - 2. Christianity
   - 3. Islam
   - 4. Others (Specify)

4. Educational level
   - 1. Primary
   - 2. JHS
   - 3. SHS
   - 4. Tertiary
   - 5. Others (Specify)

5. Ethnicity
   - 1. Asante
   - 2. Dagomba
   - 3. Ewe
   - 4. Others (Specify)

6. Place of residence/location
   - 1. Urban
   - 2. Peri-urban

7. Occupation
   - 1. Housewife
   - 2. Public sector
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>3. Farming</td>
<td>[ ]</td>
</tr>
<tr>
<td>4. Private sector</td>
<td>[ ]</td>
</tr>
<tr>
<td>5. Others (Specify)</td>
<td>..........</td>
</tr>
<tr>
<td>9. Number of pregnancies</td>
<td>..</td>
</tr>
<tr>
<td>10. Number of children/household members</td>
<td>.</td>
</tr>
<tr>
<td>11. Number of deliveries</td>
<td>..</td>
</tr>
<tr>
<td>Items</td>
<td>Scores</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>low</td>
</tr>
<tr>
<td>1. On average, estimate the number of times that you carried out</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>birth preparedness.</td>
<td></td>
</tr>
<tr>
<td>2. On average, estimate the number of times your peers</td>
<td></td>
</tr>
<tr>
<td>carried out birth preparedness.</td>
<td></td>
</tr>
<tr>
<td>3. On average, estimate the number of times your in-laws encouraged</td>
<td></td>
</tr>
<tr>
<td>you to do birth preparedness.</td>
<td></td>
</tr>
<tr>
<td>4. On average, estimate the number of times your husband</td>
<td></td>
</tr>
<tr>
<td>encouraged you to do birth preparedness.</td>
<td></td>
</tr>
<tr>
<td>5. On average, estimate the amount of time your close friends</td>
<td></td>
</tr>
<tr>
<td>use/carried out birth preparedness.</td>
<td></td>
</tr>
</tbody>
</table>

In the following section, evaluate how much that you agree with the statements presented with (1) being low and (10) being high.

<table>
<thead>
<tr>
<th>Items</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>low</td>
</tr>
<tr>
<td>6. I have helped a sibling by answering questions about how to plan</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>for childbirth.</td>
<td></td>
</tr>
<tr>
<td>7. I have helped a parent/guardian by answering questions about how</td>
<td></td>
</tr>
<tr>
<td>to do birth preparedness.</td>
<td></td>
</tr>
<tr>
<td>8. I have helped a grandparent by answering questions about how to</td>
<td></td>
</tr>
<tr>
<td>carry out a birth preparedness plan.</td>
<td></td>
</tr>
<tr>
<td>9. I have helped a friend by answering questions about how to do</td>
<td></td>
</tr>
<tr>
<td>birth preparedness.</td>
<td></td>
</tr>
</tbody>
</table>
### Section C: Predictors of Birth Preparedness (Behaviour)

**Attitudes** - Attitudes represent an individual's likes, dislikes, beliefs and opinions regarding a particular behaviour. Evaluate how much you agree with the statements presented with (1) being low and (10) being high.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I think preparing for childbirth is good.</td>
<td>Low</td>
</tr>
<tr>
<td>2. I think birth preparedness is beneficial.</td>
<td></td>
</tr>
<tr>
<td>3. I think it is important to prepare towards childbirth.</td>
<td></td>
</tr>
<tr>
<td>4. I think preparing for childbirth will prevent complications.</td>
<td></td>
</tr>
<tr>
<td>5. I think birth preparedness will have a positive impact on my delivery outcome.</td>
<td></td>
</tr>
</tbody>
</table>

**Subjective Norm** - Subjective Norms represent a person's perception of important others' (family friends) beliefs that he or she should or should not perform the behaviour.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. People that are important to me recommend and/or encourage that I do birth preparedness.</td>
<td>Low</td>
</tr>
<tr>
<td>2. If I do birth preparedness people that are important to me would approve.</td>
<td></td>
</tr>
<tr>
<td>3. Others feel that I am safer because I do birth preparedness.</td>
<td></td>
</tr>
<tr>
<td>4. I think most of my acquaintances do birth preparedness.</td>
<td></td>
</tr>
<tr>
<td>5. I think doing birth preparedness is typical for my age group.</td>
<td></td>
</tr>
</tbody>
</table>

**Perceived Behavioural Control** - Perceived Behavioural Control represents an individual's perceived ease or difficulty of performing a particular behaviour.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. For me, doing birth preparedness is easy.</td>
<td>Low</td>
</tr>
<tr>
<td>2. I feel capable enough to prepare for childbirth.</td>
<td></td>
</tr>
<tr>
<td>3. I feel competent enough to carry out all the components of birth preparedness.</td>
<td></td>
</tr>
<tr>
<td>4. I rarely encounter problems that I cannot overcome when carrying out birth preparedness.</td>
<td></td>
</tr>
<tr>
<td>5. I know how to carry out birth preparedness.</td>
<td></td>
</tr>
</tbody>
</table>
### Intention

Intention represents an indication of an individual’s readiness to perform a given behavior.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In the future I intend to do birth preparedness as I do now.</td>
<td></td>
</tr>
<tr>
<td>2. I plan to continue birth preparedness after delivery.</td>
<td></td>
</tr>
<tr>
<td>3. I believe I will do birth preparedness as much or more next time I become pregnant.</td>
<td></td>
</tr>
<tr>
<td>4. I plan to communicate with other pregnant women doing birth preparedness.</td>
<td></td>
</tr>
<tr>
<td>5. I intend to share my birth preparedness plan with other pregnant women. (e.g. attending ANC, identify skilled attendant, saving money, arranging for transport, buying required items, etc.).</td>
<td></td>
</tr>
</tbody>
</table>

### Section D: Birth Preparedness (Behaviour)

Behaviour - Behaviour represents how likely an individual will perform a given behaviour.

<table>
<thead>
<tr>
<th>Items</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I carry out birth preparedness plan.</td>
<td></td>
</tr>
<tr>
<td>2. I communicate with others doing birth preparedness.</td>
<td></td>
</tr>
<tr>
<td>3. I check to see how beneficial birth preparedness is from health professionals and those who do it.</td>
<td></td>
</tr>
<tr>
<td>4. I check for birth preparedness plans from people that are important to me.</td>
<td></td>
</tr>
<tr>
<td>5. I update my own birth preparedness plan.</td>
<td></td>
</tr>
</tbody>
</table>

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## Appendix G – Work Plan (Gantt Chart)

<table>
<thead>
<tr>
<th>Activity</th>
<th>2016</th>
<th>2016/17</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>July</td>
<td>Oct.</td>
<td>Dec - Feb</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>Mar</td>
</tr>
<tr>
<td></td>
<td>Sept.</td>
<td>Nov.</td>
<td>Apr</td>
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<td></td>
<td></td>
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<td>May</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>June</td>
</tr>
<tr>
<td>Proposal writing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application for ethical clearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piloting/Administering of Questionnaire</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report of Results</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correction and writing final draft</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thesis presentation and defence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correction and final submission</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Studying, monitoring and evaluation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On going