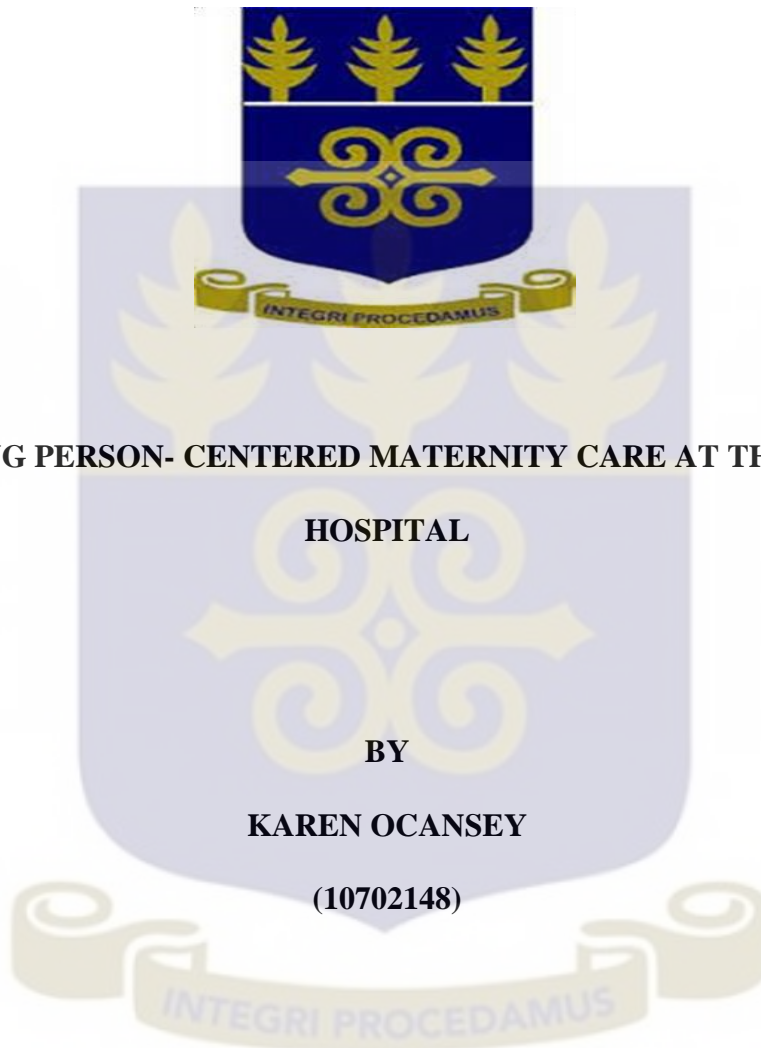


**SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA LEGON**



ASSESSING PERSON- CENTERED MATERNITY CARE AT THE LEKMA

HOSPITAL

BY

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MASTER OF PUBLIC HEALTH DEGREE.**

JULY, 2019

DECLARATION

I, Karen Ocansey, do hereby declare that with the exception of references to the literature and works of other researchers which have been duly cited, this dissertation is the result of my original work.

OCANSEY KAREN.....

DATE.....

(STUDENT)

DR. ERNEST MAYA

DATE.....

(SUPERVISOR)

DEDICATION

I first and foremost dedicate this work to the all mighty God, to my family and friends and to all mothers.

ACKNOWLEDGEMENTS

I am very grateful to the Almighty God for the gift of life and also for how far he has brought me in my education. It has always been by His Grace and loving kindness. How does a person say “Thank you” when there are so many people to thank? Obviously this work is a thank you to Dr. Ernest Maya, a Senior lecturer in the Population, Family and Reproductive Health department, School of Public Health, without whom this work would have never been completed. I would also like to say a big thank you to the Head of the PFRH Department, Prof Torpey and all lecturers of the School of Public Health for teaching and nurturing me throughout this programme. To Mr. Dominic Andoh who helped me with data collection and analysis, I would like to say a big thank you. Finally, friends and family whose efforts and resources made the completion of this project a successful one, I say God bless you all.

ABSTRACT

Many women lose their lives annually during childbirth and a high proportion of the deaths happen in Sub Saharan Africa. Consequently, maternal mortality remains a pressing issue and poor person- centered maternity care contributes both directly and indirectly to it. Person-centered Maternity Care (PCMC) is defined as maternity care that is deferential and responsive to the needs, values and preferences of prospective mothers. Growing evidence suggests that quality of maternal care received by women plays an important role in identifying complications during labour and childbirth in facility based deliveries thus decreasing maternal mortality and morbidity significantly. Despite the positive effect of PCMC on maternal outcomes, there is inadequate literature on the subject. The main objective of this study was to assess the levels of PCMC in the LEKMA Hospital. The specific objectives were to identify the proportion of women receiving poor PCMC, the domain of PCMC in which women record low scores and the factors influencing PCMC using a recently developed PCMC scale.

This study was a facility- based cross sectional study. The sample size was calculated to be one hundred and ninety- two women. Structured questionnaires which included the PCMC scale were used to collect data and were collected, cleaned, coded and keyed into Microsoft Excel after data collection. Scores obtained by women from the PCMC scale were summed up and categorized into Low (0- 26), Moderate (27- 52) and High (53- 78). The raw data was then exported to Stata Version 15 for analysis. Descriptive statistical analysis (mean and standard deviation for quantitative continuous variables and proportions for categorical variables) was performed to describe mother-related factors that influence the levels of PCMC received. Chi Square test was used to compare proportions of low or high PCMC scores among various groups of women (example age groups) to determine the associations between the dependent and independent variables. The binary logistic regression model was

used to determine which demographic and individual level characteristics as well as health facility factors were most significant in influencing the level of PCMC received. One hundred and ninety-two women participated in the study out of which only one recorded a low PCMC score. The Dignity and Respect domain received the lowest mean score and the factors that were found to influence PCMC significantly ($p < 0.05$) were uninterrupted water supply, uninterrupted power supply and the level of overcrowding in the wards. In conclusion LEKMA Hospital provides good PCMC to prospective mothers however, attention should be paid to Respect and Dignity as well as infrastructure to reduce disparities in PCMC. The PCMC scale also had good reliability (Cronbach alpha = 0.88) and can be used across various contexts to determine quality of maternity care received by women.

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LIST OF ABBREVIATIONS

| | |
|-------|---------------------------------|
| PCMC | Person- Centered Maternity Care |
| LMICs | Low and Middle Income Countries |
| MDGs | Millennium Development Goals |
| SDG | Sustainable Development Goals |
| SES | Socio Economic Status |
| HIV | Human Immunodeficiency Virus |

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Annually, 275,000 women lose their lives due to pregnancy related challenges in low and middle- income countries, and 3 million babies do not survive till the fifth week after birth (Moyer et al., 2014). Although these numbers have fallen since 1990, maternal and child mortality are still estimated to be 14 times higher in developing countries than their developed counterparts (Afulani, Sayi, & Montagu, 2018). Maternal mortality is shown to be at its peak in countries where the numbers of births delivered by a Skilled Birth Attendant is low (Sheferaw et al., 2017), and deliveries occurring in health facilities or deliveries that happen away from home and in any healthcare setting have been identified to be a critical strategy for reducing maternal and child mortality (Moyer et al., 2014).

In recent times, the numbers of women delivering babies in healthcare facilities is rising. However, growing proof in literature suggests that the involvement of patients in their own healthcare by healthcare practitioners is essential if strides are to be made in the improvement of quality of care received (Labrusse, Ramelet, Humphrey, & MacLennan, 2016). Poor quality of healthcare contributes to maternal mortality directly and indirectly. Directly in the sense that it does not facilitate prompt identification of pregnancy infractions, and indirectly in the sense that it causes reduced demand for health services. Thus, person- centered care which takes user experience into account and is best assessed by the client, has an effect on health seeking behaviour among patients (Labrusse et al., 2016).

Person- centered maternity care (PCMC) is defined as maternity care that is deferential and responsive to preferences, needs and values of prospective mothers (Larson et al., 2015). Key elements of PCMC are system and provider responsiveness, patient- provider

communication, interpersonal treatment and patient involvement. It aims to enhance communication between health personnel and the patient toward the goal of decreasing the occurrence of asymmetry in information and promoting utilization of care and adherence (Afulani, Diamond-smith, Phillips, Singhal, & Sudhinaraset, 2018). Increased awareness of PCMC thus warranted the development of a scale for its measurement.

1.2 Problem Statement

The Millennium Development Goal for reducing maternal mortality was unable to be met globally and maternal mortality is still relatively high in developing countries like Ghana, with 310 women per every 100,000 livebirths losing their lives (Survey & Indicators, 2017). Currently, the Sustainable Development Goal 3.1 seeks to reduce global maternity to 70 deaths per 100,000 live births by 2030 (Callister & Edwards, 2017) and it is important to remember that every prevented maternal death contributes to the realization of this goal. About three out of four maternal deaths are caused by complications during labour, actual birth and the first 24 hours following delivery (Afulani *et al.*, 2018). A great proportion of these deaths can be attributed to poor maternal care and absence of PCMC, and could be avoided if health care practitioners were responsive to the women's needs and complications were recognized and treated promptly. Also, studies show that women tend to deliver babies in an atmosphere where they feel safe, valued and respected (Mcmahon *et al.*, 2014). Hence, PCMC or lack of it plays a very key role in maternal and child mortality and must be practiced and monitored in health facilities.

1.3 Justification

Person- centered Maternity Care is identified as essential to improving reproductive health outcomes by the World Health Organization yet little research exists in this field. In Africa, work has been done on PCMC in Kenya by (Afulani *et al.*, 2018). In other African countries such as Tanzania, Ethiopia and Ghana research has been conducted on aspects of PCMC such as Respectful Maternity Care (RMC) by (Kujawski *et al.*, 2015; Moyer *et al.*, 2014; Sheferaw *et al.*, 2017) respectively. Whereas there is literature assessing respectful maternal care (RMC), there is paucity of literature on the much broader PCMC construct. Additionally, the PCMC scale is relatively new, and has not yet been validated in West Africa. This study therefore seeks to utilize the PCMC scale in assessing levels of PCMC in a health facility in Ghana, to determine the quality of maternal healthcare being experienced by women who visit this health facility (Khan, Wojdyla, Say, Gülmezoglu, & Look, 2006).

This study ultimately seeks to extend the knowledge on PCMC in Ghana and introduce the PCMC scale to the Ghanaian health setting. Results obtained will serve as a baseline for further studies that seek to use the PCMC scale to assess maternity care in Ghana and other West African countries.

1.4 Research questions

1. What proportion of women who deliver their babies at the LEKMA Hospital receive low levels of PCMC?
2. In which of the domains of PCMC do women record the lowest scores?
3. Which are the factors that influence PCMC?

1.5 Study Objectives

1.5.1 General Objective

To assess PCMC in the LEKMA Hospital.

1.5.2 Specific objectives

1. To determine the proportion of women receiving high levels of PCMC on the PCMC scale).
2. To determine which of the domains of PCMC record the highest PCMC scores.
3. To determine the factors that are associated with PCMC at the LEKMA Hospital.

1.6 Conceptual framework

The figure below was adopted from (Afulani, Sayi, et al., 2018) and (K. Hill, 2010) and it presents Person- centered Maternity Care and factors affecting it.

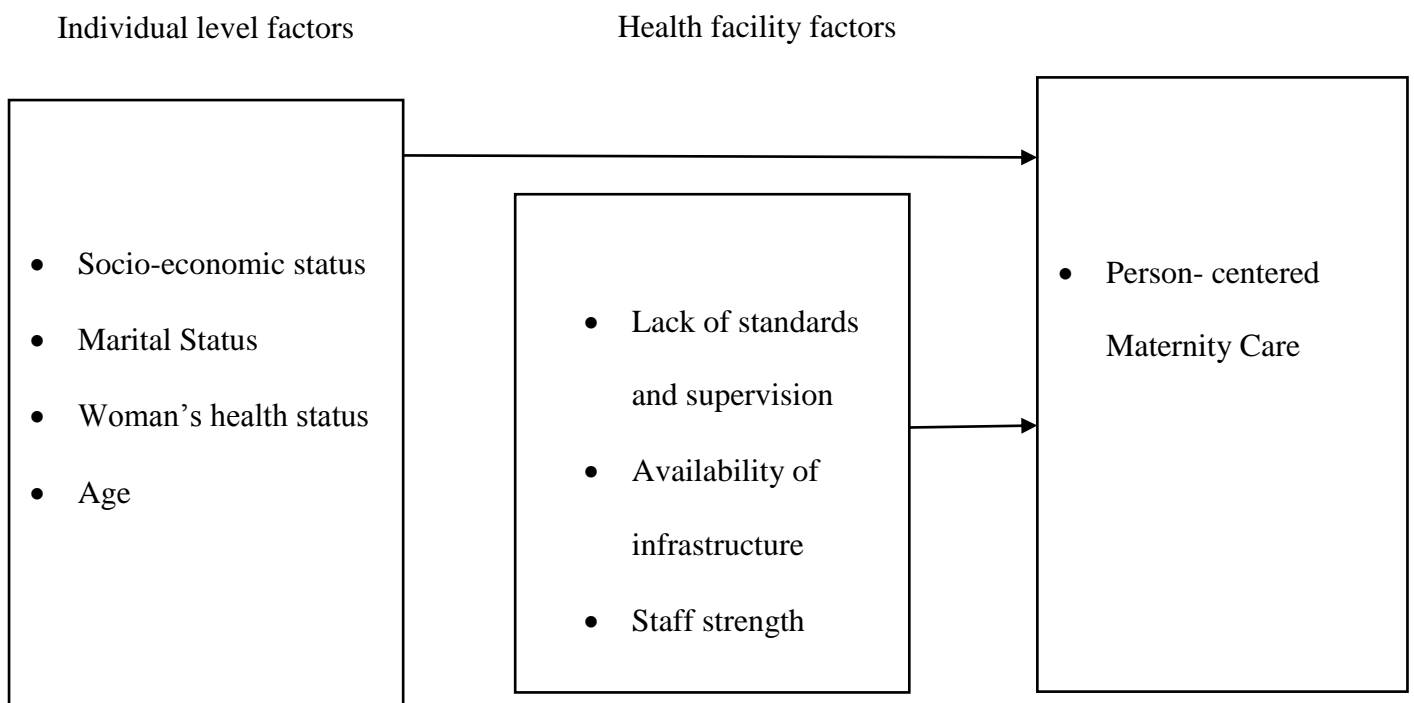


Figure 1 Factors affecting PCMC

1.7 Narrative

The conceptual framework elucidates how these two categories of factors; individual level factors and health facility related-factors influence the quality of maternity care received by potential mothers.

Individual level factors such as age, socioeconomic status, marital status and health status of the woman affect person- centered maternity care. A well-educated woman who earns more or belongs to a wealthier family is usually more empowered and more informed about standards of maternity care. Thus a woman of higher socioeconomic status is more likely to demand respect and better quality of maternal care. Bearing children outside marriage is considered immoral in many African settings. Thus unmarried women are more likely to encounter abuse and discrimination during childbirth at health facilities. Health status of women (especially HIV status) leads to abandonment and disrespect during child birth as the stigma surrounding the disease persists among many health workers. Younger women are more prone to disrespect and abuse at childbirth as they are usually unmarried and perceived as ‘bad children’ for having sex outside marriage, who ought to suffer in order to deter them from engaging in sex subsequently.

Health facility factors such as lack of supervision, staff strength and presence of infrastructure also affect quality of person- centered care received by patients. Lack of adequate supervision of staff and poor examples from their superiors may lead to normalization of mistreatment and abuse on the part of health workers hence reducing quality of maternal care. Inadequate staff may lead to the available staff getting overworked and irritable, causing them to lash out at patients. This may escalate into abuse and mistreatment, especially when the staff does not feel motivated. Finally, lack of infrastructure such as beds may hinder the delivery of quality maternity care as patients are treated in an undignified manner like being asked to sleep on the bare floor.

In conclusion, all the factors above could influence PCMC either negatively or positively.

CHAPTER TWO

2.0 LITERATURE REVIEW

Maternal Mortality has been defined to be the chances of a female losing her life as a consequence of pregnancy or childbirth, or within 42 days of giving birth to a baby during her lifespan (Hogan et al., 2010). Five measures of maternal mortality are generally accepted; maternal death, maternal mortality ratio, maternal mortality rate, life time risk of maternal death and proportionate mortality ratio (Ronsmans & Graham, 2006). Maternal mortality has continually been a major challenge for health systems around the globe and attempts to tackle this issue have been made around the world for the past three decades (Callister & Edwards, 2017). Factors that cause maternal mortality globally are as numerous as they are complex, and connote direct and indirect causes. The greatest burden of maternal mortality is in low and middle income countries (LMICs). Consequent of this, at the landmark Millennium Summit in the year 2000, world rulers took a stance to improve lives and general health of people in LMICs by endorsing the Millennium Development Goals (MDGs). The fifth MDG demanded for a decrease in the maternal mortality ratio (Alkema *et al.*, 2016).

2.1 Millennium Development Goal 5

During the Millennium Summit, eight millennium goals were developed, to be attained by the year 2015. The fifth Millennium Development Goal sought to attain a 75% decrease in maternal mortality ratios observed from the year 1990 to 2015 globally (Koblinsky et al., 2016). In 2002, the World Health Assembly (WHA) restated its dedication to the health related MDGs through resolution WHA 55.19. (Declaration & Inter-agency, 2008). To aid in the sentinel of strides made towards achieving this goal, the United Nation's Maternal Mortality Interagency Group (made up of WHO, UNICEF, UNFPA, UNDP and World Bank Group) made country- specific estimates maternal mortality frequently. It was recognized that maternal mortality is unequally distributed around the world and the greatest risk is by far in

Sub-Saharan Africa (Hogan et al., 2010). Key ways prescribed to minimize maternal mortality were providing proper intrapartum-care, increasing the prevalence of deliveries made by Skilled Birth Attendants, the provision of emergency obstetric care, increasing overall Antenatal care attendance, providing women with appropriate family planning techniques and providing safe abortion methods and care (Campbell & Graham, 2006). According to Alkema et al. by 2016, the worldwide maternal mortality ratio from 1990 to 2015 had decreased from 385 deaths for every 100,000 live births to 216, accounting for a 43.9% reduction. However, different regions and continents showed different degrees of progress with eastern Asia showing the highest decrease. In 2015 regional maternal mortality rates recorded were between twelve deaths per 100,000 live births for developed nations to 546 within Sub-Saharan Africa. The number of maternal deaths in a year also reduced from 532,000 to 303,000, and out of this figure 201,000 (66.3%) took place in Sub-Saharan Africa. In summary, although strides were made in reducing maternal mortality, MDG 5 was not achieved globally.

To build on the advancements made by MDG 5, the United Nations along with several leaders of the world agreed to the Sustainable Development Goals (SDGs) in 2015 (Callister & Edwards, 2017), which includes the goal of decreasing worldwide maternal mortality ratio to seventy (70) deaths per 100,000 live births.

2.2 Sustainable Development Goal 3

This Sustainable Development Goal 3 aspires to safeguard healthy lives and advocate for well-being for all ages. SDG target 3.1 seeks to reduce the worldwide ratio for maternal mortality to seventy (70) deaths per 100,000 live births by the year 2030, with no particular country's maternal mortality ratio going beyond 140 deaths per 100,000 live births. A major motif of the SDGs is to make sure that 'no individual is left behind' (Kruk et al., 2016). Other

aspects of SDG 3 focus on neonatal, infant death, infectious diseases, substance abuse, health coverage, knowledgeable health workforce, reproductive health and immunizations among others.

2.3 Person- centered Maternity Care

Person- centered Maternity Care is defined as maternity care which is deferential and reactive to the needs values and preferences of the prospective mother (Larson et al., 2015). It has been identified as a key aspect of quality maternal and child care. However, improper person-centered care during child birth is increasingly being documented around the world (Bohren et al., 2015). Consequently, the World Health Organization has recommended good intrapartum care for a good experience of childbirth. These recommendations highlight adequate communication between patient and provider, deferential maternity care and accompaniment during labour and childbirth as basic elements of PCMC which every woman should be provided with throughout labour and the birth of her child. These propositions were established on evidence that suggests that the impact of these interventions are likely to minimize the maternal morbidity and mortality burden (WHO, 2018).

PCMC is viewed as a broader construct with respectful maternity care being a subset, however in reality, these two concepts are highly overlapping. A recent analysis that compiled statistics from sixty- seven surveys done in thirty- two countries pinpointed twelve main jurisdictions of respectful maternity care which were found to overlap with domains for PCMC. Freedom from abuse and ill- treatment; establishment of privacy and confidentiality; safeguarding the dignity of women; expected availability of information and request of informed consent; making sure women have access to family and community support throughout pregnancy; improving upon the quality of the surroundings and availability of resources; administering unbiased maternity care; engaging with efficient correspondence;

appreciating the peculiar choices of women that enhance their capabilities to bear children; adequate numbers of competent and motivated personnel and presence of efficient and effective continuity of care (Shakibazadeh et al., 2018). These domains overlap with previously identified domains of PCMC, which include dignity, autonomy, privacy or confidentiality, communication, social support, trust, supportive care, and the health facility environment (Afulani, Diamond-Smith, Golub, & Sudhinaraset, 2017). Therefore, poor respectful maternity care is a strong indicator of poor PCMC.

2.3.1 Importance of Person- Centered Care

Person- centered care is essential in improving provider- client relationship. In addition it increases adherence to treatment, enhances client satisfaction and ultimately improves general health outcomes (Ekman et al., 2011). While person- centered care is important in general health care, it is more important in terminal illness. In particular, person- centered care improves safety and coordination as well as the quality of life of the patients with terminal illness as their needs, preferences and values are taken into account in the healthcare process (Care & Feinberg, 2014).

2.3.2 Importance of Person-Centered Maternity Care on maternal health outcomes

Person-Centered Maternity Care has been found to be key in increasing demand for facility based deliveries and leads to improved maternal and neonatal health outcomes. Person-centered maternity care places emphasis on the quality of patient experience thus helping the patient to feel safe and at ease to communicate how she feels and what she needs to the healthcare provider (Afulani, Sayi, et al., 2018). This aids prompt identification of labour complications and medical conditions which could have otherwise led to morbidity and or mortality for both mother and new- born. Person- Centered Maternity Care also greatly

affects health seeking behaviour of women subsequently and has been shown to increase births in health facilities where it is practiced. Women who visit these facilities are involved in decision making concerning their pregnancy and childbirth and are thus able to get the support and services they require.

2.3.3 Challenges to providing PCMC

Measurement of person- centered care has always been a challenge and PCMC is no exception. According to (Ekman et al., 2011) the challenge is not in convincing healthcare providers to practice PCMC; majority of them believe it is essential to obtaining good maternal outcomes. The challenge is rather in convincing healthcare providers that they are not practicing it – at least not consistently or systematically. This issue arises because there has not yet been an acceptable tool worldwide for measuring person- centered care as well as PCMC.

Also lack of adequate resources and personnel is a great barrier to providing quality PCMC as the mother's entire experience at the facility including availability of certain amenities counts. PCMC would also require a level of dedication and time on the part of the care providers. Hence, if the facility is understaffed, PCMC may be difficult to practice (Articles, 2016).

2.4 The PCMC Scale

The PCMC scale is a twenty- six item scale measuring various domains of PCMC. Each item on the scale has a four point scoring scale; 0- 'No, never', 1- 'Yes, a few times', 2- 'Yes, most of the time' and 3- 'Yes, all the time'. As such, the minimum attainable score from the scale is 0 while the maximum attainable score is 78. A lower figure corresponds to poorer

PCMC while a higher figure implies better quality of PCMC. This scale was developed and validated by Afulani et al. in Kenya in 2017, and in 2018 in Uttar Pradesh, India.

The development of the PCMC scale followed the globally accepted procedures for scale development. Literature was analysed to define clearly the constructs and domains of PCMC and the items on the scale were generated using previously existing tools and adding new items (Collins, 2018). Reviews were then done by experts in Kenya, India and in the United States of America (USA) to validate the content of the items on the scale and cognitive interviews were done with potential respondents to assess how items on the scale were interpreted (Jobe, 1989). The scale then proceeded to the pretesting stage after which structured interviews were done with women who had delivered babies in the preceding six months.

A Cronbach's alpha of 0.88 indicating good internal consistency and reliability has been accredited to the PCMC scale. There are three subscales which come together to form the scale and these are scales for Dignity and Respect, Communication and Autonomy and Supportive Care. Each of these scales have a Cronbach's alpha ranging between 0.67 and 0.73 and as such can be used independently (Afulani, Diamond-Smith, et al., 2017). Psychometric analysis found that sampling adequacy for all items on the scale was greater than 0.5 using the Kaiser- Meyer- Olkin (KMO) measure. The combined KMO was 0.91 showing good variables for factor analysis. Overlapping items from the Kenya and India validations suggest that this scale can be utilized within different contexts to compare PCMC experiences of women and inform and evaluate improvement in the quality of healthcare they receive.

2.5 Factors Affecting PCMC

Factors that have been found to affect PCMC are individual level characteristics of the woman and health facility characteristics. Individual level characteristics comprise socioeconomic status of the woman, health status of the woman and her familiarity with the health system, as well as demographic factors like age and marital status. Examples of health facility factors are the size of the facility, staffing size, availability of infrastructure and the sex of the healthcare provider (Afulani, Sayi, et al., 2018). These variables are discussed in detail in the sections below.

2.5.1 Individual Level Factors

2.5.1.1 Socioeconomic Status

Socioeconomic status (SES) has been recognized as one of the most important forecaster of an individual's mortality and morbidity as well as healthcare experience (Boller, Wyss, Mtasiwa, & Tanner, 2003). This was found to be consistent with all medical conditions with very few exceptions. SES is a broad and complex construct brought about by a spectrum of variables usually financial and occupational with educational influences (Mueller & Parcel, 2018). It is hypothesized from studies on women's childbirth experiences that poorer women receive poorer quality of respectful maternity healthcare (Bohren et al., 2015). Taking PCMC into consideration, the smaller social gap between women with high SES and healthcare providers facilitate receipt of better quality maternity care and cause providers to show more respect and be more supportive, unlike in the case of women with low SES (Duong, Binns, & Lee, 2004). Even though in some cases, mistreatment of women with low SES may be intentional, it is hypothesized that it is often unconscious. Disrespectful behaviour directed at patients flourishes in areas whose traditions tolerate and supports mistreatment, and individual biases may underline patterns of abuse (Leape et al., 2012). Thus, in societies

where people of low economic and educational status are more liable to maltreatment, providers may be unknowingly treating women of low social status poorly. Over time, level of education has also become a widely used measure of SES in epidemiological literature (Krieger, Williams, & Moss, 1997).

According to (Moyer et al., 2014), low socio-economic status could be a risk factor for particularly difficult interactions in a given health facility given the larger ‘societal distance’ between health providers and pregnant women. This is consistent with a study done in South Africa, where the writers came to a conclusion that nurses were perpetually in a struggle to make their professional identity and middle class status apparent to women with low SES and in this attempt, displayed violence or mistreatment against patients as a way of establishing social distance (Jewkes, Abrahams, & Mvo, 1998). Hence, if females having lower SES are prone to experience mistreatment in a health facility, it poses questions regarding the effects on their long-term attitudes towards orthodox medicine and health-seeking behaviour. A great number of respondents reported that women who experienced ill- treatment were unlikely to deliver their next child at that health facility.

Work done in Kenya corroborated these findings (Afulani, Sayi, et al., 2018). They found that women from households with more wealth and gainfully employed women receive PCMC of higher quality than those from poorer households and those unemployed. The effect of employment has the greatest effect on the most impoverished women, with unemployed women from homes of poverty being recipients of the lowest quality of maternity care. It was also stated that, this phenomenon may as a result health workers according females from wealthier homes a certain level of respect regardless of their personal standing or capacity to assert themselves. Another possible reason for this could be the fact that women from wealthier households usually have various members of their homes demanding respectful care on their behalf. Thus, whilst women from more impoverished

households stand a higher risk of being maltreated, gainful employment maximizes women's empowerment, which facilitates advocacy for better quality of healthcare (Afulani, Altman, Musana, & Sudhinaraset, 2017).

2.5.1.2 Marital Status

It has generally been proven that unmarried women have the tendency to delay prenatal care unlike their married counterparts due to stigma and fear of social rejection (Gage, 1998). Single mothers have also been found to be more prone to disrespect and abusive care (Amroussia, Hernandez, Vives-Cases, & Goicolea, 2017). Studies done in Tunisia reveal that single mothers encounter discrimination and abuse in their quest for maternal healthcare services at health facilities. These encounters reflect the poor quality of health care and also how various health systems translate in their practices the stigmatization and discrimination relating to single motherhood in the African context. Social biases and stigmatization do not only affect how single mothers are cared for during childbirth, but also how they perceive their care (Hill, 2010).

These findings were validated by Afulani et al., (2018) in Kenya on PCMC. Marital status, as qualitative studies suggest, is key in determining the quality of maternal care received by a woman. Adolescents or single women experience maltreatment more often, as pregnancy is seen as appropriate only within marriage and there are certain cultural taboos that shroud premarital sex (Bohren et al., 2015). As such, unmarried women had lower mean PCMC scores on the PCMC scale than their married counterparts indicating receipt of poorer quality of healthcare.

2.5.1.3 Health Status of the woman

Health status has been reported to affect maternity care, especially HIV status. Qualitative research carried out in Kenya and South Africa found that fear of mistreatment and biases can greatly influence the receipt and provision of care for HIV positive women during pregnancy. Fear of their HIV status being made public by healthcare providers was reported by women in Kenya, as well as HIV-related stigma and mistreatment as a basis for not delivering children in health facilities (Greene, Ion, Kwaramba, Smith, & Loutfy, 2016). HIV positive women report discriminatory intercourse between themselves and health care providers in a variety of clinical and health facility contexts including high resource health service areas (Ion & Elston, 2015). It is evident that women continually deal with HIV-related stigmatization and social exclusion within health care settings, while planning to give birth and become mothers (Sandelowski, Lambe, & Barroso, 2004). Some women even experience HIV-associated stigma at the moment where they discover that they are pregnant from a physician who thinks that women with HIV have no business giving birth to babies. Women living with HIV are sometimes questioned why they would get pregnant. An interview with a Sudanese woman narrated the instance of a woman who went to the hospital for premature labour and was denied care and a delivery room after her husband made it known to the health facility that she was HIV positive. The doctor finally came to attend to her, wearing 12 pairs of gloves and delivered the severely underweight premature baby, who weighed just 1kg. The woman and the delivered child were not given any further care (Hill, 2010).

2.5.1.4 Age of mother

In Kenya, nurses are known to make statements like: “You young girl, what were you looking for in a man? Now you can’t even give birth.” to young mothers (Altahir, Alaal, Mohammed, & Eltayeb, 2018). In India, the Janani Suraksha Yojana program, which is a safe

motherhood intervention, caters only to women 19 years and above and those with two or less children, and this discriminates against younger mothers (Altahir et al., 2018).

2.5.2 Facility Based Factors

2.5.2.1 Staff strength

The effects of inadequate human resources and overburdened systems of health on the motivation of the provider are often regarded as major factors that lead to maltreatment during facility based deliveries. In Nigeria, it has been identified that the poor attitude of health facility staff toward pregnant women arises in part due to issues of poor staff strength, providers feeling overworked, and being underpaid (Altahir et al., 2018). A member of staff said, “If we had at least two nurses in a clinic, they could take shifts, but when there is just one person he is overworked, and if he is not around there is no access to health-care services” (B. J. Hill & Hill, 2009). It was reported that in Sierra Leone, delivering mothers lose their lives as a result of the only doctor on duty for the facility being away on other assignments and the unavailability of any other doctors (Amroussia et al., 2017). In Kenya a midwife once admitted to being tired and feeling sleepy after delivering her ninth out of 11 babies in 12 hours.

2.5.2.2 Availability of infrastructure

A study of hospital conditions in Jamaica revealed that overcrowding, supply shortages and inadequate staff strength caused alienation of nurses and midwives and resulted unsatisfactory care received by clients.

2.5.2.3 Lack of Standards and supervision

Generally, known standards do not exist for respectful maternal care in most health facility settings. Maternal health care standards often focus on evidence-based clinical care standards rather than standards of respectful and responsive maternal health care. Dignified interpersonal care, patient provider communication and consent, privacy and protection from physical abuse are among the main elements of respectful maternal care which supervisors must ensure are being practiced in their facilities (Jennings, Yebadokpo, Affo, & Agbogbe, 2010).

In majority of facility service settings, leadership and supervision is quite poor for even fundamental standards of clinical care and as such, standards of respectful care are completely neglected. In a number of instances, the leaders and supervisors themselves exhibit disrespectful childbirth care which is normalized and emulated by other members of staff. Poor leadership and supervision within service delivery facility is reported as a major potential contributor to disrespectful care at birth (Amroussia et al., 2017).

A discussant in a structured group discussion elaborated that poor supervision at the service delivery site has an impact on services. “If there is very weak supervision of the health provider the health care provider will take advantage of that. The provider knows the boss is not going to come and hear all these stories.” When individuals are mistreated, they are advised by other patients, staff and even family not to say anything because the perception is that, the health care worker, with whom they have an issue, will recall and discriminate against them or mistreat them at a later time. In other cases, it was reported that the providers cover up for each other when mistreatment and abuse of patients occurs. Inadequate supervision, or lack of it thereof contributes to a facility culture in which health care workers cover up inappropriate behaviour for one another. “People do cover up for each other. Unless it goes to drastic issues, we as managers don’t know about it” (Fonn & Xaba, 2001).

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

This chapter focuses on how data collection was planned and conducted and is divided into nine parts; study design, study area, study population, variables, sampling, data collection tools, data processing analysis, ethical issues and quality control.

3.1 Study Design

This study utilized a facility based quantitative cross sectional design. A quantitative approach was used to gather data for the study due to the nature of scoring within the PCMC scale as well as the objectives this study sought to achieve.

3.2 Study Area

This study was conducted in a Ghanaian public health facility; the LEKMA Hospital located in the LEKMA municipality of the Greater Accra Region. This is due to the fact that, the LEKMA hospital records a high number of deliveries and high PNC attendance.

The LEKMA Hospital is situated at Teshie, a town within Accra. It operates under the auspices of the Ghana Health Service and it was established by the Chinese government in 2010 as a China- Ghana Friendship Hospital. The LEKMA hospital is a district- level referral hospital for inhabitants of the Ledzokuku- Krowor area. It has a 100 bed capacity as well as all units necessary to qualify as a General Hospital. Specialist services are also offered and these include laboratory and radiology units. The hospital has 22 doctors of which 9 are specialist and more than 200 nurses, pharmacists and paramedics. The hospital also has a 24-hour maternal unit and in 2014, over 2000 babies were delivered.

3.3 Study Population

The study population consisted of all mothers who delivered their babies at the LEKMA Hospital and attending Post Natal Care at LEKMA Hospital.

3.3.1 Inclusion Criteria

The following inclusion criteria were used to select participants for the study;

1. Women visiting the LEKMA Hospital for Post Natal Care
2. Women who delivered their babies at the LEKMA Hospital.
3. Women who consent to participate in the study.

3.3.2 Exclusion Criteria

The following exclusion criteria were considered when participants were being selected for the study;

1. Women attending Post Natal Care who do not give their consent to participate in the study.
2. Post- natal women who who gave birth at LEKMA Hospital but lack the mental capacity to provide consent.

3.4 Variables

The dependent variable was the level of Person Centred Maternity care in this health facility, whether low, moderate or high corresponding to the scores participants obtained on the PCMC scale. Independent variables included individual level factors such as age of patient, marital status of patient and socioeconomic status of patient, health status of the woman as well as external factors like lack of standards and supervision, lack of infrastructure and staff strength of the health facility. For the individual level factors, socioeconomic status was

operationalized as level of education and monthly income, both of which were included in the data collection tool. Marital status of the woman was operationalized in the data collection tool as a qualitative nominal variable i.e. ‘Single’, ‘Married’, ‘Divorced’ or ‘Widowed’. The health status of the woman was operationalized as the presence or absence of any known chronic medical condition and the age of the woman was operationalized as the age of the participant at her last birthday. For the external factors, staff strength was operationalized as midwives on duty per shift on the day the participant delivered, and this was obtained from hospital records. Availability of infrastructure was operationalized as number of beds, availability of basic amenities like water and electricity and overcrowding. Lastly, lack of supervision and standards was operationalized as the absence or presence of facility standards concerning respectful maternity care, and this information was obtained from hospital staff.

3.5 Sampling

3.5.1 Sample size

The sample size was determined to be 191 mothers who have given birth at the LEKMA Hospital, visiting the facility for Post Natal Care.

3.5.2 Sampling method

Sampling was done randomly. On each given day of data collection, every other woman was selected to participate. Selected women were noted so as to not try to recruit them to participate in the study at a later time.

3.5.3 Sample size determination

A previous study done in Kenya by (Afulani, Sayi, et al., 2018) reported a mean PCMC score of 59 with a standard deviation of 14. Using this as input, the sample size for the study (n) was calculated as follows:

$$n = \frac{(z_{1-\alpha/2})^2 \sigma^2}{e^2}$$

Where:

n = Sample size

Z = Z statistic for 95% level of confidence ($\alpha = 0.05$)

σ = population standard deviation (14)

e = margin of error tolerated at 2% to improve accuracy

According to previous studies done in Kenya by (Afulani, Sayi, et al., 2018) non-response rate was about 2%. Factoring this into the calculation, sample size (n) is 192.

3.6 Data collection tools

Structured questionnaire was used to collect data from the study participants, and data was collected between April and June 2019. The questionnaire covered areas such as demographics, individual level information and the PCMC scale adopted from (Afulani, Diamond-smith, et al., 2018). Data collection was done in English, Twi or Ga depending on which language the participant was conversant with. The PCMC scale is a 26 item scale which covers three main domains; Dignity and Respect, Communication and Autonomy and Supportive Care. The maximum number of points one can score from the scale is 78 and the minimum number of points one can score is 0, as each item on the scale carries a maximum

of 3 points and a minimum of 0 points. Each item on the scale has a four point scoring scale; 0- 'No, never', 1- 'Yes, a few times', 2- 'Yes, most of the time' and 3- 'Yes, all the time'. Find the PCMC scale attached in the appendices. Data collection ended when the sample size was achieved.

3.7 Data processing and analysis

Administered questionnaires were collected, cleaned, coded and keyed into Microsoft Excel. The scores obtained from the scale were summed up for each participant and the scores were categorized into Low (0- 26), Moderate (27-52) and High (53- 78). The raw data were then exported to Stata Version 15 for analysis. Descriptive statistical analysis (comprising mean and standard deviation for quantitative continuous variables and proportions for categorical variables) were performed to describe mother-related factors that influence the levels of PCMC received. Chi Square test was used to compare proportions of low, moderate and high PCMC scores among various groups of women (example age groups) to determine the associations between the dependent and independent variables. The multiple logistic regression model was used to determine which demographic and individual level characteristics as well as health facility factors were most significant in influencing the level of PCMC received. Confidence level was held at 95%, and $P < 0.05$ (at 5% level of significance) were considered as significant. Results were presented in tables.

3.8 Ethical issues

Ethical clearance was sought from the Ghana Health Service Ethics Review Committee. Permission was sought from the regional health directorate and the LEKMA Hospital to undertake this study. Participants 18 years and above were also required to provide consent by signing Informed Consent Forms. Participants below the age of 18 were required to

provide parental consent from a parent or guardian, and child assent. In the case where participants could not read the participant information form for themselves, a witness was present to ensure that the procedures were explained to the participant's satisfaction. Languages which the participants were conversant with were used to communicate with the participant (English, Twi or Ga). Participants were assured of confidentiality and privacy, as the process of filling the questionnaire was undertaken away from hospital staff and away from any crowded hospital spaces. Also, names of participants were not recorded or included in any publications of the study, and completed questionnaire were kept in a secure and locked cupboard with only the principal investigator and study team having access to it. Soft copies of the data were stored on a hard drive with a password. Participants were assured that participation in this study was completely voluntary. As such, participants were free to withdraw from the study at any time; and withdrawal from the study did not in any way affect the facility related activities of the participant, or any relationship with the staff. Study participants were also made to understand that there was no direct benefit or risk in participating in the study. However, information obtained from this study would be useful in helping to identify factors influencing poor treatment received by pregnant women and the groups of women who are often mistreated by health practitioners. This would then be taken into consideration in training health practitioners to improve quality of maternal care and ultimately, reduce the occurrence of maternal mortality.

3.9 Quality Control

In order to obtain accurate and reliable results, the following quality control measures were put in place:

- The research assistant was adequately trained by the principal investigator to ensure his tasks were well understood. The research assistant was introduced to the rationale

of the study, the sampling procedure and the consenting process, and hands on demonstrations such as role play were conducted to ensure that he had grasped the procedure. All the above were done to ensure credibility of data obtained.

- Pretesting of questionnaire was done with a small sample (10%) of the target population (19 respondents) at the LEKMA hospital to ensure that items on the questionnaire generated data of interest to the study and increased response rate. This also helped to ensure that all errors associated with the study were reduced, which ultimately improved the quality of data obtained.

CHAPTER FOUR

4.0 RESULTS

4.1 Introduction

This section of the research presents the findings on the results obtained from the field work. The results from the 192 women sampled and interviewed at the LEKMA hospital is summarized in tables. The chapter is sub-divided into eight main subheadings: descriptive statistics, the PCMC scale, the PCMC scale reliability analysis, PCMC score cut- offs and scores among various groups of women, individual level and demographic characteristics of the women against the general assessment of safety and ease at the facility and finally binary logistic regression analysis test.

4.2 Socio- demographic characteristics of respondents

One hundred and ninety- two women who had recently given birth at the facility attending Post Natal Care participated in this study. Out of this number, 103 (53.6%) were less than or equal to 30 years old and 89 (46.4%) were over 30 years old. Majority of women 147 (76.6%) were married. Socioeconomic status was operationalized as level of education and monthly income of women. Thus, a total of 14 women (7.3%) had no formal education and the same figure was found for women with their highest level of education being primary school. Women with Senior High School education had the highest number 75 (39.1%) and majority of women received monthly salaries less than 1000 cedis 122 (63.5%). Finally, Christians were the majority 151 (78.6%) followed by Muslims 40 (20.8%).

Table 4.1: Sociodemographic characteristics of participants

| Variables | Frequency (n) | Percentage (%) |
|-------------------------------|----------------------|-----------------------|
| Mother category (Ages) | | |
| Young mother (Age≤30) | 103 | 53.6 |
| Older mother (Age>30) | 89 | 46.4 |
| Marital status | | |
| Single | 37 | 19.3 |
| Married | 147 | 76.6 |
| Divorced | 5 | 2.6 |
| Widowed | 3 | 1.6 |
| Level of education | | |
| No formal education | 14 | 7.3 |
| Primary school | 14 | 7.3 |
| JHS | 55 | 28.6 |
| SHS | 75 | 39.1 |
| University | 34 | 17.7 |
| Monthly Income | | |
| Less than 1000 cedis | 122 | 63.5 |
| 1000-3000 cedis | 54 | 28.1 |
| 3000 cedis | 16 | 8.3 |
| Religious affiliation | | |
| Christian | 151 | 78.6 |
| Muslim | 40 | 20.8 |
| Traditionalist | 1 | 0.5 |
| Other | 0 | 0.0 |

4.3 Reliability Test for PCMC Scale and subscales

The PCMC scale used in this study had 26-items and a possible score ranging from 0 to 78. Four questions were taken out from the original 30 item scale due to poor correlation (<0.2) with the other items on the scale. For this study, these items were grouped into three conceptual domains representing subscales for “Dignity and Respect”, “Communication and Autonomy” and “Supportive Care”. These subscales have maximum possible scores of 30, 27 and 21 respectively. The reliability test conducted shows that the overall PCMC scale has good reliability (Cronbach alpha =0.88). The subscales were also found to be reliable having

Cronbach alpha values ranging from 0.674 – 0.732. These results are shown below for the number of items per scale and their associated Cronbach’s Alpha.

Table 4.2: Reliability statistics

| Scale | Reliability Statistics | |
|----------------------------|------------------------|-----------------|
| | Cronbach's Alpha | Number of Items |
| Dignity and respect | .674 | 10 |
| Communication and Autonomy | .732 | 9 |
| Supportive Care | .680 | 7 |
| Overall PCMC scale | .880 | 26 |

4.4 PCMC scores obtained by respondents

PCMC scores obtained by women were categorized into tertiles; low, moderate and high, according to cut- offs calculated as seen in the table below.

Table 4.3: Cut off scores for PCMC scale and subscales

| Scale | Cut-offs | | |
|----------------------------|-------------|-------------|-------------|
| | Low | Moderate | High |
| Overall PCMC scale | 0.0 – 26.0 | 27.0 – 52.0 | 53.0 – 78.0 |
| Dignity and respect | 0.0 –10.00 | 11.0 – 20.0 | 21.0 – 30.0 |
| Communication and autonomy | 0.0 – 12.00 | 13.0 – 20.0 | 21.0 – 27.0 |
| Supportive Care | 0.0 – 5.0 | 6.0 – 12.0 | 13.0 – 21.0 |

Scores obtained by the respondents are seen in Table 4.4.

The lowest score obtained was 25 while the highest score was 69. One hundred and forty-nine women (77.6%) had high scores while only 1 woman (0.5%) recorded a low score and 42 (21.9%) recorded scores in the moderate range.

Table 4.4: Summary of PCMC scores

| Scale | Scores | | | | | |
|-----------------------------------|--------------|----------------|--------------|-------------|--------------|----------------|
| | Low | | Moderate | | High | |
| | Count (N) | Percent (%) | Count (N) | Percent (%) | Count (N) | Percent (%) |
| Overall PCMC scale | 1 | 0.5 | 42 | 21.9 | 149 | 77.6 |
| Dignity and respect | 2 | 1.0 | 115 | 59.9 | 75 | 39.1 |
| Communication and autonomy | 2 | 1.0 | 30 | 15.6 | 160 | 83.3 |
| Supportive Care | 4 | 2.1 | 40 | 20.8 | 148 | 77.1 |

The various mean scores obtained by women were also calculated and are shown in table 4.5 below. The Dignity and Respect scale had an overall mean score of 17.39 while the Communication and Autonomy and Supportive care scales recorded overall mean scores of 23.0 and 14.16 respectively.

Table 4.5: Mean PCMC score assessment

| | | Dignity and respect | | Communication and autonomy | | Supportive care | | Overall scale | |
|--|---------------------------------------|---------------------|------|----------------------------|------|-----------------|------|---------------|------|
| | | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| A: | | | | | | | | | |
| DEMOGRAPHIC INFORMATION | | | | | | | | | |
| Religious affiliation | Christian | 19.68 | 3.02 | 23.28 | 3.15 | 14.05 | 3.04 | 57.01 | 6.97 |
| | Muslim | 20.02 | 4.05 | 23.68 | 3.14 | 14.20 | 2.94 | 57.90 | 7.92 |
| Mother category | Young mother(ages≤30) | 17.37 | 3.13 | 23.18 | 3.67 | 14.17 | 2.76 | 54.73 | 6.97 |
| | Older mother(ages>30) | 17.38 | 4.09 | 23.57 | 2.40 | 13.98 | 3.29 | 54.93 | 7.43 |
| Composite Mean | | 16.93 | 3.63 | 21.98 | 3.04 | 13.88 | 3.02 | 52.8 | 7.21 |
| B: INDIVIDUAL LEVEL FACTORS | | | | | | | | | |
| Marital status | Single | 19.35 | 3.73 | 22.86 | 4.05 | 13.41 | 3.34 | 55.62 | 8.99 |
| | Married | 19.71 | 3.05 | 23.50 | 2.94 | 14.15 | 2.94 | 57.35 | 6.68 |
| | Separated | 22.50 | 3.82 | 23.25 | 1.91 | 16.00 | 1.85 | 61.75 | 4.33 |
| Level of education | No formal education | 20.71 | 7.89 | 25.00 | 1.88 | 15.50 | 3.16 | 61.21 | 9.54 |
| | Primary school | 17.50 | 3.20 | 24.14 | 1.56 | 15.29 | 3.12 | 56.93 | 5.30 |
| | JHS | 16.93 | 3.20 | 22.62 | 3.42 | 13.60 | 2.90 | 53.15 | 6.70 |
| | SHS | 17.29 | 2.70 | 22.99 | 3.58 | 13.75 | 2.80 | 54.03 | 7.22 |
| | University | 16.85 | 2.82 | 24.41 | 1.79 | 14.53 | 3.33 | 55.79 | 5.82 |
| Monthly Income | Less than 1000 cedis | 17.32 | 2.91 | 23.21 | 3.40 | 13.89 | 2.96 | 54.42 | 6.58 |
| | 1000-3000 cedis | 17.61 | 4.85 | 23.61 | 2.77 | 14.31 | 3.13 | 55.54 | 8.25 |
| | 3000 cedis | 17.00 | 3.56 | 23.69 | 2.21 | 14.81 | 3.04 | 55.50 | 7.82 |
| Do you have any chronic medical conditions you are aware of? | Presence of chronic medical condition | 17.50 | 3.39 | 23.56 | 1.59 | 15.50 | 1.51 | 56.56 | 3.37 |
| | Absence of chronic medical condition | 17.36 | 3.62 | 23.35 | 3.25 | 13.95 | 3.08 | 54.66 | 7.41 |
| Have you delivered at this facility before? | Yes | 17.32 | 3.78 | 23.40 | 3.20 | 14.21 | 3.03 | 54.93 | 7.34 |
| | No | 17.47 | 3.30 | 23.30 | 3.09 | 13.88 | 3.00 | 54.64 | 6.92 |
| Composite mean | | 17.79 | 3.79 | 23.53 | 2.63 | 14.52 | 2.72 | 55.84 | 6.68 |
| C: HEALTH FACILITY FACTORS | | | | | | | | | |
| Was the labour ward crowded when you delivered? | Crowded labour ward | 17.76 | 5.49 | 22.17 | 3.45 | 13.26 | 3.65 | 53.20 | 9.04 |
| | Labour ward not crowded | 17.25 | 2.76 | 23.74 | 2.96 | 14.34 | 2.75 | 55.34 | 6.43 |

| | | | | | | | | | |
|--|----------------------------|-------|------|-------|------|-------|------|-------|------|
| Was there uninterrupted power supply during your stay at the hospital? | Uninterrupted power supply | 17.40 | 2.75 | 24.62 | 1.88 | 14.00 | 2.26 | 56.02 | 4.22 |
| | Interrupted power supply | 17.36 | 3.87 | 22.90 | 3.39 | 14.11 | 3.25 | 54.38 | 7.96 |
| Was there uninterrupted water supply during your stay in the hospital? | Uninterrupted water supply | 17.73 | 4.98 | 24.41 | 2.32 | 15.00 | 2.34 | 57.14 | 7.17 |
| | Interrupted water supply | 17.25 | 2.99 | 23.01 | 3.32 | 13.77 | 3.16 | 54.03 | 7.02 |
| Composite mean | | 17.46 | 3.81 | 23.48 | 2.89 | 14.08 | 2.9 | 55.02 | 6.97 |
| OVERALL COMPOSITE MEAN | | 17.39 | 3.74 | 23.0 | 2.85 | 14.16 | 2.88 | 54.55 | 6.95 |

4.5 Associations between PCMC, demographics, individual level and health facility factors of respondents.

This section focuses on the scores obtained for women with various demographic characteristics, individual level characteristics and women experiencing various health facility factors. As seen in table 4.6 below, there was a significant association between Religious affiliation of the women and their PCMC scores.

Table 4.6: Association between PCMC scores and demographic, individual and health facility factors

| Characteristics | High N (%) | Moderate N (%) | Crude OR (95% CI) | Adjusted (OR 95% CI) | P-value |
|--|------------|----------------|-------------------|----------------------|---------|
| Demographic Factors | | | | | |
| Religious Affiliation | | | | | |
| Christian | 118 (79.2) | 33 (76.7) | 0.3 (0.0, 2.2) | 1.3 (0.2, 8.6) | 0.779 |
| Muslim | 31 (20.8) | 10 (23.3) | | | |
| Total | 149 (100%) | 43 (100%) | | | |
| Mother category | | | | | |
| Young mother (ages≤30) | 81 (54.4) | 22 (51.2) | 0.8 (0.7, 1.0) | 0.4 (0.1, 2.8) | 0.571 |
| Older mother (ages>30) | 68 (45.6) | 21 (48.8) | | | |
| Total | 149 (100%) | 43 (100%) | | | |
| Individual level factors | | | | | |
| Marital Status | | | | | |
| Single | 28 (18.8) | 9 (20.9) | 0.5 (0.2, 1.1) | 0.2 (0.0, 1.1) | 0.159 |
| Married | 113 (75.8) | 34 (79.1) | | | |
| Separated | 8 (5.4) | 0 (0.0) | | | |
| Total | 149 (100%) | 43 (100%) | | | |
| Level of education | | | | | |
| No formal education | 14 (9.4) | 0 (00) | 0.2 (-0.6, 1.0) | 1.2 (0.5, 2.7) | 0.041* |
| Primary school | 13 (8.7) | 1 (2.3) | | | |
| JHS | 35 (23.5) | 20 (46.5) | | | |
| SHS | 57 (38.3) | 18 (41.9) | | | |
| University | 30 (20.1) | 4 (9.3) | | | |
| Total | 149 (100%) | 43 (100%) | | | |
| Monthly Income | | | | | |
| Less than 1000 cedis | 94 (63.1) | 28 (65.1) | 0.6 (-0.6, 1.8) | 1.8 (0.6, 5.9) | 0.953 |
| 1000-3000 cedis | 42 (28.2) | 12 (27.9) | | | |
| Above 3000 cedis | 13 (8.7) | 3 (7.0) | | | |
| Total | 149 (100%) | 43 (100%) | | | |
| Do you have any chronic medical conditions you are aware of? | | | | | |
| Presence of medical conditions | 16 (10.7) | 0 (0.00) | 1.6 (-2.1, 2.3) | 0.0 (0.0, -) | 0.081 |
| Absence of medical conditions | 133 (89.3) | 43 (100.0) | | | |
| Total | 149 (100%) | 43 (100%) | | | |
| Delivered before at the facility | | | | | |
| Yes | 95 (63.8) | 24 (55.8) | 0.7 (0.6, 1.0) | 0.5 (0.1, 2.6) | 0.419 |
| No | 54 (36.2) | 19 (44.2) | | | |
| Total | 149 (100%) | 43 (100%) | | | |

Health facility factors

Was the labor ward crowded when you delivered?

| | | | | | |
|------------------------|------------|-----------|----------------|----------------|--------|
| Crowded labor ward | 28 (18.8) | 18 (41.9) | 0.7 (0.5, 0.9) | 0.5 (0.1, 2.5) | 0.005* |
| Labor ward not crowded | 121 (81.2) | 25 (58.1) | | | |
| Total | 149 (100%) | 43 (100%) | | | |

Was there uninterrupted power supply during your stay at the hospital?

| | | | | | |
|---------------------------------|------------|-----------|-----------------|-----------------|--------|
| No Interruption in power supply | 48 (32.2) | 4 (9.3) | 1.4 (-1.0, 3.8) | 4.09 (0.4, 5.9) | 0.012* |
| Interruption in power supply | 101 (67.8) | 39 (90.7) | | | |
| Total | 149 (100%) | 43 (100%) | | | |

Was there uninterrupted water supply during your stay in the hospital?

| | | | | | |
|---------------------------------|------------|-----------|-----------------|----------------|--------|
| No Interruption in water supply | 46 (30.9) | 3 (7.0) | 0.7 (-1.8, 3.1) | 1.9 (0.2, 2.5) | 0.007* |
| Interruption in water supply | 103 (69.1) | 40 (93.0) | | | |
| Total | 149 (100%) | 43 (100%) | | | |

* The Chi-square statistic is significant at the .05 level.

OR- Odd Ratios

CI- Confidence Interval

4.6 Associations between characteristics of the respondents and how safe and at ease they felt at the facility.

This section of the analysis looks at each of the respondents' assessment of having felt safe and at ease at the hospital facility, which is a reflection of the quality of the overall maternity care they received. Table 4.7 below assesses the total women sampled and give summaries on their responses.

Table 4.7: Association between PCMC scores and how at safe and at ease respondents felt in the facility

| Characteristics | Did you feel safe and at ease? | | Chi-Square(df) | P-Value |
|--|--------------------------------|------------|----------------|---------|
| | Yes N (%) | No N (%) | | |
| A: DEMOGRAPHIC INFORMATION | | | | |
| Religious Affiliation | | | | |
| Christian | 114 (78.6) | 37 (78.7) | 0.330(2) | 0.848 |
| Muslim | 30 (20.7) | 10 (21.3) | | |
| Traditionalist | 1 (0.7) | 0 (0.0) | | |
| Total | 145 (100%) | 47 (100 %) | | |
| Age category | | | | |
| Young mother (ages≤30) | 78 (53.8) | 25 (53.2) | 0.005(1) | 0.943 |
| Older mother (ages>30) | 67 (46.2) | 22 (46.8) | | |
| Total | 145 (100%) | 47 (100 %) | | |
| B: INDIVIDUAL LEVEL FACTORS | | | | |
| Marital Status | | | | |
| Single | 29 (20.0) | 8 (17.0) | 0.942(3) | 0.815 |
| Married | 111 (76.6) | 36 (76.6) | | |
| Divorced | 3 (2.1) | 2 (4.3) | | |
| Widowed | 2 (1.4) | 1 (2.1) | | |
| Total | 145 (100%) | 47 (100 %) | | |
| Level of education | | | | |
| No formal education | 12 (8.3) | 2 (4.3) | 3.965(4) | 0.411 |
| Primary school | 12 (8.3) | 2 (4.3) | | |
| JHS | 43 (29.7) | 12 (25.5) | | |
| SHS | 56 (38.6) | 19 (40.4) | | |
| University | 22 (15.2) | 12 (25.5) | | |
| Total | 145 (100%) | 47 (100 %) | | |
| Monthly Income | | | | |
| Less than 1000 cedis | 93 (64.1) | 29 (61.7) | 0.097(2) | 0.953 |
| 1000-3000 cedis | 40 (27.6) | 14(29.8) | | |
| Above 3000 cedis | 12 (8.3) | 4 (8.5) | | |
| Total | 145 (100%) | 47 (100 %) | | |
| Do you have any chronic medical conditions you are aware of? | | | | |
| Presence of chronic medical condition | 13 (9.0) | 3 (6.4) | 0.310(1) | 0.578 |
| Absence of chronic medical condition | 132 (91.0) | 44 (93.6) | | |
| Total | 145 (100%) | 47 (100%) | | |
| C: HEALTH FACILITY FACTORS | | | | |
| Was the labor ward crowded when you delivered? | | | | |
| Crowded labour ward | 28 (19.3) | 18 (38.30) | 7.024(1) | 0.008* |
| Labour ward not crowded | 117 (80.7) | 29 (61.7) | | |

| | | | | |
|--|------------|------------|-----------|--------|
| Total | 145 (100%) | 47 (100 %) | | |
| Was there uninterrupted power supply during your stay at the hospital? | | | | |
| Interruption in power supply | 24 (16.6) | 28 (59.6) | 33.268(1) | 0.000* |
| No interruption in power supply | 121 (83.4) | 19 (40.4) | | |
| Total | 145 (100%) | 47 (100%) | | |
| Was there uninterrupted water supply during your stay in the hospital? | | | | |
| Interruptions in water supply | 18 (12.4) | 31 (66.0) | 53.537(1) | 0.000* |
| No interruptions in water supply | 127 (87.6) | 16 (34.0) | | |
| Total | 145 (100%) | 47 (100 %) | | |

4.7 Logistic Regression analysis

Given that the PCMC scores were valid for the high and moderate rating with only one person being recorded as low, the two significant groupings were used. Additionally, since the chi-square test only measures association between variables, the binary logistic regression model involving a high or a moderate PCMC score was employed to determine which group of factors be it the demographic factors, the individual level factors and the health facility factors was most significant in influencing the safety and ease felt in the health facility.

A full assessment of the binary logistic regression shows that the PCMC score is significantly impacted by the over-crowding of the ward, the interruptions in water supply as well as the interruption in power supply. The three variables considered under the health facility factors had a p-value less than 0.05.

The odd ratio summaries indicate the following. For Religion, there is a 56% likelihood that Muslims would have PCMC levels that differ in the model. The mother category also reveals that there is an 83.9% likelihood that the older mothers would observe significant differences in the PCMC scores unlike their counterpart younger women. For the assessment on whether the women had delivered before at the health facility, there was a 64.9% likelihood that the persons who had not delivered at the facility before would have high PCMC scores. With

reference to the marital status of the women, there was a 159% likelihood that the single mothers stood the chance of observing higher PCMC scores unlike the married and separated mothers observed. For education, there was a 90.3% likelihood that the mothers who had some level of education from the primary to the tertiary would achieve higher PCMC scores as compared to those who had no education. The monthly income assessment also revealed that there is an 85.7% likelihood that mothers earning beyond a 1000 cedis would have higher PCMC scores as compared to those with lower levels of income. The health facility factors which were significant in the model also revealed some variations in the odd ratios. Whereas there was a 272.8% likelihood that mothers who are delivered in the crowded wards would have a higher PCMC score, the odd ratios for the interruptions in power supply and water showed otherwise. For the uninterrupted power supply, there was just 22.9% likelihood that mothers who delivered in wards where the power supply was erratic or inconsistent would have a higher PCMC score. The counterpart, being the uninterrupted water supply also revealed that there was a 19% likelihood that women who experienced shortfalls in their water supply would have high PCMC scores. These summaries are as shown below in Table 4.8.

Table 4.8: Binary logistic regression

| | | | | | | |
|-----------------------------|--|--|--|---------------|---|--------|
| Logistic regression | | | | Number of obs | = | 176 |
| | | | | LR chi2(10) | = | 31.73 |
| | | | | Prob > chi2 | = | 0.0004 |
| Log likelihood = -81.992526 | | | | Pseudo R2 | = | 0.1621 |

| PCMC Level | Odds Ratio | Std. Err. | Z | P> z | [95% Conf. Interval] | |
|---------------------------------|------------|-----------|-------|-------|----------------------|----------|
| Demographic factors | | | | | | |
| Religion | 0.560293 | 0.285019 | -1.14 | 0.255 | 0.206734 | 1.518512 |
| Mother Category | 0.83882 | 0.357325 | -0.41 | 0.68 | 0.363973 | 1.933164 |
| Individual level factors | | | | | | |
| Delivered Before | 0.648692 | 0.264436 | -1.06 | 0.288 | 0.291777 | 1.442202 |
| Marital Status | 1.595793 | 0.708476 | 1.05 | 0.292 | 0.668457 | 3.809605 |
| Level of Education | 0.903001 | 0.173872 | -0.53 | 0.596 | 0.619143 | 1.317001 |
| Monthly Income | 0.857909 | 0.278566 | -0.47 | 0.637 | 0.453998 | 1.621172 |
| Chronic disease | 1 | (omitted) | | | | |
| Health facility factors | | | | | | |
| Crowded wards | 2.727839 | 1.184477 | 2.31 | 0.021 | 1.164694 | 6.388896 |
| Uninterrupted power supply | 0.22919 | 0.147482 | -2.29 | 0.022 | 0.064931 | 0.808977 |
| Uninterrupted water supply | 0.190154 | 0.144721 | -2.18 | 0.029 | 0.042784 | 0.845146 |
| _cons | 1790.033 | 4667.232 | 2.87 | 0.004 | 10.80155 | 296644.3 |

CHAPTER FIVE

5.0 DISCUSSION

5.1 Introduction

This section of the research discusses the findings and results obtained from the data collected according to the objectives of the study. This study aimed to determine the proportion of women receiving low levels of PCMC, determine which of the subscales of the PCMC scale recorded in which women recorded the lowest scores and also determine which factors influence PCMC.

5.2 Proportion of women receiving low levels of PCMC

Low PCMC, which corresponds to a low score on the PCMC scale, was defined as a score from 0 to 26. Less than 1% percent of the sample received scores within this range while over 75% of women received high scores indicating that PCMC received by women at the LEKMA Hospital is generally good. Some key findings also were observed from the results about the importance of religious affiliation, age, marital status, educational background as well as monthly income on the observed PCMC scores. Religion was not found to be significantly associated with PCMC scores contrary to findings in literature. However, Christians had a larger proportion of high PCMC scores than Muslims and Traditionalists. Although the association was not significant, younger mothers had a greater proportion of high PCMC scores than the older mothers. This finding differs from literature as studies show that younger mothers are often discriminated against (Mngadi, 2002). However in the LEKMA Hospital, younger mothers were given more support as it was recognized that they were more anxious and needed extra attention. As stated by Afulani *et al*, (2018), the effect of marital status was as expected. Qualitative studies suggest that adolescent or unmarried women experience mistreatment more frequently (Moyer et al., 2014), as pregnancy is often

viewed as appropriate only in the context of marriage. Thus, a greater proportion of married women and even divorced or widowed women had high PCMC scores than the single women sampled for the study. The educational background according to Warren *et al.*, (2017), is significantly associated with a better quality of maternal care, as such, the higher the educational level the individual has, the better care she receives. According to the author, a good educational background empowers women to demand better treatment and conditions as they have knowledge on processes that occur during the childbirth process. This was however observed to differ slightly for the results from LEKMA hospital as a greater proportion of women with no formal education and primary school education had a high PCMC score. Interactions with these women revealed that more attention was paid to them so they could feel more at ease and trust the health care delivery in the hospital. There was a close link between academic qualification and the wealth or income of the individual. As pointed out in a study done by (Mueller & Parcel, 2018), the higher the educational status of the individual, the more likely a higher income range would be observed. However, it was stressed on that wealth usually made a difference only in public hospitals because quality of care in these facilities is generally poor unlike in higher-level facilities in which wealthier families are accorded better care because of their ability to afford high charges. PCMC scores from this study at the LEKMA hospital were vastly different as the greater proportion of persons earning incomes from less than 1000 cedis had high PCMC scores, as opposed to their counterparts earning 1000- 3000 cedis monthly and over 3000 cedis as suggested for a public hospital.

Again, a greater proportion of women who had known medical conditions at the time of seeking maternity care at the hospital were found to have recorded high PCMC scores compared to those with no known medical conditions. Research in Uttar Pradesh, the most populous state in India has documented that between 20-50% of women who cited their

conditions of illness which in most cases were chronic were given much care and attention unlike their colleagues who were deemed fit (Raj *et al*, 2017). As observed, women whose medical conditions were known from previous visits to the health centre had a significantly higher chance of recording higher PCMC scores from the level of care and concern that would be shown them. This study at LEKMA observed about 8% of the sample who had fore-knowledge of a chronic disease condition. Out of this number, none of them recorded low PCMC scores thus validating the findings of previous in relation to the health condition of the patient involved.

Additionally, the Health facility factors of crowded wards, uninterrupted power supplies and uninterrupted water supplies were observed in the Uttar Pradesh hospital assessment. Although water as mentioned by Raj *et al*, (2017) could be vague in the terms of whether potable water or water for general use, most women who faced some shortages had lower PCMC scores unlike colleagues in other health facilities that had a more constant flow of water. The same is observed for shortages in power supply which indicates that the health facility environment is an important aspect of person-centered care. Greater proportions of high PCMC scores were thus observed for women who experienced no interruption in the power and water supply at the health facility (Blanc *et al.*, 2016). The study at LEKMA hospital also reveals a greater proportion of high PCMC scores for women who were not put in crowded wards during delivery. These associations were each found to be significant after the binary logistic regression. It is also worth noting that marital status and overcrowding in the wards had odds ratios greater than 1 after binary logistic regression indicating that these factors had a greater likelihood of influencing PCMC scores.

Staff strength was not shown to be responsible for low PCMC scores received by women in LEKMA Hospital as the number of nurses and midwives on duty was always constant (9- 11 at every point in time). Only 2 out of 192 women reported that they felt there was not enough

staff. As such, there were enough personnel available to attend to them the vast majority of women.

5.3 PCMC subscale recording the lowest scores

A look at the various mean scores for the subscales shows that the Dignity and Respect scale recorded the lowest mean score (17.39 out of a possible 30 points) which is consistent with literature as one of the reported forms of mistreatment during childbirth is verbal abuse (Sando et al., 2017). The Communication and Autonomy scale received the highest percentage of high PCMC scores (76%) and also the highest mean score (23.0 out of a possible 27 points). This indicates that the LEKMA Hospital healthcare providers have established a rapport with the prospective mothers who deliver their babies in the facility, communicating adequately with them. Interaction with nurses and midwives also revealed the existence of proper training and supervision of staff on involving patients in the healthcare process which could account for the good performance on the Communication and Autonomy scale.

5.4 Factors that are associated with PCMC

Women feeling safe and at ease during their stay in the LEKMA Hospital was regarded as a reflection of the quality of their overall maternal care and by extension PCMC during childbirth. Although none of the individual level factors were significantly associated with feeling safe and at ease, there were a few disparities. For religious affiliation, approximately the same percentage of Muslim and Christian women felt safe and at ease during childbirth, indicating the absence of religion based discrimination in the LEKMA Hospital. The younger and older mothers also recorded similar percentages of feeling safe and at ease at the hospital which also indicates reduced age discrimination in the facility, contrary to evidence found in literature. Surprisingly, although single women recorded more low PCMC scores than

married, divorced and widowed women, majority of them reported feeling safe and at ease. For the educational background, majority of women with no formal education and primary school education felt safe and at ease. The same was observed for the monthly income of the women where a greater percentage of women earning below 1000 cedis a month felt safe and at ease. Women reporting chronic medical conditions also had a greater percentage feeling safe and at ease as compared to their counterparts reporting no chronic medical conditions which was consistent with literature (Vedam et al., 2017).

Finally, for the health facility factors, those in less crowded wards and those not experiencing interruptions in power and water supply feeling safer and more at ease. After the binary logistic regression, these factors were found to be significant in influencing the general quality of maternity care received which was consistent with studies carried out by (Kumar & Dansereau, 2014). Thus, the factors associated with PCMC are the level of crowding in the wards and availability of uninterrupted power and water supply.

5.5 Strengths of the study

This study successfully utilized and validated the PCMC scale, a tool developed in 2018 which has never been used in Ghana. The scale and its subscales also had Cronbach's alpha ranging between 0.674 to 0.732 indicating good reliability. This study also provides new insights on quality maternal health care services, specifically contributes to the limited literature on PCMC in Ghana.

5.6 Limitations of the study

The use of income as a measure of socioeconomic status could be problematic as earnings recorded were self-reported and therefore not an accurate measure. According to (Doocy & Burnham, 2013) there may be response bias as respondents alter their actual salaries either

in hope of receiving aid or with the intention of appearing wealthy and influential. Also, there may have been recall bias at the time of data collection as some women had delivered six months earlier and may not have remembered and reported events accurately. Finally, labour and childbirth is a painful process and as such due to pain, the women may have had a distorted memory of the events that occurred and the care they received.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

Maternal mortality continues to be a challenge in the developing world, as such, attention should be paid to quality of maternity care. This study provides key assessment of maternal care and child delivery in the LEKMA hospital and based on these findings, the following conclusions can be made.

The general PCMC received by women during labour and childbirth in the LEKMA hospital was good as only 1 woman out of 192 women recorded a low PCMC score. Over 75% of the women sampled however recorded high scores. Also, of the three scales considered for the study, the lowest PCMC scores were observed for the Dignity and Respect scale, followed by the Supportive care scale and then the Communication and Autonomy scale in which women recorded the highest scores. Factors found to be associated with PCMC were overcrowding in wards and availability of uninterrupted power or water.

6.2 Recommendations

It is thus recommended that attention be paid to disparities in person- centered care which would be critical to attaining health equity and the SDG commitment that ‘no one is left behind’. Additionally, the scale is reliable and can be adopted across different contexts to compare women’s experiences of care, and to inform and evaluate quality improvement efforts to promote a comprehensive PCMC among women. This is because the PCMC scale provides a valuable tool for the growing number of quality improvement initiatives in Ghana, and beyond. The scale may also be used to support policy and programmatic efforts to improve the quality of maternity care since it is still unclear how to measure and evaluate

women's experiences of care across different facilities in Ghana. This scale would help to bridge this gap.

Finally, this scale can be adopted as it will be valuable for assessing implementation of the WHO recommendations on intrapartum care for a positive childbirth experience by providing clear guidelines and standard measurement tools. This will help improve accountability of facilities, support providers/staff in understanding how to provide person-centered care, and ensure women's voices, preferences, and values are front and centre in the care they receive.

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APPENDICES

Appendix I: Questionnaire adopted from (Afulani, Sayi, et al., 2018)

Section A: Demographic Information

1. Age at last birthday
2. Religion Christian Muslim Traditionalist Other.....

Section B: Individual Level Factors

3. Marital status..... Single Married Divorced Widowed
4. Level of education..... No formal education Primary school JHS SHS
 University
5. Occupation
6. Monthly income..... <1000 cedis 1000- 3000 cedis > 3000 cedis
7. Do you have any chronic medical conditions you are aware of? ... Yes No
8. When did you give birth at this hospital? ... __/__/____
9. Have you delivered at this facility before? ... Yes No

Section C: Health facility Factors

10. Was the labour ward crowded when you delivered? Yes No
11. Was there uninterrupted power supply during your stay at the hospital? Yes
No
12. Was there uninterrupted water supply during your stay in the hospital? Yes No

Section D: PCMC Scale

Subscale 1: Dignity and Respect

13. During your time in the health facility did the doctors, nurses, or other health care providers introduce themselves to you when they first came to see you?
 No, never Yes, a few times Yes, most of the time Yes, all the time

14. Did the doctors, nurses, or other staff at the facility treat you with respect?

No, never Yes, a few times Yes, most of the time Yes, all the time

15. Did the doctors, nurses, and other staff at the facility treat you in a friendly manner?

No, never Yes, a few times Yes, most of the time Yes, all the time

16. Did the doctors, nurses, or other health care providers call you by your name?

No, never Yes, a few times Yes, most of the time Yes, all the time

17. Did you feel the doctors, nurses, or other health providers shouted at you, scolded, insulted, threatened, or talked to you rudely?

No, never Yes, a few times Yes, most of the time Yes, all the time

18. Did you feel like you were treated roughly like pushed, beaten, slapped, pinched, physically restrained, or gagged?

No, never Yes, a few times Yes, most of the time Yes, all the time

19. Were you often kept waiting?

No, never Yes, a few times Yes, most of the time Yes, all the time

20. Did you feel the doctors, nurses or other staff at the facility took the best care of you?

No, never Yes, a few times Yes, most of the time Yes, all the time

21. Did you feel you could completely trust the doctors, nurses or other staff at the facility with regards to your care?

No, never Yes, a few times Yes, most of the time Yes, all the time

22. Did the doctors, nurses or other staff at the facility ask you or your family for money other than the official cost?

No, never Yes, a few times Yes, most of the time Yes, all the time

Subscale 2: Communication and autonomy

23. Did you feel like the doctors, nurses or other staff at the facility involved you in decisions about your care?

No, never Yes, a few times Yes, most of the time Yes, all the time

24. Did the doctors, nurses or other staff at the facility ask your permission/consent before doing procedures and examinations on you?

No, never Yes, a few times Yes, most of the time Yes, all the time

25. During the delivery, do you feel like you were able to be in the position of your choice?

No, never Yes, a few times Yes, most of the time Yes, all the time

26. Did the doctors, nurses or other staff at the facility speak to you in a language you could understand?

No, never Yes, a few times Yes, most of the time Yes, all the time

27. Did the doctors and nurses explain to you why they were doing examinations or procedures on you?

No, never Yes, a few times Yes, most of the time Yes, all the time

28. Did the doctors and nurses explain to you why they were giving you any medicine?

No, never Yes, a few times Yes, most of the time Yes, all the time

29. Did you feel you could ask the doctors, nurses or other staff at the facility any questions you had?

No, never Yes, a few times Yes, most of the time Yes, all the time

30. During examinations in the labour room, were you covered up with a cloth or blanket or screened with a curtain so that you did not feel exposed?

No, never Yes, a few times Yes, most of the time Yes, all the time

31. Do you feel like your health information was or will be kept confidential at this facility?

No, never Yes, a few times Yes, most of the time Yes, all the time

Subscale 3: Supportive Care

32. Were you allowed to have someone you wanted (outside of staff at the facility, such as family or friends) to stay with you during labour?

No, never Yes, a few times Yes, most of the time Yes, all the time

33. Were you allowed to have someone you wanted to stay with you during delivery?

No, never Yes, a few times Yes, most of the time Yes, all the time

34. Did the doctors and nurses at the facility talk to you about how you were feeling?

No, never Yes, a few times Yes, most of the time Yes, all the time

35. Did the doctors, nurses or other staff at the facility support your anxieties and fears?

No, never Yes, a few times Yes, most of the time Yes, all the time

36. Do you feel the doctors or nurses did everything they could to help control your pain?

No, never Yes, a few times Yes, most of the time Yes, all the time

37. When you needed help, did you feel the doctors, nurses or other staff at the facility paid attention?

No, never Yes, a few times Yes, most of the time Yes, all the time

38. Do you think there was enough health staff in the facility?

No, never Yes, a few times Yes, most of the time Yes, all the time

Section E:

39. In general, would you say you felt safe and at ease in the facility? Yes No

40. Additional Comments

Appendix II: Consent Forms for participation in the study

A. PARTICIPANT INFORMATION SHEET FOR ADULTS (>18 years)

Study ID _____ Initials of participant _____

Study Title: Assessing Person- centered Maternity Care in a Ghanaian health facility.

Principal Investigator: Karen Ocansey

Address: School of Public Health, University of Ghana, Legon.

This interview is being conducted on behalf of Karen Ocansey, a Master of Public Health student of University of Ghana, by

Introduction

I am Karen Ocansey, a Master of Public Health student from the University of Ghana, Legon. I am undertaking this research entitled ‘Assessing Person- centered Maternity Care in a Ghanaian Health Facility’ in fulfilment of the requirement of the Master of Public Health award. Below are points you should take into consideration before agreeing to participate in this study.

Background Information

Maternal mortality is defined as the probability of a woman losing her life as a result of pregnancy or childbirth, or in the 42 days after delivering a child. Maternal mortality continues to be high in middle income countries such as Ghana, and many strategies have been suggested to curb this phenomenon. This study seeks to investigate the quality of treatment being received by pregnant women when they go to health facilities to deliver, as studies show that the kind of treatment received by women is highly associated with maternal mortality.

Nature of the research

This study is a quantitative cross sectional study.

Benefits

There will be no direct benefits from this study. However, data and findings from this study will help identify factors influencing poor treatment received by pregnant women and the groups of women who are often mistreated by health practitioners. This will then be taken into consideration in training health practitioners to improve quality of maternal care and in the long run, reduce maternal mortality.

Risks

There is minimal risk in participating in this study, as some questions may affect participants emotionally. However, participants will not have to pay any token to be a part of this study.

Compensation

There will be no financial compensation. However, refreshments will be served in the form of a drink and pastry for time spent.

Time required

Participation in this study will require completion of a questionnaire and will take between thirty to forty- five minutes of your time.

Privacy/ Confidentiality

Information collected from you will be treated as confidential and used only for the purposes stated. You will not be identified by name in any reports or publications resulting from this study. Hard copies of data collected will be kept in a locked cupboard in a secure location with access to only the principal investigator and the study team, and softcopies will be saved on a hard drive with a password.

Rights as a participant

Participation in this study is strictly voluntary. You also reserve the right to withdraw from this study at any point. Withdrawal from this study will not in any way affect your

activities at this hospital. You are also at liberty to decline to answer a question if the question covers a sensitive subject.

Ethical Issues

This study has gone through the appropriate Institutional Review Board and has been given approval to be conducted. As such, the study is ethical and safe to participate in.

Further Information

If further information is required, contact the Principal Investigator, Karen Ocansey, on telephone number 0503011346 or 0548078725 or via email address karenocansey@gmail.com. You can also contact the academic supervisor, Dr. Ernest Maya via email address maya_ernest@yahoo.co.uk or the Ghana Health Service ethics review department on telephone number 0501001122. Results from this study will be made available to the hospital if participants wish to know the outcome of the study. Data collected will be destroyed after five years.

Informed Consent Form

I declare that I have been adequately informed about this study entitled ‘Assessing Person- centered Maternity Care in a Ghanaian Health Facility’. I have been informed about the aim of the study, the procedure, benefits and risks of this study. Outstanding questions I had have been answered to my satisfaction. I understand that this study is strictly voluntary and I reserve the right to withdraw my consent at any time. I also understand that information obtained will be treated as confidential and only used for purposed stated which is to assist in improving the quality of maternal care in Ghana.

I freely agree to take part in this study

Name of participant

Signature/thumbprint of participant

Date __/__/____

***If volunteer does not understand English, a translator must sign here;**

The benefits, risks and procedures of the study were translated and explained to the participant by me. All questions were adequately answered and the participant agreed to participate in this study.

Name and signature of translator

Date __/__/____

***If volunteer cannot read the form themselves, a witness must sign here;**

The benefits, risks and procedures of the study were read and explained to the participant in my presence. All questions were adequately answered and the participant agreed to participate in this study.

Name and signature of witness

Date __/__/____

I certify that the benefits, risks and procedures of this study have been adequately discussed and explained to the above individual.

Name and signature of person who obtained consent

Date __/__/____

B. PARENTAL PARTICIPANT INFORMATION SHEET

Study Title: Assessing Person- centered Maternity Care in a Ghanaian health facility.

Principal Investigator: Karen Ocansey

Address: School of Public Health, University of Ghana, Legon.

This interview is being conducted on behalf of Karen Ocansey, a Master of Public Health student of University of Ghana, by

Introduction

I am Karen Ocansey, a Master of Public Health student from the University of Ghana, Legon. I am undertaking this research entitled ‘Assessing Person- centered Maternity Care in a Ghanaian Health Facility’ in fulfilment of the requirement of the Master of Public Health award. Below are points you should take into consideration before agreeing to participate in this study.

Background Information

Maternal mortality is defined as the probability of a woman losing her life as a result of pregnancy or childbirth, or in the 42 days after delivering a child. Maternal mortality continues to be high in middle income countries such as Ghana, and many strategies have been suggested to curb this phenomenon. This study seeks to investigate the quality of treatment being received by pregnant women when they go to health facilities to deliver, as studies show that the kind of treatment received by women is highly associated with maternal mortality.

Nature of the research

This study is a quantitative cross sectional study.

Background Information

Maternal mortality continues to be high in middle income countries such as Ghana, and many strategies have been suggested to curb this phenomenon. This study seeks to investigate the quality of treatment being received by pregnant women when they go to health facilities to deliver, as studies show that the kind of treatment received by women is highly associated with maternal mortality.

Benefits

There will be no direct benefits from this study. However, data and findings from this study will help identify factors influencing poor treatment received by pregnant women and the groups of women who are often mistreated by health practitioners. This will then be taken into consideration in training health practitioners to improve quality of maternal care and in the long run, reduce maternal mortality.

Risks

There is minimal risk in participating in this study, as some questions may affect participants emotionally. However, participants will not have to pay any token to be a part of this study

Compensation

There will be no financial compensation. However, refreshments will be served to your child in the form of a drink and pastry for time spent.

Time required

Participation in this study will require completion of a questionnaire and will take between thirty to forty- five minutes of your child's time.

Privacy/ Confidentiality

Information collected from your child will be treated as confidential and used only for the purposes stated. Your child will not be identified by name in any reports or publications resulting from this study. Hard copies of data collected will be kept in a locked cupboard in a secure location with access to only the principal investigator and the study team, and softcopies will be saved on a hard drive with a password.

Rights as a participant

Participation in this study is strictly voluntary. You also reserve the right to withdraw your child from this study at any point. Withdrawal from this study will not in any way affect your activities or your child's activities at this hospital. You are also at liberty to decline to answer a question if the question covers a sensitive subject.

Ethical Issues

This study has gone through the appropriate Institutional Review Board and has been given approval to be conducted. As such, the study is ethical and safe to participate in.

Further Information

If further information is required, contact the Principal Investigator, Karen Ocansey, on telephone number 0503011346 or 0548078725 or via email address karenocansey@gmail.com. You can also contact the academic supervisor, Dr. Ernest Maya via email address maya_ernest@yahoo.co.uk or the Ghana Health Service ethics review department on telephone number 0501001122. Results from this study will be made available to the hospital if participants wish to know the outcome of the study. Data collected will be destroyed after five years.

Parental Consent

I declare that I have been adequately informed about the aim of the study, the procedure, benefits and risks of this study. Outstanding questions I had have been answered to my satisfaction. I understand that this study is strictly voluntary and I reserve the right to withdraw my consent at any time. I also understand that information obtained from my child will be treated as confidential and only used for purposed stated which is to assist in improving the quality of maternal care in Ghana.

I freely agree to allow my child to take part in this study

Name of parent

Signature/thumbprint of parent

Date __/__/____

***If volunteer's parent does not understand English, a translator must sign here;**

The benefits, risks and procedures of the study were translated and explained to the participant by me. All questions were adequately answered and the participant agreed to participate in this study.

Name and signature of translator

Date __/__/____

***If volunteer's parent cannot read the form themselves, a witness must sign here;**

The benefits, risks and procedures of the study were read and explained to the participant's parent in my presence. All questions were adequately answered and the child's parents agreed that the child should participate in this study.

Name and signature of witness

Date __/__/____

I certify that the benefits, risks and procedures of this study have been adequately discussed and explained to the above individual.

Name and signature of person who obtained consent

Date __/__/____

C. PARTICIPANT INFORMATION SHEET FOR CHILD (<18 years)

Study ID _____ Initials of participant _____

Study Title: Assessing Person- centered Maternity Care in a Ghanaian health facility.

Principal Investigator: Karen Ocansey

Address: School of Public Health, University of Ghana, Legon.

This interview is being conducted on behalf of Karen Ocansey, a Master of Public Health student of University of Ghana, by

Introduction

I am Karen Ocansey, a Master of Public Health student from the University of Ghana, Legon. I am undertaking this research entitled ‘Assessing Person- centered Maternity Care in a Ghanaian Health Facility’ in fulfilment of the requirement of the Master of Public Health award. Below are points you should take into consideration before agreeing to participate in this study.

Background Information

Maternal mortality continues to be high in middle income countries such as Ghana, and many strategies have been suggested to curb this phenomenon. This study seeks to investigate the quality of treatment being received by pregnant women when they go to health facilities to deliver, as studies show that the kind of treatment received by women is highly associated with maternal mortality.

Benefits

There will be no direct benefits from this study. However, data and findings from this study will help identify factors influencing poor treatment received by pregnant women and the groups of women who are often mistreated by health practitioners. This will then be taken into consideration in training health practitioners to improve quality of maternal care and in the long run, reduce maternal mortality.

Risk

There is minimal risk in participating in this study, as some questions may affect participants emotionally. However, participants will not have to pay any token to be a part of this study

Compensation

There will be no financial compensation. However, refreshments will be served to your child in the form of a drink and pastry for time spent.

Time required

Participation in this study will require completion of a questionnaire and will take between thirty to forty- five minutes of your time.

Privacy/ Confidentiality

Information collected from you will be treated as confidential and used only for the purposes stated. You will not be identified by name in any reports or publications resulting from this study. Hard copies of data collected will be kept in a locked cupboard in a secure location with access to only the principal investigator and the study team, and softcopies will be saved on a hard drive with a password.

Rights as a participant

Participation in this study is strictly voluntary. You also reserve the right to withdraw from this study at any point. Withdrawal from this study will not in any way affect your activities at this hospital. You are also at liberty to decline to answer a question if the question covers a sensitive subject.

Ethical Issues

This study has gone through the appropriate Institutional Review Board and has been given approval to be conducted. As such, the study is ethical and safe to participate in.

Further Information

If further information is required, contact the Principal Investigator, Karen Ocansey, on telephone number 0503011346 or 0548078725 or via email address karenocansey@gmail.com. You can also contact the academic supervisor, Dr. Ernest Maya via email address maya_ernest@yahoo.co.uk. or the Ghana Health Service ethics review department on telephone number 0501001122. Results from this study will be made available to the hospital if participants wish to know the outcome of the study. Data collected will be destroyed after five years. Also keep in mind that, even if your parents agree, you can still decide not to participate.

Child Assent Form

I declare that have been adequately informed about the aim of the study, the procedure, benefits and risks of this study. Outstanding questions I had have been answered to my satisfaction. I understand that this study is strictly voluntary and I reserve the right to withdraw my consent at any time. I also understand that information obtained will be treated as confidential and only used for purposed stated which is to assist in improving the quality of maternal care in Ghana.

I freely agree to take part in this study

Name of child

Signature/thumbprint of child

Date __/__/____

Name of person who obtained assent

Signature of person who obtained assent

Date __/__/____

***If volunteer does not understand English, a translator must sign here;**

The benefits, risks and procedures of the study were translated and explained to the participant by me. All questions were adequately answered and the participant agreed to participate in this study.

Name and signature of translator

Date __/__/____

***If volunteer cannot read the form themselves, a witness must sign here;**

The benefits, risks and procedures of the study were read and explained to the participant in my presence. All questions were adequately answered and the participant agreed to participate in this study.

Name and signature of witness

Date __/__/____

I certify that the benefits, risks and procedures of this study have been adequately discussed and explained to the above individual.

Name and signature of person who obtained consent

Date __/__/____