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WOMEN SATISFACTION WITH QUALITY OF POSTNATAL CARE IN THE LEDZOKUKU KROWOR MUNICIPAL ASSEMBLY (LEKMA) HOSPITAL

BY

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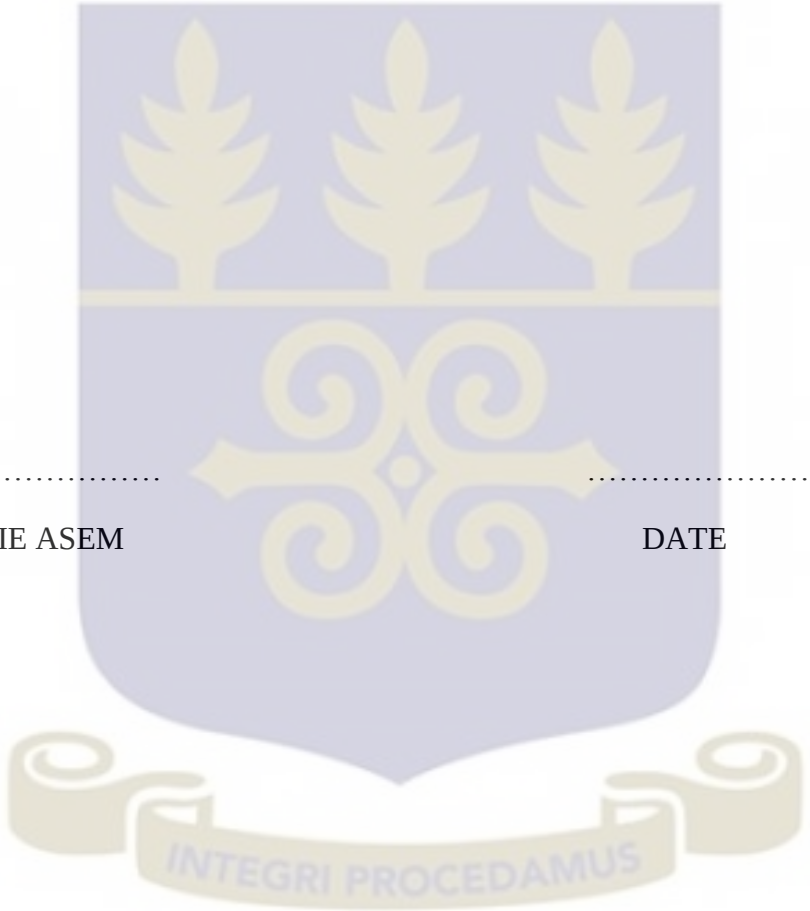
DECLARATION

I, Charity Kakie Asem, hereby declare that except for other people's work which have been duly cited and acknowledged, this work is entirely my own original research which was done under strict supervision. This dissertation has neither in part nor whole been presented elsewhere for another degree.



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DEDICATION

This work is dedicated to the Almighty God for His grace and mercies that has brought me this far.

I also dedicate the work to my lovely mother, Madam Comfort Tetteh, for her prayers, love and immense support through every endeavour of my life. God bless you abundantly, mummy.

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ABSTRACT

Background: The postnatal period is a very crucial period for both mother and baby. In Ghana however, postnatal care (PNC) coverage is low – 36% of postpartum mothers did not receive postnatal care at all in 2013 - as compared to other maternal health services like antenatal care (ANC). This study explored women's perceived quality of postnatal care and level of satisfaction in the Ledzokuku Krowor Municipal Assembly (LEKMA) hospital.

Methods: A cross sectional study of 300 women was conducted at the LEKMA hospital. Structured questionnaires based on Donabedian's framework for assessing quality of care, were used to obtain data on women's perception and satisfaction with quality of postnatal care. Descriptive statistics was used to show the distribution of explanatory variables and bivariate logistic regression was used to investigate associations between indicators of quality of care, level of satisfaction and utilisation of PNC services.

Results: The results show that 92% of women were satisfied with the postnatal services. Most of them were satisfied with the cleanliness of the environment, clarity of diagnosis, interpersonal behaviour, and availability of medicines and laboratory services. All of the socio-demographic characteristics, except age, had no significant relationship with women's perception of quality of postnatal care.

Conclusion: There is need for more interventions to further improve and sustain the quality of postnatal care provided to postpartum women at the LEKMA hospital.

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ANC	-	Antenatal care
GHS	-	Ghana Health Service
GSS	-	Ghana Statistical Service
LEKMA	-	Ledzokuku Krowor Municipal Assembly
MDG	-	Millennium Development Goal
RHD	-	Reproductive Health Division
FHD	-	Family Health Division
PNC	-	Postnatal Care
UN	-	United Nations
WHO	-	World Health Organisation

CHAPTER 1

INTRODUCTION

1.1 Background

Between 1990 and 2013, the global maternal mortality ratio (i.e. the number of maternal deaths per 100 000 live births) declined by only 2.6 per cent every year, contrary to the estimated annual decline of 5.5 per cent required to achieve Millennium Development Goal Five (MDG5) [WHO (2014); Srivastava, Avan, Rajbangshi, & Bhattacharyya (2015)]. In 2013, most of these deaths were in low and middle income countries (LMICs), where the maternal mortality ratio is about 14 times higher than in high income countries (United Nations, 2015).

In Ghana, maternal health services utilisation has been improved with the aid of the Free Maternal Care (FMC) policy. The policy which was introduced in 2003 offers women a complete package of antenatal, perinatal and postnatal care. Specifically, all women are allowed six free antenatal visits including supplementary visits to out-patient department, free delivery at a health facility which also caters for complicated birth procedures, two postnatal visits within six weeks; and care for the new-born for a period of three months (Ganle et al., 2015). Although the policy aimed at reducing financial barriers in the utilization of maternity services (Witter, Arhinful, Kusi, & Zakariah-Akoto, 2007), disparities in access and use of services have not been removed (Ganle, Parker, Fitzpatrick, & Otupiri, 2014). Indeed, maternal mortality ratio in Ghana was 143.8 per 100,000 live births as at 2014 (GHS, 2014).

The quality of skilled care provided during pregnancy, delivery, and the period after delivery (postnatal) is crucial for saving the lives of mothers and their babies. Among the three main services provided for pregnant women, antenatal care (ANC) services dominate the chart of preventive health services delivery that detects and treats potential health problems throughout the course of the pregnancy (Magoma, Requejo, Campbell, Cousens, & Filippi, 2010). ANC creates an environment to facilitate development of strong provider-client relationships and an avenue to exchange vital information that can result in improved obstetric outcomes (Kambala et al., 2015).

During labour and delivery, there is the need for a woman to be constantly monitored and assisted by skilled birth attendants for a successful delivery. Skilled attendance at delivery has been identified to have significant impact in preventing maternal and neonatal deaths (Gabrysch & Campbell, 2009). However, many women in LMICS still deliver without skilled assistance (Wilunda et al., 2014). Although the proportion of deliveries attended to by skilled health personnel increased globally from 59 per cent around 1990 to 71 per cent around 2014, more than one in four babies and their mothers are left without access to medical care by a medical doctor, nurse or midwife during childbirth (United Nations, 2015). In Ghana for instance, approximately 45.3 per cent of women delivered without the assistance of skilled personnel in 2013 (GHS, 2013).

Postnatal care (PNC) services, which begin immediately after birth until six weeks, are also critical to the health and survival of both the mother and her new-born child. An estimated 60 per cent of the world's 270,000 annual maternal deaths occur within 48 hours of delivery, and two thirds of the three million annual new born deaths occur within the first week (Warren et al., 2010; Tesfahun et al., 2014). Indeed, the first 28 days of life are the most critical for the survival

of children. For instance, of the almost 6 million children who died before their fifth birthday in 2015, about 1 million died on the first day of birth; 1 million died in the first week; and around 2.8 million died during their first 28 days of life (United Nations, 2015). Thus neonatal deaths now represent a larger share of total under-five deaths and every region of the world is experiencing an increase in the proportion of under-five deaths that occur in the neonatal period (United Nations, 2015).

Although early treatment in the postnatal period could save more lives and promote healthy behaviours among mothers, the postnatal period is often neglected, while women and new-borns hardly ever receive optimum postnatal care (Tesfahun et al., 2014). In Ghana for example, antenatal coverage in 2013 was 90.1 per cent as against 64.1 per cent for postnatal coverage (GHS, 2013). Poor PNC practices have often been identified to be one reason why women do not sometimes want to receive PNC. In Ghana for example, recent evidence suggests that the provision of skilled PNC services that are sometimes unfriendly, socially degrading and even abusive to women, have combined to discourage many women from using skilled PNC services despite the fact that these services are provided free of charge (Ganle, Otupiri, et al., 2015). In a number of studies across Africa, poor quality of maternal health care - through abuse and maltreatment - has also been reported as one of the reasons why women may fail to seek health care at health facilities (Kruk et al., 2014; Moyer et al., 2014; Yakubu et al., 2014). This often results in the inability of healthcare providers to detect post-delivery problems including potential complications, haemorrhage, hypertensive disorders, and sepsis in order to provide appropriate treatment promptly (Tunçalp et al., 2015). Consequently, the quality of maternal healthcare provided at healthcare facilities has started to receive global attention, and many

researchers in maternal and child health have joined the quality of care debate (Powell-Jackson et al. 2009; Baral 2012; Souza et al. 2014; Tripathi et al. 2015; Bohren et al. 2015). The WHO's 2015 vision on quality of care for mothers and new-borns illustrates how important the debate on maternal healthcare quality has become (Ö Tunçalp et al., 2015). This study contributes to the quality of care debate by assessing women's perception of, and satisfaction with, the quality of postnatal care in the Ledzokuku Krowor Municipal Assembly (LEKMA) hospital and how this affects utilisation of skilled care services in healthcare facilities.

1.2 Problem statement

While interventions have been scaled-up globally to increase the availability of maternal health services as well as maintain acceptable quality standards of care, not every woman has access to postnatal care services. In 2013 for example, postnatal care coverage in Ghana was 64.1%, an improvement of 1.4% from the 2012 coverage of 62.7% (GHS, 2013). This increase is however not evident in all the ten regions of the country. While some regions performed extremely well by nearly reaching the national target of 90%, many others fell below the target (GHS, 2013). The Northern Region recorded the highest postnatal coverage of 89.7%, while Ashanti Region recorded the lowest coverage of 49.4% (GHS, 2013). . The Greater Accra Region was among the regions that recorded postnatal coverage (63 %) below the national target of 90 % (GHS, 2013). According to the 2014 annual report of the Family Health Division of the Ghana Health Service, 63.7% of women were reported to have received a PNC check up in the first two days after birth in the Greater Accra Region (GHS, 2014). This figure also fell below the 78% postnatal care services utilisation in the country (GSS, 2014).

With this relatively low postnatal care utilisation levels, many women living in the Ledzokuku Krowor Municipality, may suffer from post-delivery complications like sepsis, anaemia and haemorrhage which could lead to deaths among these women. Also, the increase in the maternal mortality ratio in the municipality from 111.9 per 100,000 live births in 2013 to 165.2 per 100,000 live births in 2014 (GHS, 2014) highlights the need for empirical research to assess women's satisfaction with the care they are provided during their postnatal period. Although intangible in nature, quality of care largely explains why women do not access services at all, access them late or suffer an avoidable adverse outcome, despite timely presentation at the health facility (Hulton et al., 2000: Tuncalp et al, 2015). The perceptions of women on the quality of maternal care services influence decisions to seek care, which is essential to improving maternal and neonatal outcomes (Srivastava *et al*., 2015; Bohren et al., 2015).

Indeed, a number of recent studies have shown that the way in which women perceive the quality of care they are offered at health facilities as well as their satisfaction with care quality influence health service utilisation (Worku et al., 2013; Emelumadu et al., 2014: Srivastava *et al*., 2015). Although a number of scholars have started to research into the important role quality maternal healthcare plays in both stimulating demand for skilled care services and reducing maternal and neonatal morbidity and mortality, empirical evidence related to women's perceptions of, and satisfaction with, the quality of routine intrapartum and immediate postpartum care, including essential postnatal and new-born care, are lacking (Tripathi et al., 2015). In particular, while there are a few studies that have evaluated care quality (see Baltussen, Yé, Haddad, & Sauerborn, 2002; Anwar, Kalim, & Koblinsky, 2009), the perspectives of women have received relatively little attention in both clinical practices and research (Granja, Machungo, &

Bergstrom, 2000; Tripathi et al., 2015). In the context of Ghana more generally, there are few studies that have examined the quality of maternal health care offered at health facilities (Moyer, Adongo, Aborigo, Hodgson, & Engmann, 2014). In the Ledzokuku Krowor Municipality more specifically, the author is not aware of any previous studies that have assessed women's perceptions of, and satisfaction with, the quality of routine PNC, and the ways in which these perceptions may affect service utilisation. As efforts to achieve the maternal health goals continue to grow, assessment of the quality of routine PNC services women receive is essential to ensuring the delivery of appropriate interventions to reduce maternal and new born mortality and morbidity (Tripathi et al., 2015). In view of this, and given the maternal health situation in the Ledzokuku Krowor municipality, as well as the knowledge gaps identified above, including the fact that there is little information about mothers' perception of, and satisfaction with, the quality of PNC services, this study sought to assess women's satisfaction with postnatal care services in the Municipality.

1.3 Research objectives

The general objective of this study was to assess women's perception of, and satisfaction with, the quality of postnatal care in the Ledzokuku Krowor Municipality and how this affects utilisation of skilled care services in the LEKMA hospital

Specifically, the study sought to:

1. Explore reasons why women patronise postnatal services at the LEKMA Hospital.
2. Assess women's perceptions of quality of postnatal services at the LEKMA Hospital.

3. Assess women's satisfaction with the quality of postnatal care provided at the LEKMA Hospital.

4. Determine how women's perceptions of, and satisfaction with, the quality of postnatal care affect utilisation of skilled care.

1.4 Research Questions

1. Why do women patronise postnatal services at the LEKMA hospital?
2. How do women perceive the quality of PNC offered at the LEKMA hospital?
3. Are women satisfied with the quality of PNC provided in health facilities at the LEKMA hospital?
4. How do women's perceptions of, and satisfaction with, the quality of postnatal care provided at the LEKMA hospital affect PNC service utilisation?

1.5 Justification

The findings from this research could be a source of evidence for policy makers in planning and implementing interventions to increase utilisation of postnatal services and reduce maternal and neonatal mortality. It can also help management of the LEKMA Hospital to know specific areas that need improvement within the hospital to ensure total satisfaction with postnatal care. In essence, this study adds to the number of researches that have been done to bring more attention to quality of PNC in the healthcare system.

1.6 Conclusion

This chapter gave a background to the study, articulated the research problem and set out the objectives and research questions. The next chapter reviews relevant related literature in order to properly situate the present study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature related to quality of care and women's satisfaction with maternal health services especially postnatal care in order to provide a context for the present study. The literature review is based on empirical literature from developing and developed countries with emphasis on the findings and methodological issues. Relevant journals from databases such as Biomed Central, Pubmed, and Google Scholar were searched with keywords such as women's (maternal) satisfaction, perception, quality of care, postnatal care and maternal health services

2.2 Understanding postnatal care

PNC is referred to as the period after childbirth to six weeks after, within which extra attention is needed to safeguard the overall health of a mother and her new-born (Demott et al., 2006; WHO, 2013). The WHO (2013) has provided recommendations on PNC for mothers and their new-borns. The target is health professionals who are responsible for providing PNC to women and new-borns as well as policy-makers and managers of maternal and child health programmes, health facilities, and teaching institutions in areas where resources are limited. The recommendations by WHO are summarised under three main headings namely, provision of PNC to mothers and new-borns; content of PNC for the new-born; and content of PNC for mother.

2.2.1. Provision of postnatal care to mothers and new-borns

This refers to the time of discharge, number and timing of PNC and home visits for PNC (WHO, 2013). It is recommended that after a normal delivery, a healthy mother and her new-born should receive care in the facility for at least 24 hours before discharge (WHO, 2013). Afterwards, there should be at least three additional postnatal contacts for all mothers and new-borns, on day 3 (48–72 hours), between days 7–14 after birth, and six weeks after birth (WHO, 2013). Home visits in the first week after birth is also highly recommended.

2.2.2 Content of PNC for the new-born

The WHO (2013) also recommends that signs such as 'stopped feeding well', history of convulsions, fast breathing (breathing rate ≥60 per minute), severe chest in-drawing, no spontaneous movement, fever (temperature ≥37.5 °C), low body temperature (temperature <35.5 °C), jaundice in first 24 hours of life, or yellow palms and soles, should be checked out for immediate attention. Caregivers should encourage women- to seek healthcare early if they identify any of the above danger signs in-between PNC visits. Also exclusive breastfeeding for six months and proper cord care must be ensured (WHO, 2013). Use of chlorhexidine in these situations may be considered only to replace application of a harmful traditional substance, such as cow dung, to the cord stump (WHO, 2013). Bathing should be delayed until 24 hours after birth and babies appropriately clothed with one to two layers of clothes and hats/caps. Preterm and low-birth-weight babies should be identified immediately after birth and should be provided special care as per existing guidelines (WHO, 2013).

2.2.3 Content of PNC for the mother

The WHO (2013) further recommends that all postpartum mothers should be regularly checked within 24 hours after birth for vaginal bleeding, uterine contraction, fundal height, temperature and heart rate (pulse). Blood pressure also should be measured shortly after birth. If normal, the second blood pressure measurement should be taken within six hours (WHO, 2013). Subsequently, enquiries should continue to be made about general wellbeing and the following should be checked: micturition and urinary incontinence, bowel function, healing of any perineal wound, headache, fatigue, back pain, perineal pain and perineal hygiene, breast pain, uterine tenderness and lochia (WHO, 2013). Breastfeeding progress should be assessed at each postnatal visit. Here also, women should be asked about their emotional well- being and available social support between 10–14 days after birth, to detect mild or severe postpartum depression or "postpartum blues" ("maternal blues") (WHO, 2013). Any issues of emotional and psychosocial concern should be appropriately managed or referred. Mothers should be counselled on nutrition, hygiene especially washing of hands before breastfeeding, family planning and contraceptive usage, physical exercise and consistent use of insecticides treated mosquito nets (WHO, 2013). Iron and folic acid supplementation should be provided for at least three months. Lastly, the WHO (2013) recommends antibiotics usage for women with a vaginal delivery and a third or fourth degree perineal tear for prevention of wound complications.

2.3. Understanding quality of care

Quality of care has been defined in so many ways by different people. Using the marketing concept, Bitner & Hubbert (1994) defined service quality as the complete assessment by

customers of the relative inferiority or superiority of an organisation and its services (Mpinganjira, 2011). de Jager, du Plooy, & Ayadi (2010) explained quality within healthcare service delivery as referring to services that meet set standards, implying excellence, and satisfy the needs of both consumers and healthcare practitioners in a way that adds significant meaning to both parties' healthcare experiences.

With respect to quality of care in maternal health, defining its special dimensions could be quite challenging. However, Hulton, Matthews, & Stones (2000) in developing a framework for evaluating quality of care in maternal health services defined maternal healthcare quality as *"the degree to which maternal health services for individuals and populations increase the likelihood of timely and appropriate treatment for the purpose of achieving desired outcomes that are both consistent with current professional knowledge and uphold basic reproductive rights"* (p. 199). This implies that to ensure quality of care within the health facility, there is the need to build capacity of human resources with skills necessary to manage complications that are related to pregnancy, labour and delivery and the period after in the midst of appropriate infrastructure and supplies. This must be consistent with the needs of women so they can accept these services and utilise them accordingly.

Embedded in almost all the definitions identified throughout literature is the element of acceptability of service by the healthcare consumer (Raven et al., 2012). This implies that the provision of healthcare must be congruent with the needs and expectations of patients as influenced by their beliefs, culture, values and preferences. Therefore, services could be provided in the most appropriate form, yet not acceptable by the consumer it was designed for. On this basis and for the purposes of the present dissertation, Hulton et al. (2000) definition of quality of PNC, was adopted for the study.

2.3.1 Dimensions of Quality of Care

As quality of care is a multidimensional concept, evaluation of its separate dimensions is necessary. Grönroos (1984) defined and explained service quality and differentiated between the process of delivery (functional quality), which relates to the perceived quality and the actual output of the service (technical quality), which relates to objective quality. Technical quality in healthcare refers to the accuracy of diagnosis and procedures, while functional quality refers to the manner of delivery of healthcare. Sohail (2003) is of the opinion that service quality is primarily shaped by functional quality, because patients often find it difficult to assess the technical quality (see also de Jager et al., 2010).

One of the prominent conceptualisations of healthcare quality comes from the work of Donabedian (1988), who identified three dimensions of quality of care: structure, process and outcome. The structure component comprises physical infrastructure, equipment, staff credentials and monitoring procedures; the process component comprises access, comprehensiveness, co-ordination, continuity, appropriateness and staff/patient interpersonal relations; and outcome dimension comprises patient satisfaction, resolution or relief of symptoms and health status (Gross & Nirel, 1998).

More recently, Choi, Lee, Kim, & Lee, (2005) also argue that there are two approaches towards how to conceptualise health care quality. One is the traditional medical approach stressing the outcome of medical services from the point of view of care providers (what is provided). The other is the service marketing approach emphasising the process of medical care from the patient's perspective (how the service is provided). The World Health Organization (WHO,

2006) has also identified six dimensions to healthcare quality. These dimensions require that healthcare be:

- Effective: provision of health care that is adherent to an evidence-base practices, results in improved health outcomes for individuals and communities, and responsive to needs
- Efficient: delivering health care in a manner which maximises the use of resources and avoids waste;
- Accessible: delivering health care in a timely fashion, geographically sound, and in a setting where skills and resources meet medical need;
- Acceptable/patient-centred: delivering health care which takes into account the preferences and aspirations of individual service users and the cultures of their communities;
- Equitable: delivering health care which does not vary in quality because of personal characteristics such as gender, race, ethnicity, geographical location, or socioeconomic status;
- Safe: health care which minimizes risks and harm to service consumers (patients).

The foregoing clearly suggests that different people in different contexts understand quality and its dimensions in different ways, and this could potentially be a challenge when it comes to assessing quality of care.

2.3.2 Women's perceptions of quality of maternal healthcare

Although evidence on women's perception of maternal healthcare quality is limited, many studies have been conducted across the world to explore the perceptions of patients about the

quality of care they receive and subsequent utilisation in the future. For instance, Kambala et al. (2015), explored how women rate quality of maternal and new-born care in Malawi. The study was a cross sectional survey in which women who were exiting any of the three maternal healthcare services, namely antenatal, delivery and postnatal, in 33 selected facilities were interviewed. They measured perceptions of quality under three dimensions, i.e. interpersonal relations, conditions of the examination rooms and nursing care services. The findings of this study revealed that all the dimensions of care under consideration were perceived to be good by the participants. Socio demographic characteristics played a significant role. Women with higher levels of education better appreciated technical provision of services and perceived quality as high. Interpersonal relation was found to be strongly associated with perceived quality of care. More especially, participants rated quality high where the health workers introduced themselves, explained examination procedures, sought their consent, encouraged them to ask questions and assured them of privacy and confidentiality.

In a cross-sectional study conducted in Jordan, Mohammad, Shaban, Homer, & Debra (2014) identified and assessed three dimensions of quality of care, namely interpersonal factors, information-giving and participation in decision, and physical environment. They highlighted that women oftentimes are limited in decisions that concern them due to the fact that they have minimal information from caregivers to make any informed decisions. This often affects levels of satisfaction especially in the event of poor health outcomes. Unlike Kambala et al. (2015) study, Mohammad et al. (2014) found that there was no association between a woman's socio-demographic background and satisfaction with intrapartum care. Rather, obstetric variables such as episiotomy, induced labour, etc. were found to influence satisfaction. Women were likely to

score satisfaction low when they have experienced many obstetric interventions. It was highlighted that continuity of care may help limit such obstetric variables.

Karkee, Lee, & Pokharel (2014) in a longitudinal survey in Nepal on the perception of women about the quality of maternity services also identified that women perceived quality of service based on the type of health facility, i.e. maternity homes, public hospitals and private homes. Women's assessment of the quality of services provided them was based on items relating to physical structure of the health facility, delivery of healthcare services, and interpersonal aspects of health care. The mean scores of the overall quality of health facility and healthcare delivery was higher among private hospital users than those using maternity homes or public hospitals. Quality of interpersonal care in public hospitals recorded the lowest scores. However, analysis of perceived quality before and after delivery saw an improvement in the perception of quality of interpersonal care in the public hospital after delivery.

The perceptions of women about the post-natal period and their knowledge on maternal mortality also influence the patronage of postnatal services. A study conducted by Zamawe, Masache, & Dube (2015) revealed that uptake of PNC services was relatively lower in most developing countries like Malawi and Ghana, as compared to other maternal healthcare services. They attributed this to the perception of most women that antenatal and natal period are the most risky of the maternity period. Also, it was found that most participants had inadequate information on maternal morbidity and mortality. Apart from these factors, the study also found that long waiting time for treatment and separation of mother and baby during PNC clinic sessions reduces the utilisation of PNC. It was recommended that maternal health education should be intensified to increase awareness and promote PNC to safeguard the life of mother and new-born.

Tunçalp, Hindin, Adu-Bonsaffoh, & Adanu, (2012) mentioned that perception of women especially those who had near-misses or experienced life threatening events during delivery is very crucial in an attempt to improve obstetric care and avoid pregnancy and its related diseases and deaths. The study which was conducted in an Accra-based facility shows that, although women perceive the care they receive during a complicated birth as life-saving, they were unhappy with the attitudes of some health personnel and also with the inadequate information they receive on their conditions.

2.4 Women's satisfactions with maternal healthcare and associated factors

Several factors have been identified to influence patient's satisfaction in previous studies (Naidu, 2009; Matejić, Milićević, Vasić, & Djikanović, 2014; Srivastava et al., 2015). These include organisational structure of clinics, treatment length, access, cost, physicians' communication with patients, caregivers' behaviour and attitudes, health workers' competence, and patient expectations.

Srivastava et al. (2015) conducted systematic review of literature in developing countries to investigate some determinants of women's satisfaction with maternal care quality. They used the PRIMA framework to review both qualitative and quantitative studies. The determinants that were identified were classified under the Donabedian framework of structure, process, and outcome. Factors considered under process included, promptness, interpersonal behaviour, privacy/confidentiality, perceived good care, cognitive support, emotional support, and preference for female caregivers. For structure, review of studies showed that physical environment, cleanliness, human resources, medicines and supplies were key determinants. Under outcome, only the outcome of delivery in terms of survival and well-being of mother and

new-borns was considered. Other factors that were identified to influence levels of patient satisfaction were access, cost of care, and maternal characteristics such as age, educational level and parity. Interpersonal behaviour was found to be a key determinant of maternal satisfaction. However, Srivastava et al. (2015) in their review did not conduct any form of meta-analysis to establish the strengths of association between these determinants and maternal satisfaction. Although there are appreciable numbers of home deliveries in most developing countries, most of the studies were on facility-based deliveries.

Ashraf, Ashraf, Rahman, & Khan (2012) also identified some non-medical factors such as cost, convenience and accessibility to be critical in determining the satisfaction with level of the services by women in Pakistan. They mentioned that although these factors are not directly linked to the health services, they do have a bearing on women's satisfaction and therefore must be incorporated into quality improvement programmes. Satisfaction and dissatisfaction levels were 61% and 39% respectively among women. Contrary to some studies such as Kambala et al., (2015) and Mohammed et al. (2014), participants in Ashraf et al.'s (2012) study were highly satisfied with interpersonal aspect of care, i.e. 75%. However, this study cannot be generalised because respondents were selected only from public hospitals, and also the study excluded women with complicated deliveries.

Bhattacharyya, Issac, Rajbangshi, Srivastava, & Avan (2015) in their study in India also explored satisfaction among both maternal healthcare users and providers in order to highlight key themes that cut across both perspectives to inform quality improvement programmes. Although providers and users tend to have different outlooks on quality of services delivered, the study identified some common challenges that parties have. These included poor physical facilities, irregular supply of basic utilities amenities such as water and electricity, non-

availability of drug and non-drug consumables, lack of privacy, and lack of competent personnel to manage complications and to provide post-delivery counselling.

2.5 Relationship between perceptions of, and satisfaction with, quality of care and utilisation of maternal health service

Studies that directly examine the relationship between perceptions of, and satisfaction with, quality of care and utilisation of maternal health services are very limited. However, Dzomeku's (2011) study on maternal satisfaction in the Mampong Hospital in Ghana suggests that majority of the participants were not satisfied with the attitudes of care providers especially in terms of non-explanation of procedures, shouting, and no attention for clients. Consequently, most women and their relatives subsequently decided to arrive late at the facility or not use it at all. Participants also reported that caregivers often whisper among themselves without any apparent reason and this makes them uncomfortable and unwilling to come again. They deem such acts humiliating. Financial factors were also identified to be a cause of dissatisfaction among these women. This is partly because many women received very expensive bills at the end of the service delivery, which they felt was very exploitative on the part of the healthcare provider. These findings point to the need both to regularly train caregivers on effective communication and interpersonal relationship with clients, and to conduct further research to examine the link between perceptions of, and satisfaction with, quality of care and utilisation of maternal health services.

2.6 Conceptual Framework

As noted from figure 2.1, one of the prominent conceptualisations of healthcare quality comes from the work of Donabedian (1988). This study therefore adopted the Donabedian framework to assess women's perception of, and satisfaction with PNC quality. In summary, the framework consists of three components: Structure, Process and Outcomes (see figure 2.1).

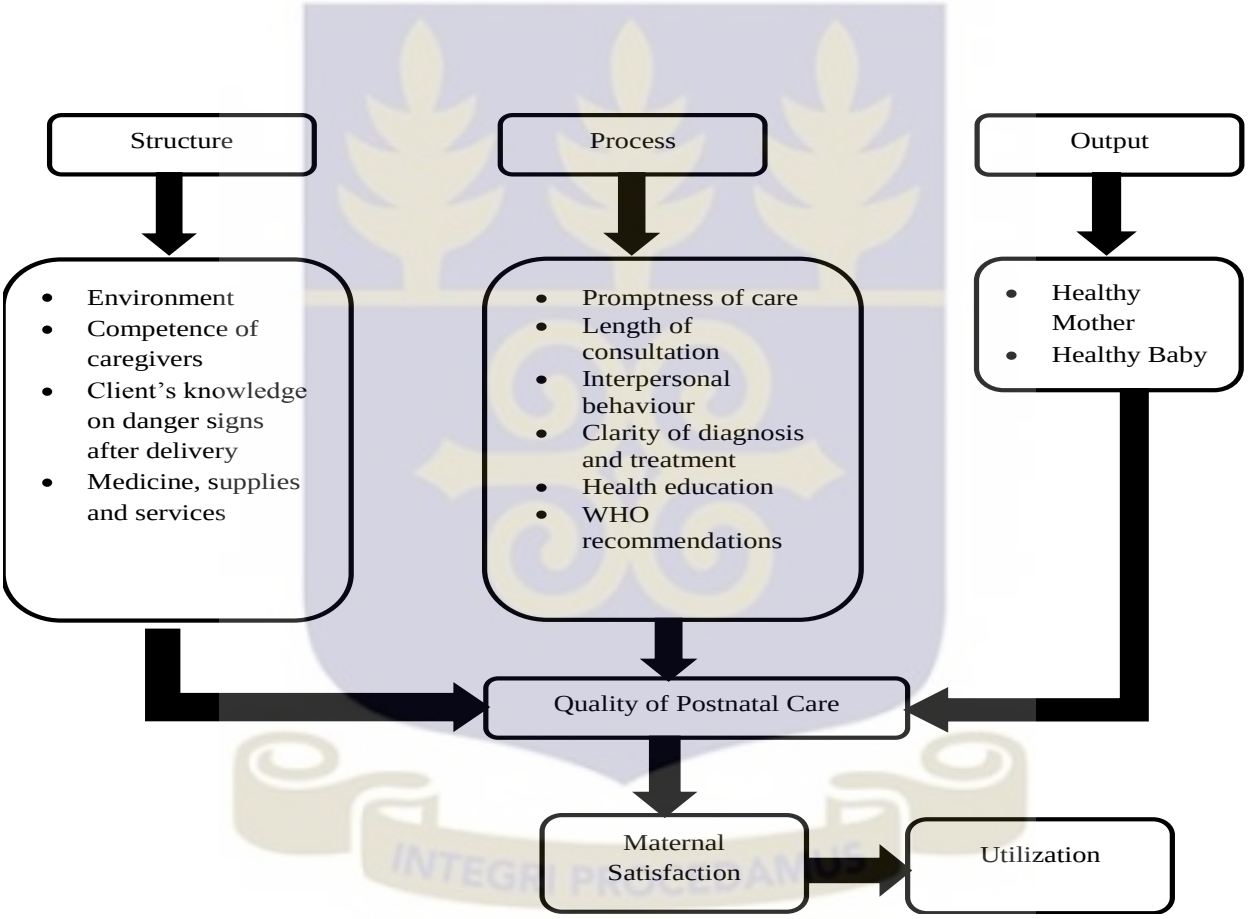

Figure 2.1: Framework for assessing women's satisfaction with quality of PNC

The *structure* looks at the setting within which women are given care in terms of the labour and maternity wards and the skills the health workers have especially in identifying danger signs in postpartum women. This also considers the availability of medical supplies to treat women in

dangerous conditions. The *process* aspect looks at how service is delivered in terms of promptness, duration, and interactions between health workers and clients. It also considers the extent to which service delivery conforms to WHO guidelines on PNC. The *outcome* in this case refers to whether both mother and baby were found healthy after birth. All these factors come together to influence how a woman rates the quality of care given and as such determine if she would like to use the facility for her next delivery or recommend to other women.

2.7 Conclusion

This chapter reviewed relevant related literature on women's perception of, and satisfaction with PNC quality, and the link between women's perceptions of, and satisfaction with, quality of care and utilisation of maternal health services. The review suggests that although literature exist on women's perception of, and satisfaction with PNC quality, in the context of Ghana, there are few studies that have examined the quality of maternal healthcare offered at health facilities. This suggests the need for further research. The present study therefore contributes to filling this gap.

CHAPTER 3

METHODS

3.1 Introduction

This chapter deals with how the study was conducted by describing study design, type of data sources, method of data collection, data analysis and ethical issues considered.

3.2 Study Context

The study was conducted in the Ledzokuku Krowor Municipal Assembly (LEKMA) Hospital. The municipality is one of the 16 administrative districts in the Greater Accra Region of Ghana. In 2010, the total population was 227,932 comprising of 109,185 males and 118,747 females (sex ratio: 91.9 males to 100 females). LEKMA, like most of the districts in the Greater Accra Region, has more females than males with about 69,038 of females within the reproductive ages 15-49 years (GSS, 2013)

Infant mortality and under-five mortality were 52 and 78 per 1000 live births, respectively between 2003 and 2007. In 2014, institutional maternal mortality ratio was 165.2 per 100,000 live births which is higher than the national ratio of 142 per 100,000 live births (GSS, 2014). The municipality is also burdened with malaria and hypertension as its top priority diseases, especially in the second quarter of 2008.

It has four types of health facilities in the form of hospitals, health centres/ health post and others (government, quasi-government, mission and private health facilities). Currently, there are a total of 16 health facilities made up of 3 hospitals, 2 health centres and 11 clinics. A health centre and

reproductive and child health clinics are available to provide clinical/ preventive service in the Municipality. There are also private specialist hospitals such as the Family Health, Manna Mission and Lister Hospital, which provide obstetric and gynaecological procedures (www. lekmagh.org).

The LEKMA Hospital at Teshie is a Ministry of Health facility with a capacity of 100 beds. It has all the units of a General Hospital including specialist services, laboratory and radiological facilities, and also a Malaria Research Centre and Herbal Medicine Unit. It serves as the Municipal Hospital for the Ledzokuku-Krowor (Teshie / Nungua) area. The hospital's clinical staff is made up of a team of 22 Doctors of which 9 are specialists; over 200 nurses; pharmacist and paramedical staff (www.lekmahospital.org). The LEKMA hospital provides all reproductive health services including child welfare clinic and family planning. Postnatal days are from Mondays, Wednesdays and Fridays. However, women with postnatal issues are still attended to outside postnatal days.

3.3 Study design

The study was designed as a cross-sectional survey. Generally, the aim of a cross sectional study is to find the occurrence of the outcome of interest, for a population or subgroups within the population at a given time point. As this study aimed to assess the level of satisfaction and PNC utilisation among postnatal mothers of different characteristics, a cross-sectional study design was appropriate.

3.4 Data types and sources

Data for this study comprised mainly of primary data which was obtained from administered questionnaires to respondents.

3.5 Study population/respondents

The study population was postnatal mothers in their reproductive age (15-49 years) using the postnatal clinic at the LEKMA hospital.

3.6 Inclusion criteria

Although ideally the postnatal period is limited to six weeks after birth, for the purposes of this study mothers who have given birth in the last six months were included in the study. This is to help obtain the number of respondents needed for the study within the specified time frame.

3.6.7 Exclusion criteria

Mothers who had complications during delivery and mothers with preterm babies were excluded, as they are considered as special cases whose experiences might influence perceptions of quality of care. Also, mothers below 15 years were excluded because they are likely to have very little expectations and this may influence their experiences.

3.7 Sample size determination

In order to get an appropriate sample size for the study, Cochran (1977) formula for calculating a sample size was used. The formula is denoted as follows:

$n = Z^2 * pq/d^2$

where:

n: required sample size

z: confidence level

p: estimated women's satisfaction level

q: estimated women's dissatisfaction

d: margin of error

Assuming 95% confidence level, a margin of error of 5% and 75% and 25% level of women's satisfaction and dissatisfaction with PNC quality respectively – these proportions have been reported in a recent systematic review of literature on the determinants of women's satisfaction with maternal healthcare in developing countries (see Srivastava et al., 2015) - the sample size is calculated as follows:

n= (1.96)2*[0.75*0.25] /0.052

=288.12

This is approximately 288. However, a non-response rate was adjusted for at 5%. This resulted in a sample size of 302.

3.8 Sampling methods

Within the period of study, ten postnatal clinics were attended over a period of two (2) weeks. In order to obtain the required sample size of approximately 300 women, about 30 interviews were conducted per each visit. Systematic random sampling method was used to recruit women who

met the inclusion criteria and were willing to participate in the study, till the sample size was obtained. The register for each clinic day was used as the sampling frame. The researcher identified mothers who met the inclusion criteria and randomly picked folders from the register of the day. Where a randomly selected participant was unwilling to participate, the random sampling technique was repeated till the required number was obtained. Also, in the case where there were few registrants for a particular clinic day such that 30 women could not be randomly selected, all women who met the inclusion criteria and willing to participate in the study were interviewed.

3.9 Methods of data collection and instrument

The study was conducted from May 2016 to June 2016. Structured questionnaires were used as the data collection instrument. The questionnaire was designed based on the Donabedian's framework for assessing quality of care, with a specific focus on PNC services. The questionnaire was prepared in English but explained in Ga or Twi, as these were the commonly spoken languages within the area. Data were collected by the principal investigator and two (2) research assistants who were trained intensively for 2 days prior to PNC clinic visits. They were supervised on daily basis during the data collection period to ensure completeness and consistency of the questionnaires filled. Before the actual data collection, the questionnaire was pretested in a different health facility within LEKMA. The pre-test enabled all the needed corrections and clarifications to be made before the actual data collection.

The questionnaires captured information on socio-demographic characteristics of respondents, women's patronage of postnatal services and perception of mothers on quality of PNC, overall satisfaction and utilisation of PNC services. The questionnaire included close-ended questions to

obtain information from respondents. The close-ended questions were used in order to obtain information that was relevant to the research objectives and also to facilitate codification and analysis of data.

3.10 Data processing

The completed questionnaires were cleaned, coded and entered into SPSS statistical software. The data was exported to STATA Version 13.0 for analysis.

3.10. Data analysis

3.10.1 Variables

Two main variables were considered in this study: outcome/dependent variable and independent variable. The outcome variables for this study were satisfaction with quality of PNC and utilisation of PNC services. Independent variables considered in the study were socio-demographic characteristics, cleanliness of environment, promptness of care, health education, interpersonal relations, clarity of diagnosis and treatment, among others. These variables were mainly classified under *structure*, *process* and *outcome* in line with the conceptual framework discussed in chapter two (2).

3.10.2 Analysis

Descriptive statistical analysis was performed to describe women's perceptions of PNC quality, levels of satisfaction with PNC quality and levels of PNC service utilisation. Cross-tabulation and regression analysis (binary and logistic regression) were employed to assess the factors that

influence women's satisfaction with PNC quality as well as the relationship between perceptions and satisfaction with PNC quality and service utilisation. Confidence level was held at 95% and $P<0.05$ (at 5% level of significance) was considered as significant. Results were presented in tables and graphs.

3.11 Ethics

Approval to conduct the survey was obtained from the Ethical Review Committee of the Ghana Health Service. The permission of the Municipal Director of Health Service and hospital management of the LEKMA hospital were sought before collecting data in the facility. Informed consent was obtained from all participants. The consent form was written in English language and translated into a local language of the participant's choice so they could understand. Participants who did not understand the English language were allowed to thumb print after the interviewer/ research assistant had explained the intent of the study and the content of the informed consent form. The interviews were conducted at the premises of the health facility but in an environment that ensured privacy, confidentiality and devoid of likely influence of the health providers on the respondents.

3.12 Conclusion

This chapter discussed the study's methods, focusing on the study design, study population, sampling and data analyses. The next chapter presents the results of the study.

CHAPTER 4

RESULTS

4.1 Introduction

This chapter presents results of the study. It first presents demographic characteristics of the respondents, women's patronage of postnatal services, their perception of the quality of care and levels of satisfaction. Second, chi-square analysis of the associations between demographic characteristics of respondents and perception of quality of PNC are then presented. Finally, bivariate and logistic regression analyses to determine the strength of association between indicators of care and level of satisfaction are presented.

4.2 Demographic characteristics of respondents

In all, 300 women were interviewed for this study. All the women who were approached were willing to take part in the study, representing 100% response rate for this study. The demographic characteristics of the respondents of the study are presented in Table 4.1 below. Majority of the respondents (65.3%) were between the ages of 20-29. Most (67.3%) of the postnatal mothers were married. None of the respondents were divorced or widowed. Most of the mothers had some form of formal education with 37.3% having secondary school education and 24.7% completing tertiary education. Only 3.3% of the mothers had no formal education at all. Although majority of the respondents were self-employed (60%) or formally employed (25.3%), about 14% were unemployed. Also, majority of the women (76.7%) had one or two children.

Table 4.1 Socio-demographic characteristics of Respondents

Characteristic	Frequency	Percent
Age		
<20	20	6.7
20-29	196	65.3
30-39	82	27.3
≥40	2	0.7
Parity		
1	116	38.7
2	114	38.0
3	52	17.3
4 and above	18	6.0
Marital status		
Single	94	31.3
Married	202	67.3
Co-habitating	4	1.3
Educational level		
None	10	3.3
Primary	16	5.3
JHS/Middle School	88	29.3
Secondary	112	37.3
Tertiary and above	74	24.7
Employment status		
Self-employed	180	60.0
Formal employment	76	25.3
Unemployed	44	14.7

4.3 Women's reasons for attending PNC clinic at the LEKMA Hospital

The study sought to explore women's reasons for accessing postnatal services at the LEKMA Hospital. Table 4.2 shows the proportion of women who were referred and those who were not.

Table 4.2 Women's reasons for attending PNC clinic at LEKMA Hospital

How attended	Frequency	Percent
Not referred	252	84
Referred	48	16
Total	**300**	**100**
Reasons for walked-in		
Proximity	217	86.1
Partners choice	19	7.5
Parent	2	0.8
Good service	14	5.6
Total	**252**	**100**
Reasons for referral		
Availability of services	40	83.33
Change of Location	8	16.67
Total	**48**	**100**

From the table above, majority of the respondents (84%) who accessed postnatal services did so at their own will whilst 16% of the respondents were referred from other hospitals either private or public. Most of the clients (86.1%) preferred LEKMA hospital because it was the nearest facility to their place of residence. Some (7.5%) also walked in because their partners wanted them to and others because they had heard of the quality of services offered at LEKMA. Only two clients used PNC services at LEKMA hospital because they had moved in with their parents (especially mothers) to get support in taking care of the new-borns. Most of the respondents (83.3%) said they had been referred to LEKMA hospital due to the availability of postnatal

services and 16.7% claimed it was because they were relocating to the Ledzorkuku Krowor area from other far away towns.

4.4 Women's perception of quality of care

One of the objectives of the study was to assess women's perception of quality of care using the Donabedian quality of care indicators of structure, process and outcome. The extent to which women perceived quality of PNC based on the indicators are presented below.

4.4.1 Structural quality of care

The structural quality of care indicator was based on ratings on the general environment of the facility, toilet facilities, competence of health workers, availability of prescribed medicines and services like laboratory and X-ray. Table 4.3 shows results on respondents' evaluation of the structural quality of care at LEKMA hospital.

Table 4.3 Women's perception on structural quality of care

Indicator	Disagree n(%)	Indifferent n(%)	Agree n(%)
Cleanliness of environment	10(3.3)	18(6.0)	272(90.7)
Cleanliness of toilet facilities	70(23.3)	40(13.3)	190(63.3)
Competency of health workers	2(0.7)	16(5.3)	282(94)
Availability of medicines	18(6.0)	36(12.0)	246(82.0)
Availability of other services e.g. laboratory	4(1.3)	26(8.7)	270(90.0)

About 91% of respondents agreed that the environment was clean. Among the indicators considered, most of the women agreed more on the competency of health workers (94%). Majority of respondents perceived the structural quality of care as good. However, a significant proportion of respondents (23%) disagreed with the cleanliness of toilet facilities.

4.4.2 Process quality of care

The study also looked at women's evaluation of the process of seeking care based on indicators such as waiting time, length of consultation, interpersonal behaviour, clarity of diagnosis and health education. Table 4.4 presents results on women's assessment of the process quality of PNC at LEKMA hospital

4.4.2.1 Waiting Time

Generally, respondents disagreed that they had to wait long before being attended to by a doctor (62.7%) or a nurse (63.3%). Most of the women (61.3%) agreed that they were happy with the time they had to wait.

4.4.2.2 Length of Consultation

Although 56.7% of the respondents disagreed that they spend long time in contact with the nurse, midwife or doctor, 89.3%, of the respondents perceived that the time spend in consultation is enough to address all their concerns (Table 4.4.2).

Table 4.4 Women's perception on process of care

Indicator	Disagree n(%)	Indifferent n(%)	Agree n(%)
Waiting Time			
Client wait long for nurses	188 (62.7)	32 (10.7)	80 (26.7)
Clients wait long for doctors	190 (63.3)	30 (10.0)	80 (26.7)
Clients are satisfied with waiting time	80 (26.7)	36 (12.0)	184 (61.3)
Length of Consultation			
Clients spend long time with nurses/midwives/doctors	170 (56.7)	26 (8.7)	104 (34.7)
Time spent is enough for client's questions	10 (3.3)	22 (7.3)	268 (89.3)
Interpersonal Relationship			
Health worker was professional	0(0.0)	22 (7.3)	278 (92.7)
Client was treated with respect	4 (1.3)	26 (8.7)	270 (90.0)
Privacy during interaction	6 (2.0)	24 (8.0)	270 (90.0)
Client encouraged to ask questions	2 (0.7)	22 (7.3)	276 (92.0)
Client's questions answered satisfactorily	2 (0.7)	20 (6.7)	278 (92.7)
Clarity of diagnosis			
Health worker explained client's state of health	10 (3.3)	10 (3.3)	280 (93.3)
Health worker explained procedures	10 (3.3)	12 (4.0)	278 (92.7)
Health worker explained treatment	12 (4.0)	12 (4.0)	272 (92.0)
Health education			
The use of ITNs	32 (10.7)	0 (0.0)	268 (89.3)
Early and exclusive breastfeeding	10 (3.3)	0 (0.0)	290 (96.7)
Daily diet & nutrition during breastfeeding	64 (21.3)	16(5.3)	220 (73.3)
Danger signs in the first month	72 (24.0)	20 (6.7)	208 (69.3)
Date for next PNC visit	16 (5.3)	4(1.3)	280 (93.3)
Family planning	38 (0.7)	2 (12.7)	260 (86.7)
Routine child immunizations	8 (2.7)	2 (0.7)	290 (96.7)

4.4.2.3 Interpersonal behaviour

The interpersonal aspect of quality of care was measured by the professionalism of health workers, respectful care, privacy during interactions, encouraging clients to ask questions and answering the questions satisfactorily. Majority of the respondents scored high for the various aspects of interpersonal care (90.0%-97%).

4.4.2.4 Clarity of diagnosis

Respondents perceived clarity of diagnosis based on the ability of the health worker to explain women's state of health and that of their babies, procedures performed and the purpose of treatments before administering medications and injections to clients. Majority of the mothers agreed that they were clear on their state of health (93.3%), procedures (92.7%) and treatment (92.0%).

4.4.2.5 Health education based on WHO recommendations

Indicators measuring health education was based on WHO recommendations. These included information on the use of insecticide treated nets, early and exclusive breastfeeding, daily diet and nutrition during breastfeeding, danger signs, next postnatal visit, family planning and routine child immunization. Majority of the respondents agreed that they have received adequate information on all the aspects of health promotion considered under this study. However, some mothers disagreed that they had enough information on danger signs (24%) to look out for in the first month as well as on daily diet and nutrition (21%) during breast feeding.

4.4.3 Care outcome

This aspect of quality care was concerned with the extent to which clients perceived they are well informed on postnatal issues and how it has improved their health. As shown in table 4.4 majority of women agreed that the quality of PNC has led to them being well informed (97.3%) on postnatal issues and has also improved their health and that of the baby (98%).

4.5 Overall quality of care

This section examines overall perception of care quality by the socio-demographic characteristics of respondents. All the mothers below 20 years and 40 years or above agreed that PNC quality was good. The difference in respondents' perception of overall quality of care by age was statistically significant ($p<0.047$). More of the women who had three children and below (92.3%-94.8%) scored high for overall perception of quality care than mothers who had 4 and more children (88.9%). The difference in respondents' perception of overall quality of care by parity was however not statistically significant ($p<0.683$). (Table 4.5)

All women who had no form of education agreed that overall quality of care was good compared to 75% of those who had primary education. Apart from age, there was no significant association between client's demographic characteristics and their overall perception of quality PNC.

Table 4.5 Overall perception of quality of care by background characteristics

	Overall perception that care quality is good			Chi-square
Characteristic	**Disagree (n=8)**	**Neutral (n=12)**	**Agree (n=280)**	**P-value**
Age (years)				
>20	0(0.0)	0(0.0)	20(100.0)	0.047
20-29	4(2.0)	4(2.0)	188(96.0)	
30-39	4(4.9)	8(9.8)	70(85.4)	
40 and above	0(0.0)	0(0.0)	2(100.0)	
Parity				
1	2(1.7)	4(3.5)	110(94.8)	0.683*
2	4(3.5)	4(3.5)	106(93.0)	
3	2(3.9)	2(3.9)	48(92.3)	
4 and more	0(0.0)	2(11.1)	16(88.9)	
Marital status				
Single	2(2.1)	0(0.0)	92(97.9)	0.169*
Married	6(3.0)	12(5.9)	184(91.1)	
Co-habiting	0(0.0)	0(0.0)	4(100)	
Educational Level				
None	0(0.0)	0(0.0)	10(100.0)	0.068*
Primary	2(12.5)	2(12.5)	12(75.0)	
JHS/Middle	0(0.0)	4(4.5)	84(95.5)	
Secondary	4(3.6)	2(1.8)	106(94.6)	
Tertiary	2(2.7)	4(5.4)	68(91.9)	
Employment status				
Self-employment	2(1.1)	8(4.4)	170(94.4)	0.322*
Formal employment	4(5.3)	2(2.6)	70(92.1)	
Unemployed	2(4.5)	2(4.5)	40(91.0)	

*p>0.05

4.6 Level of satisfaction

One of the objectives of this study was to assess the extent to which women are satisfied with the PNC services they receive at LEKMA hospital. This section presents respondents' overall satisfaction with the quality of care. It also presents chi-square analyses of the association between indicators of care and levels of satisfaction. Figure 4.1 indicates that, majority of women (92.0%) were satisfied with the quality of PNC. Only 8% were not satisfied with the quality of care they received.

From table 4.6, all mothers below 20 years and above 40 years were found to be satisfied with quality of PNC compared to mothers within the ages of 20-29 (95%) and 30-39 (83%). Mothers who had obtained only primary education were the least satisfied (75%), followed by mothers who had 4 and more children (78%). A higher proportion of single mothers (96%) were satisfied with quality of care as compared to the married counterparts (90%). However, a chi-square analysis shows that women's parity, marital status, educational level and employment status were not statistically associated with their overall satisfaction with quality of care ($p>0.05$).

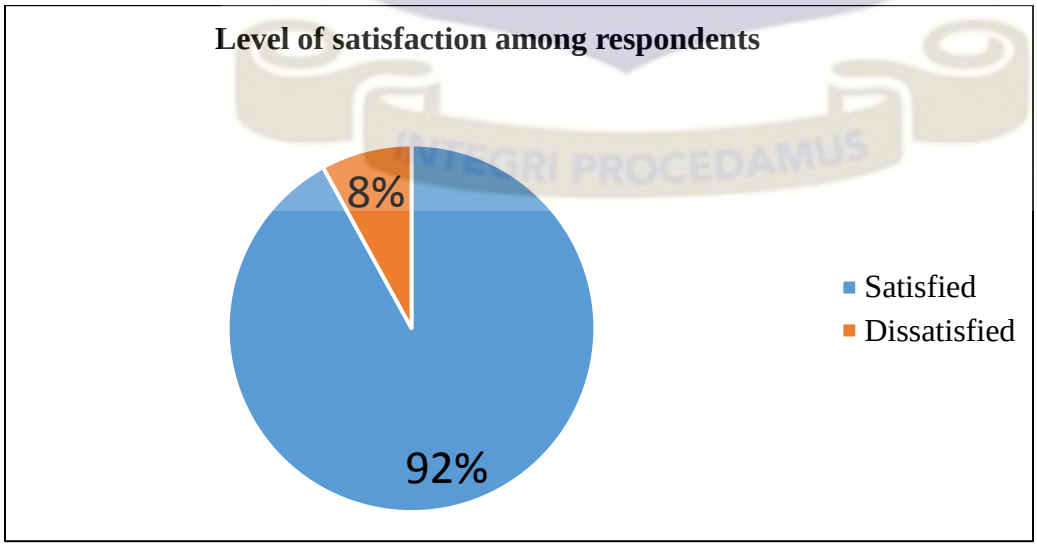

Figure 4.1 Overall level of satisfaction with PNC quality

Table 4.6 Overall Satisfaction Level by Socio-demographic Characteristics

	Overall Satisfaction Level		Chi-square
	Dissatisfied	Satisfied	P-value
Characteristic	**n(%)**	**n(%)**	
Age (years)			
>20	0 (0.0)	20(100.0)	0.004
20-29	10 (5.1)	186(94.9)	
30-39	14(17.1)	68(82.9)	
>40	0(0.0)	2(100.0)	
Parity			
1	6(5.2)	110(94.8)	0.065*
2	8(7.0)	106(93.0)	
3	6(11.5)	46(88.5)	
4 and more	4(22.2)	14(77.8)	
Marital status			
Single	4(4.3%)	90(95.7)	0.209*
Married	20(9.9%)	182(90.1)	
Co-habiting	0(0.0)	4(100.0)	
Educational Level			
None	0(0.0)	10(100.0)	0.115*
Primary	4(25.0)	12(75.0)	
JHS/Middle	6(6.8)	82(93.2)	
Secondary	8(7.1)	104(92.9)	
Tertiary	6(8.1)	68(91.9)	
Employment status			
Self-employment	14(7.8)	166(92.2)	0.959*
Formal employment	6(7.9)	70(92.1)	
Unemployed	4(9.1)	40(90.9)	

*p>0.005

Table 4.7 also shows results from a bivariate chi-square analysis investigating association between indicators of quality of care and levels of satisfaction. The results reveal that women who agreed that the healthcare environment was clean were significantly more likely to report high score for overall satisfaction with quality of care compared with those who either disagreed or were indifferent about cleanliness of the healthcare environment ($p<0.001$).

Although a distinct proportion of women disagreed with the cleanliness of toilet facilities, there was a significant relationship between women's perception of this aspect of quality and their level of satisfaction ($p<0.001$). For instance, 82% of those who disagreed with toilet cleanliness were found to be satisfied with overall quality of care. Apart from competency of health workers (0.0%) and availability of medicines (44.4%), majority of those who disagreed with the other indicators of *structure* quality of care were satisfied. For the *process* aspect of care, the chi-square test shows that there is no statistical significance between overall level of satisfaction and women's perception of satisfaction with waiting time, enough time spent with doctor/nurse, as well as adequate information on early and exclusive breastfeeding, daily diet & nutrition during breastfeeding, danger signs to look out for in the first month, and routine child immunizations ($p>0.05$). Majority of those who agreed with aspects of *outcome* of quality of care were more satisfied with postnatal services at the LEKMA Hospital.

Table 4.7. Quality of care and levels of satisfaction (bivariate analysis)

Indicator	Overall Satisfaction Level		Chi-square *P*-value
	Dissatisfied	Satisfied	
Cleanliness of environment			
Disagree	4(40.0)	6(60.0)	0.001
Indifferent	10(55.6)	8(44.4)	
Agree	10(3.7)	262(96.3)	
Cleanliness of toilet facilities			
Disagree	12(17.1)	58(82.7)	0.001
Indifferent	8(20.0)	32(80.0)	
Agree	4(2.1)	186(97.9)	
Competency of health workers			
Disagree	2(100.0)	0(0.0)	0.001
Indifferent	6(37.5)	10(62.5)	
Agree	16(5.7)	266(94.3)	
Availability of medicines			
Disagree	10(55.6)	8(44.4)	0.001
Indifferent	6(16.7)	30(83.3)	
Agree	8(3.3)	238(96.8)	
Availability of other services e.g. lab			
Disagree	2(50.0)	2(50.0)	0.001
Indifferent	6(23.1)	20(76.9)	
Agree	16(5.9)	254(94.1)	
Client wait long for nurses			
Disagree	6(3.2)	182(96.8)	0.001
Indifferent	2(6.3)	30(93.8)	
Agree	16(20.0)	64(80.0)	
Clients wait long for doctors			
Disagree	6(3.2)	184(96.8)	0.001
Indifferent	4(13.3)	26(86.7)	
Agree	14(17.5)	66(82.5)	
Clients are satisfied with waiting time			
Disagree	10(12.5)	70(87.5)	0.115*
Indifferent	4(11.1)	32(88.9)	
Agree	10(5.4)	174(94.6)	
Clients spend long time with nurses/doctors			
Disagree	6(3.5)	164(96.5)	0.005
Indifferent	4(15.4)	22(84.6)	
Agree	14(13.5)	90(86.5)	
Time spent is enough for client's questions			
Disagree	2(20.0)	8(80.0)	0.059*
Indifferent	4(18.2)	18(81.8)	
Agree	18(6.7)	250(93.3)	
Health worker was professional			
Disagree	6(27.3)	16(72.7)	0.001
Indifferent	0(0.0)	0(0.0)	
Agree	18(6.47)	260(93.5)	

Client was treated with respect			
Disagree	0(0.0)	4(100.0)	0.011
Indifferent	6(23.1)	20(76.9)	
Agree	18(6.7)	252(93.3)	
Privacy during interaction			
Disagree	2(33.3)	4(66.7)	0.016
Indifferent	4(16.7)	20(83.3)	
Agree	18(6.7)	252(93.3)	
Client encouraged to ask questions			
Disagree	0(0.0)	2(100.0)	0.002
Indifferent	6(27.3)	16(72.7)	
Agree	18(6.5)	258(93.5)	
Client's questions answered satisfactorily			
Disagree	0(0.0)	2(100.0)	0.115*
Indifferent	4(20.0)	16(80.0)	
Agree	20(7.2)	258(92.8)	
Health worker explained client's state of health			
Disagree	4(40.0)	6(60.0)	0.001
Indifferent	4(40.0)	6(60.0)	
Agree	16(5.7)	264(94.3)	
Health worker explained procedures			
Disagree	4(40.0)	6(60.0)	0.001
Indifferent	4(33.3)	8(66.7)	
Agree	16(5.8)	262(94.2)	
Health worker explained treatment			
Disagree	4(33.3)	8(66.7)	0.001
Indifferent	4(33.3)	8(66.7)	
Agree	16(5.8)	260(94.2)	
Client is well informed			
Disagree	2(50.0)	2(50.0)	0.001
Indifferent	2(50.0)	2(50.0)	
Agree	20(6.9)	272(93.2)	
Client's health improved			
Disagree	2(100.0)	0(0.0)	0.001
Indifferent	2(50.0)	2(50.0)	
Agree	20(6.8)	274(93.2)	

***p*-value >0.05**

Further, table 4.8 below shows results from a logistic regression analysis investigating association between indicators of quality of care and levels of satisfaction. Clients who agreed that the environment was clean were 18 times more likely to be satisfied with the quality of care than those who did not agree, after adjusting for age, parity and educational level [AOR=18.0, 95%(C.I=3.99-81.38)] . Also, those who perceived that waiting for the nurse and waiting for the

doctor was long had 0.14 and 0.15 times the odds of being satisfied respectively. Women who agreed that they had privacy during the process of seeking care had 3.5 times the odds of being satisfied than those who disagreed [AOR=3.53, 95%(C.I=0.55-22.50)]. Women who agreed they were well informed on postnatal issues had 31 times the odds of being satisfied than those who disagreed [AOR=31.4, 95% (C.I=3.77-260.78)]. The odds of being satisfied among those who agreed on all the indicators of clarity of diagnosis, dropped after adjusting for age, parity and educational level. The logistic regression analysis revealed that, competency of health workers, client's being happy with waiting time, contact time being enough, respect, and health worker being professional, had perfect collinearity with overall satisfaction.

Table 4.8 Logistic regression analysis (Quality of care and satisfaction level)

Indicator	**Satisfaction**			
	Crude		**Adjusted***	
	OR	**95% CI**	**OR**	**95% CI**
Cleanliness of environment				
Disagree	*Ref*			
Indifferent	0.53	0.11-2.56	0.52	0.09-2.96
Agree	17.47	4.25-71.83	18.01	3.99-81.38
Cleanliness of toilet facilities				
Disagree	*Ref*			
Indifferent	0.83	0.31-2.23	0.86	0.29-2.53
Agree	9.62	2.99-30.98	11.34	3.32-38.73
Availability of medicines				
Disagree	*Ref*			
Indifferent	6.25	1.74-22.43	4.07	1.06-15.65
Agree	37.12	11.58-119.4	32.77	9.56-112.25
Availability of other services e.g. lab				
Disagree	*Ref*			
Indifferent	3.33	0.38-28.96	5.11	0.54-48.76
Agree	15.88	2.10-120.15	31.62	3.73-267.84
Client wait long for nurses				
Disagree	*Ref*			
Indifferent	0.49	0.10-2.57	0.52	0.97-2.79
Agree	0.13	0.05-0.35	0.14	0.05-0.38

Clients wait long for doctors				
Disagree	*Ref*			
Indifferent	0.21	0.06-0.80	0.21	0.51-0.82
Agree	0.15	0.06-0.042	0.15	0.06-0.43
Clients spend long time with nurses/doctors				
Disagree	*Ref*			
Indifferent	0.20	0.05-0.77	0.17	0.04-0.69
Agree	0.24	0.09-0.63	0.21	0.08-0.59
Privacy during interaction				
Disagree	*Ref*			
Indifferent	2.5	0.34-18.63	1.15	0.14-9.66
Agree	7.0	1.20-40.83	3.53	0.55-22.50
Health worker explained client's state of health				
Disagree	*Ref*			
Indifferent	1	0.18-5.98	0.58	0.08-4.00
Agree	11	2.82-42.95	7.23	1.61-32.41
Health worker explained procedures				
Disagree	*Ref*			
Indifferent	1.33	0.23-7.63	0.83	0.13-5.38
Agree	10.92	2.80-42.62	5.86	1.26-27.36
Health worker explained treatment				
Disagree	*Ref*			
Indifferent	1	0.18-5.46	0.78	1.13-4.66
Agree	8.13	2.21-29.88	4.83	1.14-20.53
Client is well informed				
Disagree	*Ref*			
Indifferent	1	0.06-15.99	2.12	0.10-42.95
Agree	13.6	1.82-101.69	31.35	3.77-260.78

*adjusted for age, parity and education

4.7 Utilisation

Three indicators of utilisation of care were considered in this study. These are willingness to take medications and advice, willingness to recommend services to friends and family and willingness to return for follow ups. Figure 4.2 shows the extent to which respondents were willing or not willing to use postnatal services. Majority of the respondents were willing to take

their medicines (94.7%), willing to return for follow ups (90%), willing to recommend services (94%).

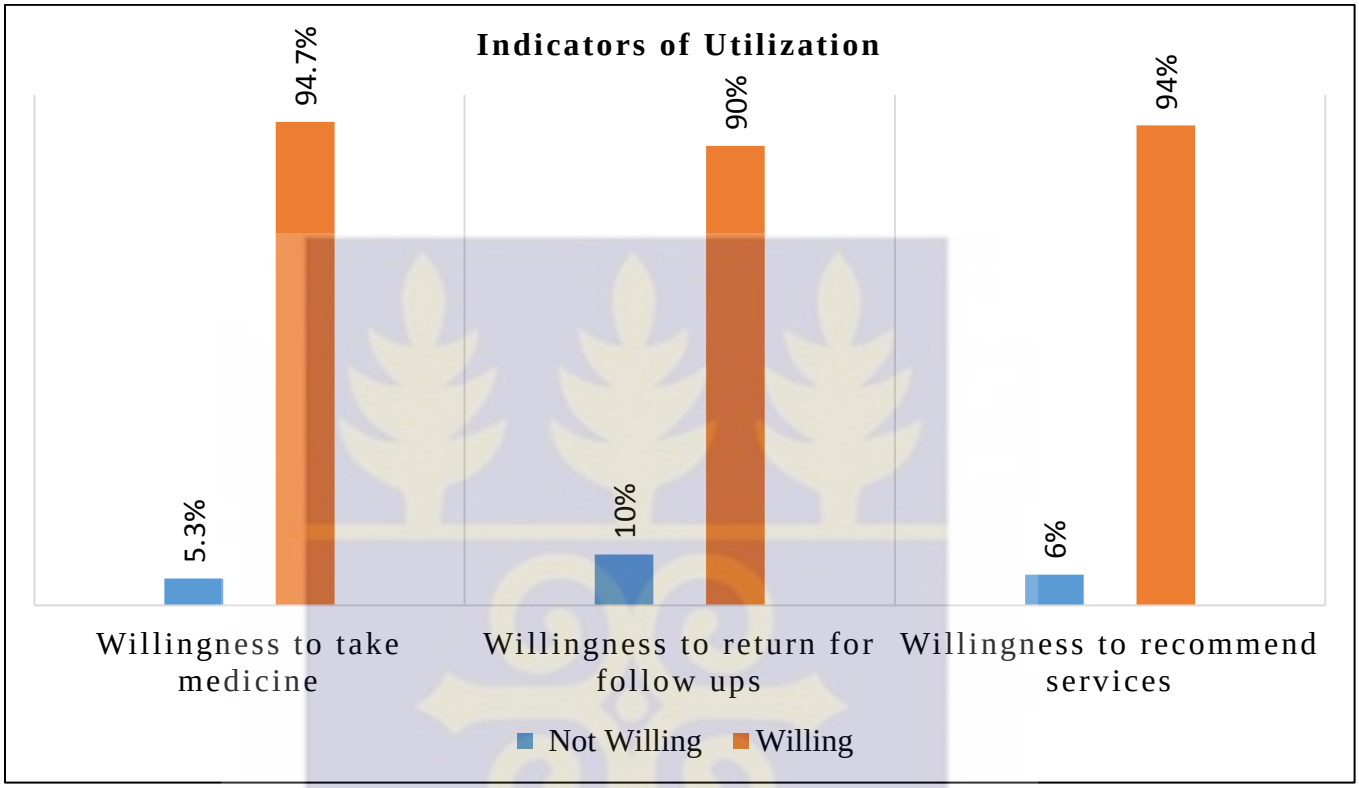

Figure 4.2 Distribution of indicators of utilization

This research also aimed to determine whether there is a relationship between overall level of satisfaction with PNC and utilisation of services at the LEKMA hospital. To achieve this objective, a bivariate chi-square analysis was performed. The result, as shown in table 4.9, suggests that among women who were satisfied with quality of care, 97.8% of them were willing to take prescribed medicines and 58.3% of those who were dissatisfied were willing to take their medications. Also 92.8% of those who were satisfied were willing to return for follow-ups as compared to 58.3% of those who were not satisfied. Although some women were dissatisfied with overall quality, a significant proportion of them were willing to take medications (58.3%), willing to recommend services (50%) and were willing to return for follow ups (58.3%). The

difference between satisfaction levels and indicators of utilization was statistically significant ($p<0.001$).

Table 4.9 Level of satisfaction and Utilization of PNC services at LEKMA hospital

	Overall Satisfaction Level		Chi-square
Indicator	**Dissatisfied**	**Satisfied**	**P-value**
	n (%)	**n (%)**	
Willingness to take medications			
Yes	14(58.3)	270(97.8)	0.0001
No	10(41.7)	6(2.2)	
Willingness to recommend services			
Yes	12(50.0)	270(97.8)	0.0001
No	12(50.0)	6(2.2)	
Willingness to return for follow-ups			
Yes	14(58.3)	256(92.8)	0.0001
No	10(41.7)	20(7.3)	

4.8 Conclusion

This chapter presented the results of the survey. The chapter revealed that 92% of women were satisfied with the quality of PNC at the LEKMA Hospital. Also, women's level of satisfaction was found to be significantly associated with all the indicators of utilization. The next chapter discusses these findings and their implications for policy and further research.

CHAPTER 5

DISCUSSION

5.0 Introduction

This chapter discusses the results of the study. The discussion comprises a summary of main findings, how the findings are consistent or inconsistent with previous studies, explanation of findings and their implications as well as the strength and limitations of the study.

5.1 Summary of Findings

Majority of the respondents were between the ages of 20-29 with some form of employment and had at least primary education. Most of the women accessed postnatal services at the LEKMA hospital because it was within their proximity and some also because it was their partner's choice. Most women highly rated the environmental cleanliness of the health facility, competence of health workers, availability of medicines and laboratory services, and clarity of diagnosis and treatment.

This study revealed that overall, 92% of women were satisfied with the PNC services they received at the LEKMA hospital, while 8% were dissatisfied. Specifically, women were highly satisfied with the clarity of diagnosis and interpersonal relations. A bivariate analysis examining association between women's satisfaction and perception of quality of care showed that clean environment, availability of medicines and other services, clarity of diagnosis, waiting time and contact time, as well as some aspects of interpersonal care were significantly associated with level of satisfaction. Women were also willing to recommend and reutilize postnatal services at the LEKMA hospital.

5.2 Consistency with previous research

Apart from parity, women demographic characteristics as reported in this study were contrary to other studies such as Mohammed et al. (2014) study where majority of the respondents (63.8%) were between 25 and 35 years old and 73.8% were unemployed.

Most socio-demographic factors were found not to have any association with the perceived quality of PNC services, except age. However, a similar study by Kambala et al. (2015) revealed that some socio-demographic characteristics are highly associated with women's perception of quality of care. For instance, women with higher level of education rate their perception of care quality higher because they are able to make better judgment and appreciate the benefits of seeking care.

Women's perception of cleanliness of the environment was found to be very high. This finding is contrary to Karkee et al.(2014) work in Nepal, where women rated lowest for cleanliness in public hospitals. Women rated clarity of diagnosis very high contrary to (Ashraf et al., 2012) where 54% of women were not satisfied because they had not received adequate information about procedures and treatment from the doctors and nurses.

Women who perceived waiting time and contact time to be too long were also less likely to be satisfied with the quality of care. This finding supports what Zamawe et al. (2015) reported in their study, where women mentioned that having to wait for long hours prevents them from utilising postnatal services. Respect did not have any significant relationship with satisfaction, according to this study. This is in contradiction with previous facility based studies by Kambala et al. (2015) and Warren et al.(2015) where women indicated higher satisfaction because they were treated with respect by the health workers.

The high level of overall satisfaction found in this study is similar to Sholeye, Abosede & Jeminusi (2013) study on women's satisfaction with PNC services. The study which was conducted at primary health centres in Mushin in Lagos, Nigeria, revealed an overall satisfaction with services at 98.5%. However, this is not the situation in most studies conducted on women's satisfaction with maternal services. For instance, Ashraf *et al* (2012) study in Pakistan found satisfaction level of 61%.

Over 90% of mothers were willing to reuse postnatal services compared to the 78% of women who intended to continue use of services in Ashraf *et al* (2012) study in Pakistan.

5.3 Explanation of findings and implications

Satisfaction with maternal services is an important outcome measure for the quality of care and provision of services. In this study, majority of the women were satisfied with the quality of care they received. The high level of satisfaction may be attributed to the fact that the LEKMA hospital has all the units of a General Hospital including specialist services, laboratory and radiological facilities, and also a Malaria Research Centre and Herbal Medicine Unit.

Maternal characteristics as identified in literature can influence the extent to which women are satisfied with the quality of care they receive at health facilities. Common characteristics often considered in previous studies include age, parity, educational status, employment or income level and marital status. The greater proportion of women in this study had secondary education and above and were either self-employed or formally employed, which is a very typical characteristic of an urban population. This may also explain why majority of the women rated

the quality of care high as they may better understand the implications of the care being provided.

Women were satisfied with all the aspects of the *structure* quality of care, especially the cleanliness of the environment, competency of health workers and availability of medicines and other services. The satisfaction with environment may be due to good maintenance practices at the clinic by the hospital management. Women's relatively poor perception about the toilet facilities could be largely explained by the frequent water shortages in the Teshie-Nungua area where LEKMA hospital is situated. The inadequate supply of water could cause the spread of infections for mothers as they use the toilet facilities.

For the *process* quality of care, women were more satisfied with the clarity of diagnosis and interpersonal relation with health workers. The friendly attitude of health workers encouraged women to ask questions concerning their health and that of their babies. This gives them a better understanding of their state of health and basic procedures as well as the need to take their medications to ensure positive health outcome. This may be the reason underlying the positive overall care *outcome*, as shown in the study.

Finally, inadequate access to skilled delivery services have been identified as a major factor promoting poor maternal and new born health in sub-Saharan African countries, including Ghana. It is undoubted that, the establishment of the LEKMA hospital in the Teshie-Nungua area has helped eliminate barriers in the health system such as long distance to health facilities and transportation problems. However, other socio-cultural barriers like women's lack of autonomy or decision-making power are also been identified in other studies as a factor influencing women's utilisation of services (Ganle et. al. 2015). In the study, there were some women who

mentioned that they utilised the LEKMA hospital because their husbands/partners wanted them to. This suggests the need to involve husbands/partners in efforts to increase the uptake of postnatal services.

5.6 Strengths and Limitations

The systematic random sampling method employed in this study allowed women that were present at each postnatal clinic an equal chance of participating in the study as compared to convenient or purposive sampling used in some studies. However, because the study was conducted within two weeks, it only included participants who presented themselves at the facility within that period. Women who attended the facility subsequently may have different experiences and perceptions about the quality of care of postnatal services. Although overall satisfaction was high, it may not depict an exceptional quality of PNC. Findings should therefore be interpreted in consideration of the many factors that may have influenced clients' ratings. Also, participants may have overrated the quality of the services because they were interviewed at the facility and there is the fear of being overheard by healthcare providers or other clients. Furthermore, using a structured questionnaire alone to elicit complex perceptions of women about PNC may have impaired the women's ability to explicitly express their true feelings and dissatisfaction. This implies that a further qualitative study might be required to supplement the preliminary quantitative work.

5.6 Conclusion

This chapter reflected on the results of this study. The results suggest that most women are satisfied with the quality of PNC services they receive at LEKMA hospital, and that satisfaction

was associated with women's willingness to utilise PNC services at the hospital. However, some women were not satisfied with some aspects of PNC care. These findings highlight the need for remedial actions to be taken to improve quality of PNC for all women. In this regard, specific recommendations are made in the next chapter.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This study sought to describe women's satisfaction with quality of care of PNC at LEKMA and how it affects continuous use of postnatal services. A total of 300 women were recruited for the survey through a systematic random sampling at the LEKMA postnatal clinic. Overall, women's satisfaction with the quality of PNC in LEKMA was very high, which indicate that the postnatal period is gaining recognition from both women and health providers. Although the findings are based primarily on women's experience and as such may not necessarily reflect excellent clinical care, it serves as a good source of information for policy makers in the health system to understand women's perceptions of quality of PNC and what motivates them to access services. Incorporating women's perspectives into quality assessments is critical in making maternal health services more responsive to their needs. This study is useful for indicating the aspects of care that need to be focused on while assessing the quality of care or taking action to improve it.

6.2 Recommendations

Based on the findings presented and discussed earlier, the following recommendations are made.

1. The hospital management should employ innovative ways of ensuring continuous water supply, such as drilling a bore hole, to facilitate good housekeeping services especially for the toilet facilities. This could help improve sanitation at the hospital thereby enhancing women's PNC experience.

2. Results from the bivariate analysis suggested that continued use of postnatal services is directly associated with the satisfaction of women. It is therefore recommended that continuous monitoring and evaluation of services at the postnatal clinic by health providers and policy makers be instituted by the hospital management and supported by the Ghana Health Service to ensure that postnatal services are tailor-made to meet the needs of clients.

3. It is also recommended that the hospital should intensify comprehensive health education on PNC especially in the provision of evidence-based information on daily diet and nutrition for mothers during breastfeeding as well as danger signs to look out for in the first few months (e.g. postpartum depression). Sustainable provision of incentives such as insecticide treated nets should be considered to encourage women to patronise postnatal services and help reduce neonatal and maternal mortality.

4. More research into determining the relative strength of various factors underlying women's satisfaction which focuses on specific policy areas is recommended to help in prioritizing appropriate interventions to improve quality of care. Also further research to determine the factors that motivates health workers to show friendly attitudes to clients is needed.

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APPENDIX A

PARTICIPANT INFORMATION SHEET

Title: Women's Satisfaction with Quality of PNC in the Ledzokuku Krowor Municipal Assembly

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General Information about Research

PNC is a critical period for the well-being of both mother and baby. Most maternal deaths occur during this period. It is important to provide services that are responsive to the needs of women so they can utilize the services for improved outcomes. The study therefore seeks to assess the level of satisfaction among women on quality PNC in the Ledzokuku Krowor Municipal Assembly. This would guide the hospital management and municipal health director in the quest to improve quality in PNC.

Possible Risks and Discomforts

The study poses no known risks to participants since it is non-invasive. Study participants will only be asked to fill a questionnaire, which will take about 15 minutes to complete.

Possible Benefits

There will be no direct benefits to respondents, in cash or in kind. The study's findings would however be used to help management and healthcare providers to evaluate performance in service delivery. Above all, this would be a source of evidence for policy makers in planning and implementing interventions to increase satisfaction and reduce maternal mortality.

Data Storage and usage

Data collected will be used for research purposes only. Data will be stored in password-protected folders on a microcomputer. Any hard copies of the data will be kept under lock and key. Only the researcher and supervisor will have access to all forms of data collected. Questionnaires will be kept for a period of 12 months, by which time all processes relating to this study would have been completed.

Voluntary participation/ withdrawal

Participation in the study is absolutely voluntary. Members in the study population have the rights refuse to partake in the study even though they qualify. Participants can refuse to answer a question or withdraw in the process without any consequences.

Ethical Approval

This study has been approved by the Ethical Review Board of Ghana Health Service. You may contact **Hannah Frimpong on 050 7041223** for further information and inquiries.

APPENDIX B

CONSENT FORM

Volunteer Agreement

All the information contained in the **participant information sheet,** which describes the benefits, risks, and procedures for the research entitled "Women's satisfaction with quality of PNC in the Ledzokuku Krowor Municipal Assembly" have been explained to me. I am satisfied with all the responses given me. Therefore, I agree to participate as a volunteer.

…… ……....

Date Signature (**Thumprint**)

Volunteer

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

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

…… ……..

Date Signature (**Thumbprint**) of Witness

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

…… ……..

Date Signature **(Thumbprint)** of Volunteer

APPENDIX C

SCHOOL OF PUBLIC HEALTH

UNIVERSITY OF GHANA- LEGON

QUESTIONNAIRE

The researcher is a student of the School of Public Health pursuing **Masters in Public Health** and conducting a survey on "WOMEN'S SATISFACTION WITH QUALITY PNC IN THE LEDZOKUKU KROWOR MUNICIPAL ASSEMBLY". Kindly respond to the following questions accordingly. Your responses will be duly appreciated and treated with utmost confidentiality.

Interview Date: ……

ID No ……

A. Socio-Demographics Characteristics of Respondents

1. Age: **[1]** <20 ☐ **[2]** 20-29 ☐ **[3]** 30-39 ☐ [4] ≥40 ☐

2. Number of Children: **[1]** 1 ☐ **[2]** 2 ☐ **[3]** 3 ☐ **[4]** 4 and more ☐

3. Educational Level (completed): **[1]** None ☐ [2] Primary ☐ [3] JHS/Middle School ☐ **[4]** Secondary ☐ **[5]** Tertiary and above ☐

4. Employment Status: **[1]** Self-employed ☐ **[2]** Formal employment ☐ **[3]** Unemployed ☐

5. Marital Status: **[1]** Single ☐ **[2]** Married ☐ **[3]** Divorced/Separated ☐ **[4]** Co-habitating ☐ [5] Widowed ☐

B. Women's Patronage of Postnatal Services

6. How did you attend PNC at LEKMA Hospital?

[1] Walked-in ☐ **[2]** Referred ☐

b. If walked in, why……

7. a. If referred, from which hospital

1] Private ☐ **[2]** Public ☐

b. Why were you referred……

8. How old is your baby……..

9. Number of PNC visits so far: **[1]** once ☐ **[2]** 2-3times ☐ **[3]** >3 times ☐

10. Attending PNC check-ups four times is enough

Yes ☐ No ☐

C. Women's Perception of PNC

Indicators of Quality of Care

Please indicate the extent to which you think the hospital performed by each of the following statements on a scale of **1 =strongly disagree; 2= disagree; 3 = undecided/indifferent; 4 = agree; 5= strongly agree.**

Structural Quality of Care	**[1]**	**[2]**	**[3]**	**[4]**	**[5]**
SQoC1: The environment was clean					
SQoC2: Toilet facilities were clean					
SQoC3: Health workers are competent and professional					
SQoC4: Medicines prescribed were available					
SQoC5:Services such as laboratory and X-ray were available					

Please indicate the extent to which agree or disagree with the following. **1 =strongly disagree; 2= disagree; 3 = undecided/indifferent; 4 = agree; 5= strongly agree**

Waiting Time	**[1]**	**[2]**	**[3]**	**[4]**	**[5]**
WT1: I usually have to wait long before being seen by the nurse?					
WT2: I usually have to wait long before being seen by the doctor?					
WT3: I am happy with the time I					

have to wait					
Length of Consultation	**[1]**	**[2]**	**[3]**	**[4]**	**[5]**
LC1: I spend a long time with the nurse/midwife/doctor?					
LC2: The time I usually spend with the doctor is enough to address my questions					
Interpersonal Behaviour	**[1]**	**[2]**	**[3]**	**[4]**	**[5]**
IB1: The health worker was professional.					
IB2: The health worker treated me with respect.					
IB3: There was privacy during my interaction with health worker					
IB4: The health worker encouraged me to ask questions regarding the clinical care I received.					
IB5: The health worker answered all my questions satisfactorily					

Please indicate the extent to which you understood procedures and treatments, based on your experience with PNC service delivery in the hospital, on a scale of **1 =strongly disagree 1 = strongly disagree; 2= disagree; 3 = undecided/indifferent; 4 = agree; 5= strongly agree.**

Clarity of Diagnosis and Treatment	**[1]**	**[2]**	**[3]**	**[4]**	**[5]**
CDT1: The health worker explained my state of health and that of the baby.					
CDT2: The health worker explained the procedures to me.					
CDT3: The health worker explained the purpose of the treatments before administering medications and injections to me					

Please indicate the extent to which you receive adequate information on the following. **1 = strongly disagree; 2= disagree; 3 = undecided/indifferent; 4 = agree; 5= strongly agree.**

Health Education (based on WHO recommendations)	**[1]**	**[2]**	**[3]**	**[4]**	**[5]**
HE1:The use of insecticide treated bed nets throughout infancy					
HE2: Early and exclusive breastfeeding in the first six months after delivery.					
HE3: Daily diet and nutrition during breastfeeding.					
HE4: Specific health problems that can occur during the first month after birth (danger signs) that require prompt attention.					
HE5: Date for next PNC visit.					

HE6: Family planning and contraceptive usage.					
HE7: Routine child immunizations.					

D. Women's Satisfaction with PNC

Please indicate the extent to which you agree with the following statements. **1 = strongly disagree; 2= disagree; 3 = undecided/indifferent; 4 = agree; 5= strongly agree.**

Care Outcome	**[1]**	**[2]**	**[3]**	**[4]**	**[5]**
CO1: I am well informed on the importance of taking my medications and the danger signs in pregnancy					
CO2: My health and that of the new-born has been improved due to quality of care provided					

Overall Quality of PNC	**[1]**	**[2]**	**[3]**	**[4]**	**[5]**
OvQ1: I think the quality of care I received was because of my :					
a. Age					
b. Number of Children (Parity)					
c. Educational Background					
d. Marital status					
e. Employment status					
OvQ2: Overall, I would rate the quality of PNC I received as good					

OvQ3: Overall, I am satisfied with the quality of PNC received					

E. Utilization

Please indicate the extent to which you agree with the following statements. **1 = strongly disagree; 2= disagree; 3 = undecided/indifferent; 4 = agree; 5= strongly agree.**

	[1]	**[2]**	**[3]**	**[4]**	**[5]**
UT1: I willingly return for follow-ups because I am happy with the care given to me					
UT2: I willingly take my medications because I am happy with the care					
UT3: I willingly recommend the service to other relative or friend					