ASSESSING THE QUALITY OF INFORMATION, EDUCATION AND COMMUNICATION DURING ANTENATAL CARE AT CHIRADZULU DISTRICT HOSPITAL

Msc (Midwifery) Thesis

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DECLARATION

I, the undersigned, hereby declare that this thesis is my own original work which has not be submitted to any other institution for similar purposes. Acknowledgements have made in recognition to other people's work used in the thesis.

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Signature

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Certificate of Approval

We, the undersigned, hereby certify that this thesis is the student's own work and effort and has been submitted with our approval.

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DEDICATION

I dedicate this work to my late beloved mother, Hannah Mercy Mpando. Mum, I wish you were here. I believe you fought a good fight, finished the course and kept the faith (2 Timothy 4:7-8). Glory be to God for He gave and has taken back (Job 1:21).

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ABSTRACT

Every pregnant woman attending antenatal care (ANC) is supposed to be informed, educated and communicated on various health areas regarding pregnancy and its outcomes. Information, education and communication (IEC) is considered as one of the major factors that help in reducing maternal mortality as it intends to develop positive attitudes towards behaviours in different cultures in order to support pregnant women accessing health services when required. This study aimed at assessing the quality of IEC offered during ANC at Chiradzulu District Hospital. The study had a descriptive design that employed quantitative methods of data collection and analysis. The sample size was 384 pregnant women who reported for ANC. Data was analysed using a Statistical Package for Social Sciences (SPSS) version 20.0. The researcher computed the statistics in form of frequency tables, pie charts and graphs to summarise the data. Results reveal that information necessary for pregnant women according to participant's manual in integrated maternal and neonatal care for Malawi is not provided and some information is given in inadequate amount. The IEC is offered by both skilled (58.3%) and unskilled attendants using a few teaching and learning resources. However, majority of the respondents (45.6) reported that no teaching resources were used.

In conclusion, IEC that is offered during antenatal care at Chiradzulu District Hospital, antenatal department is of poor quality. Quality IEC improves women's ability to plan for various areas of care so as to meet the necessary needs during pregnancy. If

IEC of good quality is provided to pregnant women, maternal and neonatal morbidity and mortality rates can be reduced.

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LIST OF ABBREVIATIONS

ANC ………………………………..Antenatal care

COMREC…………………………...College of Medicine Research and Ethics committee

DHMT ……………………………....District Health Management Team

DHO …………………………………District Health Office

FANC ……………………………….Focused Antenatal Care

IEC ……………………………….....Information Education and Communication

IMNC ………………………………. Integrated Maternal and Neonatal Care

KCN ………………………………...Kamuzu College of Nursing

MCH ………………………………. Maternal and Child Health

MMR ………………………………..Maternal Mortality Ratio

MOH ………………………………...Ministry of Health

NMCM ……………………………..Nurses and Midwives Council of Malawi

NMR ……………………………… Neonatal Mortality Rate

NSO ………………………………....National Statistics Office

WHO …………………………...…World Health Organization

OPERATIONAL DEFINITIONS

Antenatal care (ANC):	The care that service providers give to pregnant women during the course of their pregnancy.
Information Education and Communication (IEC):	Means sharing of information and ideas in a way that is culturally sensitive and acceptable to the community using appropriate cannels, messages and methods
Focused antenatal care (FANC):	A model of ANC developed by World Health Organization (WHO) used during provision of antenatal care to women.
Maternal death:	Death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by pregnancy or its management but not from accidental or incidental causes
Maternal Mortality Ratio:	Number of maternal deaths during a given period of time per 100,000 live births during the same time period.
Neonatal death:	. Death of a baby within the first twenty eight days of life.
Quality IEC:	Recommended type and amount of information given to pregnant women, offered by skilled attendant using teaching resources and methods and acceptability of the information by the pregnant women.

Skilled attendant: A health professional who is trained to provide antenatal care, manage normal labour and to identify and refer obstetric complications during antenatal, labour, delivery, and the postnatal period. These include midwives, nurses, medical officers and clinical officers.

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CHAPTER 1

Assessing Quality of IEC offered during Antenatal Care

Introduction

The importance of Information Education and Communication (IEC) given to pregnant women as part of antenatal care (ANC) is well recognized worldwide. IEC means sharing information, ideas in a way that is culturally sensitive and acceptable to the community using appropriate channels, messages and methods (Mahar et al., 2012). IEC in health programs aim at increasing awareness, change attitudes and bring about a change in specific behaviours (Nwaeze, Enabor, Oluwasola, & Aimakhu, 2013). As part of ANC, IEC is said to improve women's ability to plan for various areas of care so as to meet the necessary needs during pregnancy. If IEC offered to pregnant women is of good quality, it is likely to influence effective utilization of ANC services and compliance with interventions (Nwaeze, Enabor, Oluwasola, & Aimakhu, 2013). It can also improve patient outcomes by increasing the chance of using skilled attendance at birth (Raine, Cartwright, Richens, Mahamed, & Smith, 2010).

Quality IEC comprises of the recommended type and amount of information given to pregnant women, offered by skilled attendants using recommended teaching resources and methods and acceptability of the information by the pregnant women. It can be drawn from Donabedian conceptual model. The model provides a framework for examining health services and evaluating quality of health care. According to the model, information about quality of care can be drawn from three categories: "structure,"

“process,” and “outcomes (Donabedian, 1988). "Structure describes the context in which information is delivered (human and material resources). Process denotes the transactions between patients and providers throughout the delivery of healthcare. It includes client provider interaction, teaching methods used and type and amount of information offered to pregnant women. Finally, outcomes refer to the effects of healthcare on the health status of patients and populations. This includes client satisfaction towards the information received.

IEC is a component of focused antenatal care (FANC), a model that has been elucidated by the World Health Organization (WHO) as part of the Safe Motherhood Initiative. FANC was chosen because of its effectiveness in terms of reducing maternal and perinatal morbidity and mortality by providing individualized care during pregnancy. It is regarded as the best approach for resource limited countries where health professionals are few and health infrastructures are limited (WHO, UNICEF, UNFPA & The World Bank, 2012). Malawi, alongside Tanzania and Ethiopia are some of the countries that have adopted the FANC approach as a way of promoting maternal health.

FANC advocates for four targeted visits and comprises of various components including IEC on each of the visits. Quality antenatal care during the initial visit and subsequent visits provide pregnant women and their families with ideal information and advice for a healthy pregnancy, safe delivery, and postpartum recovery as well newborn care (Nolan, 2009). The first visit should occur by the end of 16 weeks of pregnancy; the second visit should be between 24 and 28 weeks of pregnancy; the third visit at 32 weeks;

and the fourth visit at 36 weeks. IEC interventions should involve the active participation of the target audience and adopt channels, methods and techniques that are familiar to their world view (Nwaeze, Enabor, Oluwasola, & Aimakhu, 2013). Pregnant women are supposed to be informed and educated on self-care, alcohol and tobacco use, nutrition, safe sex, rest, sleeping under insecticide treated nets (ITNs), importance of taking preventive medicines for malaria, birth and emergency plan, post-natal care, infant feeding and family planning (Ministry of Health, 2013).

Despite the existence of FANC guidelines, studies have shown that inadequate IEC is given to pregnant women. In Malawi, pregnant women are not certain of the care they receive since they do not know the standards of care. Health workers have the responsibility to inform women about the care that they should expect (Kumbani, Chirwa, Malata, Odland, & Bjune, 2012). National Statistical Office (NSO) (2011) indicated that women living in rural areas of Malawi were least likely to receive information on pregnancy complications (79%) than those living in urban areas (82%). It was therefore essential to assess the quality of IEC from the perspective of pregnant women since IEC of good quality can have effects on pregnancy outcomes including anxiety, pain control, satisfaction and the understanding of information (Raine et al., 2010).

Background

IEC as an essential component of FANC is part of ANC in Malawi. It is believed to promote self care, good nutrition, and diet, and helps to prevent malaria in pregnancy.

It also promotes birth preparedness, breast feeding, child care and family planning (Mahar et al., 2012). Furthermore, it alerts women on early identification of danger signs and empowers them with decision making about seeking care in case of obstetric emergency. If pregnant women receive adequate IEC on pregnancy related issues, delay in seeking care will be avoided and maternal and child health is promoted. This is enhanced by the fact that IEC recognizes that individuals have competencies and abilities that they apply in their daily life to maintain health. These may lead to a decrease in maternal morbidity and mortality as the women are likely to make better choices regarding their pregnancies (Anya, Hydara, & Jaiteh, 2008; Mahar et al., 2012).

In sub-Saharan Africa and Asian countries like Somalia and Pakistan, women's experience indicates that little information is provided during ANC and that the information provided is perceived in general terms and not focused on specific areas regarding pregnancy (Garnweidner, Sverre Pettersen, & Mosdøl, 2013; Lucas, Charlton, & Yeatman, 2014). Some studies indicate that barriers for providing IEC to pregnant women include lack of time, resources and relevant training in IEC (Ayiasi et al., 2013; Banda, 2013; Nwaeze et al., 2013). However, simulation of FANC revealed that proper counseling would take 15 minutes (Mahar et al., 2012).

Inadequate IEC materials are used for ANC in Malawi and that women are rarely advised on dangers of tobacco and alcohol use, importance of rest, benefits of family planning and post natal care yet this is a recommended health promotion strategy (Mann, 2006; Nikiéma, Beninguisse, & Haggerty, 2009). Little was known on quality of IEC

offered during ANC. This study therefore aimed at assessing quality of IEC offered during antenatal care. Generally, patient satisfaction has been traditionally linked with quality of services given and to the extent which their specific needs are met. Patients who are satisfied with the care have the potential to come back for the services and encourage others to access such services (Nwaeze et al., 2013).

Problem Statement

Every pregnant woman attending ANC is supposed to be informed, educated and communicated to on various health areas regarding pregnancy and its outcomes. Studies show that antenatal care coverage is high in low income countries including Malawi. However, antenatal education is inadequate despite the high antenatal coverage (Anya et al., 2008). This could be one of the reasons that maternal and neonatal mortality also remains high in these countries (WHO, UNICEF, UNFPA & The World Bank, 2012). Malawi has a very high maternal mortality ratio (MMR) of 675 / 100, 000 live births (NSO, 2011). However, About 95% of pregnant women in Malawi receive ANC (NSO, 2011). Ideally, provision of quality IEC is expected to help in reducing MMR because IEC is one of the strategies that have shown to help pregnant women develop positive attitudes towards health behaviours in different cultures in accessing health services when required (Nwaeze, Enabor, Oluwasola, & Aimakhu, 2013). Unless studies were done on the quality of IEC during antenatal care, the significance of quality IEC on pregnancy outcomes in Malawi could have not been known. This study was therefore,

important as it assessed the quality of IEC offered to pregnant women as part of ANC at Chiradzulu District Hospital.

Objectives

Broad objective.

The study aimed at assessing the quality of IEC during ANC at Chiradzulu District Hospital.

Specific objectives.

The specific objectives of this study were:

- To assess the availability of resources used for providing IEC (human and material) during ANC
- To examine the teaching and learning methods used in delivering IEC to pregnant women
- To assess the type and amount of IEC given to pregnant women during ANC
- To determine women's satisfaction with the IEC offered during ANC

Significance of the Study

The study is of public health importance as its findings will help to promote effective IEC to be given to pregnant women, thereby preventing complications that could arise with a possibility of not giving IEC to pregnant women. Policy makers like Ministry of Health (MOH), and regulatory bodies, nurse and midwifery educators as well as curriculum developers may also use the study findings to develop evidence based IEC

interventions and materials for client education. Gaps that were identified from the study and strategies for interventions that will guide service providers to offer recommended IEC to pregnant women at each visit can be suggested. The study findings will also provide an opportunity for further research regarding implementation of IEC program activities since currently, there is paucity of data regarding IEC provision, and how it contributes to pregnancy outcomes

CHAPTER 2

Literature Review

Introduction

Since IEC can improve patient outcomes, in Malawi, few studies were done regarding its quality during ANC. The literature search was guided by quality of care framework by Donabedian (1980) and focused on the research objectives as follows: to assess the availability of resources be it human and materials for provision IEC during ANC, to examine teaching and learning methods used during ANC, to assess the type and amount of IEC offered during ANC and to determine women's satisfaction towards the IEC that is offered during ANC.

However, some studies regarding IEC and pregnant women have been done in other countries and Malawi. Therefore, such studies as well as other studies done on ANC were reviewed since IEC is part of it. The review of relevant literature was conducted to generate a picture of what was known about a particular situation (Burns & Groove, 2011) and in this case was about IEC and ANC.

Overview of Quality of Care Framework and its Application to the Study

Donabedian Structure, Process and Outcome (SPO) Model

Donabedian structure, process and outcome (SPO) model which identifies the SPO as three components used to evaluate quality of health care was used in this study and guided the literature review. According to Donabedian's health care quality model, improvements in the structure of care should lead to improvements in clinical processes

that should in turn improve patient outcome (Donabedian, 1988; Lungu, Malata, Chirwa, & Mbendera, 2011; Mgawadere, 2009; Moore, Lavoie, Bourgeois, & Lapointe, 2015). Quality of IEC offered to pregnant women during ANC was drawn from the three categories: “structure,” “process,” and “outcomes” (Figure 1).

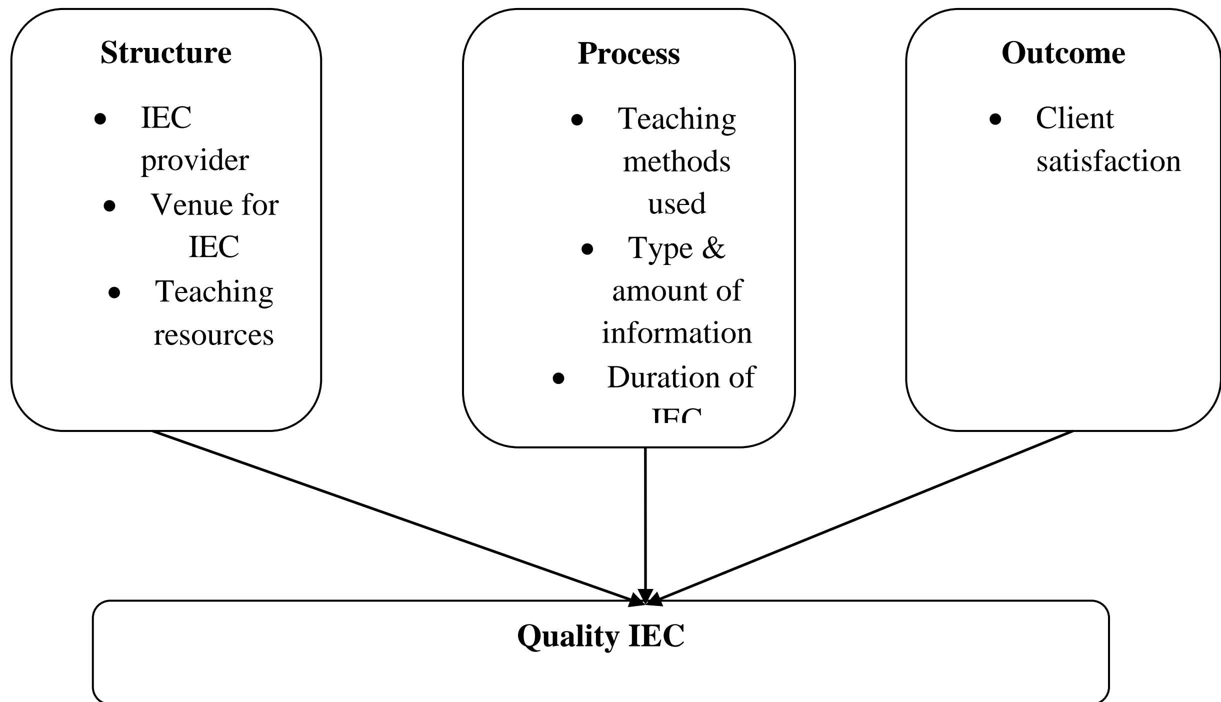

Figure 1: Modified Donabedian SPO Model. Adapted from Donabedian, (1980).

Structure

Structure describes the context in which information is delivered (Donabedian, 1988). It is concerned with the adequacy of facilities and equipment, human resources, qualifications of health care providers and operations of programs and institutions providing care (Donabedian, 1966). In addition to these, educational level of the recipient was also part of structure in this study as it influenced the acceptability of the information and how they valued it.

The context in which care is delivered affects both the process and outcome. If the place where IEC is being delivered is not conducive, pregnant women will opt not to receive the IEC or they may be physically there but not be attentive. Donabedian, (2003) stated that improvements in the structure of care affect both the process and lead to patient outcome. Delivery of quality care is dependent on availability of adequate human resource. Availability of enough service providers who are knowledgeable and skilled in the provision of IEC is essential in quality care delivery when providing antenatal care.

Process

Process is defined as the activities that constitute health care, such as diagnosis, rehabilitation, prevention, patient education and treatment (Donabedian, 1988). Process denotes the transactions between patients and providers throughout the delivery of healthcare. Process is what is actually done in giving, receiving care, carrying it out and the practitioners' activities in making a diagnosis, recommending or implementing treatment (Donabedian, 1988). Process assesses whether a patient received what is known to be good care. In this study, process included client provider interaction, type and amount of information offered, duration of IEC as well as teaching methods used. If women are actively involved in the antenatal education, they are likely to receive and utilize the acquired information unlike being passive recipients of the information.

Outcome

Outcomes are the effects of care on the health status of patients and populations including changes in health status and knowledge as well as patient satisfaction and health related quality of care. Outcome in an individual are desirable or undesirable changes which are attributable to the care they received (Donabedian, 1988). According

to Moore et al., (2015), outcomes are states of health or events that follow care, and may be expressed as, discomfort, disability, dissatisfaction, disease or death. Donabedian quality care framework contemplates that with good structure and good process the outcome will definitely be good. This includes client satisfaction and views towards the information received. In this study outcome was assessed through client satisfaction towards IEC that was offered.

Benefits of IEC

IEC intends to develop awareness, positive attitudes towards health behaviours in order to support pregnant women accessing health services when required. Furthermore, pregnant women get empowered on choice of delivery and are open to share views with spouses and parents (Anya et al., 2008; Kumbani, Sunby, & Odland, 2012; Raine et al., 2010).

Since IEC is important to pregnant women, FANC model advocates it to be included in all the four targeted visits. In so doing, pregnant women will be enlightened in getting knowledge on potential pregnancy complications and be able to develop an emergency birth plan. The women will also have knowledge of complications that may arise to both mother and neonate during antenatal, labour and delivery and post partum period (Akhund & Avan, 2011).

Identification of pregnancy related complications is recognized as an important part of the health strategy in reducing maternal morbidity and mortality rates (Both, Fleβa, Makuwani, Mpembeni, & Jahn, 2006; Kumbani et al., 2012; Raine et al., 2010). However, in a study on quantity and quality of IEC during antenatal visit at private and public sector hospitals of Bahawalpur, Pakistan, Mahar et al., (2012) found that most

women who reported for ANC were not benefiting from the aim of ANC. More than half did not receive any IEC in both facilities.

Resources used for Provision of IEC

Human and material resources must be ideal for IEC to be of good quality. One area of achieving this is through use of skilled attendants as well as material resources in terms of infrastructure and various IEC materials.

Human Resources

Various studies indicate that many pregnant women and their families have no knowledge in recognizing pregnancy danger signs despite receiving ANC from skilled attendants. Such knowledge is vital and it is a health right for the women to access such information (Changole et al., 2010; Kumbani et al., 2012; Magoma, Requejo, Campbell, Cousens, & Filippi, 2010; Nikiéma et al., 2009; Pembe et al., 2010). The result is delay in health seeking behaviour which can lead to late diagnosis of problems that could have been prevented had it been that ANC was sought earlier.

In most countries, skilled attendants lack knowledge on health promotion, skills and concept application (Magoma et al., 2010; Mahar et al., 2012; Pembe et al., 2010; Raine et al., 2010). Poor communication and counseling skills are regarded as one of the contributing factors to poor awareness of danger signs among pregnant women who have attended antenatal clinic. (Anya et al., 2008; Changole et al., 2010; Kumbani et al., 2012; Magoma et al., 2010; Pembe et al., 2010).

Both et al. (2006) and Pembe et al. (2010), found that registered nurses who are among the highest cadres of skilled attendants were the least likely health personnel to provide IEC and had shorter contact time than the lower cadres who are unskilled health

attendants. Skilled attendants do not give necessary information and education to pregnant women. In cases where IEC is given, it is disseminated in a way that most women cannot remember (Both et al., 2006; Magoma et al., 2010; Mahar et al., 2012). Nikiéma et al., (2009) and Shabila, Ahmed, & Yasin, (2014) reported that midwives were not explaining signs of labour and what to do before going for delivery to women during ANC. The women also reported that there was lack of information sharing and lack of health promotion from the midwives who were skilled attendants.

Unskilled attendants who offer IEC services to pregnant women should also be given priority for further training to higher cadres in order to increase human resource of skilled attendants with good communication and counseling skills (Pembe et al., 2010). The skills will help pregnant women to be comfortable and free to ask questions regarding ANC rather than just being recipients of IEC (Both et al., 2006; Mahar et al., 2012). In two separate studies, health workers who had good communication and counseling skills were found to be more comfortable in providing necessary IEC to pregnant women. On the other hand, pregnant women found that the health workers were supportive and facilitated relationship (Pembe et al., 2010; Raine et al., 2010). Feedback giving and necessary information to pregnant women based on assessment findings is also an IEC component that promotes effective communication during IEC (Kumbani, Chirwa, Malata, Odland, & Bjune, 2012).

Material Resources

Material resources are also important and need to be available in all antenatal clinics for use during IEC. Having adequate supplies and materials such as posters, models, videos and IEC guidelines for ANC is crucial. Other studies have shown that

clinical guidelines based on evidence rather than opinions have the potential to promote interventions of proven benefits and discourage ineffective practices (Nwaeze, Enabor, Oluwasola, & Aimakhu, 2013). Health providers should discuss the information on the posters and leaflets for women to understand the information fully (Nolan, 2009). However, the material resources must be culture sensitive for women to understand and accept the information easily. In one study, women objected to IEC materials that had been developed for another culture. For instance, Chinese midwives were giving IEC using teaching aids that depicted western women(Nolan, 2009).

Provision Time for IEC during ANC

Adequate contact time for IEC between health worker and pregnant women is vital. The assumption is that more contact time contributes to nurse client communication. Health workers should give adequate time for FANC to every pregnant woman as recommended by WHO that is 35 to 45 minutes for initial clients and about 30 minutes for subsequent visits (Anya et al., 2008; Magoma et al., 2010; Mahar et al., 2012). The four targeted visits advocated in FANC promotes more time for IEC (Anya et al., 2008; Both et al., 2006; Pembe et al., 2010).

It is recommended that additional 20 minutes is required if voluntary counseling and testing (VCT) is to become part of ANC. Several studies indicate that women expressed satisfaction with the nurses taking adequate time in order for them to understand the message (Both et al., 2006; Magoma et al., 2010; Raine et al., 2010). However, in most African countries like Tanzania, Pakistan and Gambia, some issues on IEC like nutrition, exercise and rest and personal hygiene are delivered in group counseling. This reduces the 15 minutes counseling time (Anya et al., 2008; Both et al.,

2006; Mahar et al., 2012; Pembe et al., 2010).

Although antenatal attendance is high and a lot of women attend antenatal clinics with every pregnancy, they do not benefit from IEC. Experience shows that interaction time between health worker and client is short (about 5 minutes on average). This prevents the women from getting important information regarding ante natal care, labour and delivery as well as post-natal care. The type of interaction and communication involved during short time of education discourage pregnant women from asking questions hence poor quality of IEC (Anya et al., 2008; Both et al., 2006; Pembe et al., 2010). In one study done by Nolan, (2009), Women wanted to discuss with midwives the content of the leaflets and posters found in antenatal department but midwives had insufficient time to do so. However, more time for IEC cannot be fruitful if human resource is inadequate. Additional human resource might be important when ANC is considered as an entry point for additional preventing interventions (Both et al., 2006; Pembe et al., 2010).

Factors Affecting Utilization and Acceptability of IEC

Level of education and income influence the impact of IEC interventions. This is so because the woman who has been well informed and educated is able to make reasonable decisions resulting in better pregnancy outcomes (Anya et al., 2008; Pembe et al., 2010). Educated women are able to make informed decisions concerning their health and are more prone to deliver with skilled attendants. In most cases, literate women start antenatal clinic early thereby having adequate visits which expose them to recommended IEC.

On the other hand, causes of ANC default and late initiation were identified as

unawareness of the pregnancy by the women; want to hide it from the public and to reduce the number of antenatal visits to the clinic. Longer distances to the health facility also contribute to late initiation of ANC. This behaviour is more common to uneducated people who are of low socio economic status (Anya et al., 2008; Pembe et al., 2010). Most women visit public hospitals for ANC and not for acquiring information yet IEC is one of the essential elements of ANC.

Barriers to IEC

Several factors have been identified by various studies as barriers to IEC during ANC. Such factors include inadequate knowledge and lack of communication and counseling skills by health workers, inadequate human and material resources, reduced level of knowledge of respondents, geographical locations of health facilities in relation to peoples residences (Anya et al., 2008; Magoma et al., 2010; Mahar et al., 2012; Raine et al., 2010). Because of staff shortage, less priority is given to IEC since midwives need to assist a lot of pregnant women in a defined period (Mahar et al., 2012).

Summary of Literature Review

Most women attending ANC do not benefit from IEC although it is an essential component of FANC. The IEC component is implemented poorly despite being delivered by skilled attendants. The literature review was guided by the conceptual framework and identified gaps in structure, process and outcome components regarding provision of IEC. Interaction time for IEC between skilled attendants and pregnant women is short thereby missing important information necessary for promoting better pregnancy outcomes. The result is delay in health seeking behaviours that can lead to late diagnosis of problems that could have been prevented. On the other hand, levels of education for pregnant

women affect their decisions and acceptable care rendered during ANC. Educated women are more able to make informed choices that can prevent pregnancy related complications hence reducing maternal and neonatal morbidity and mortality rates.

The study findings will give a picture of how IEC is offered to antenatal women. Midwives will be guided by the study findings on how they can best provide IEC to ante natal women. Furthermore, the findings will also guide in developing / updating Maternal and child health policy on antenatal care.

CHAPTER 3

Methodology

Introduction

This chapter describes the methodology that was employed to carry out this study. The chapter describes the study design, the study setting, sampling method, sample size, data collection, data management and analysis, ethical consideration, study trustworthiness and plan for dissemination. Methodology are procedures followed by researchers in their work of describing, explaining and predicting phenomena (Rajasekar, Philominathan, & Chinnathambi, 2013).

Research Approach and Design

The research approach provided the plan and procedures for research, which span the steps from broad assumptions to detailed methods of data collection, analysis and interpretation. A research design is a type of inquiry within the research approach that provides specific direction for procedures in the design. It is a procedure for collecting, analysing, interpreting and reporting data in a research study. It is a blue print for conducting a study, and it provides control that increases the probability that the study results will accurately reflect reality (Burns & Grove, 2011). Quantitative research approach and descriptive design was used in this study to assess the quality of IEC offered during ANC. Burns & Grove (2011) recommends the use of descriptive methods to help in discovering new meaning, describe what exists, determine the frequency with which something occurs and categorize information.

Study Setting

The study was conducted at Chiradzulu District Hospital which is located in Chiradzulu district in the southern region of Malawi. The hospital acts as a service provider as well as a teaching institution for nursing, midwifery and medical students from KCN, St. Joseph's, St. Luke's and Mulanje Mission Colleges of Nursing as well as Malawi and Malamulo College of Health Sciences. Complicated cases are referred to Queen Elizabeth Central Hospital. The hospital was chosen as a setting of the study because Chiradzulu district has the highest number of ANC attendance in Malawi (Malawi National Statistical Office and ICF Macro, 2011). Chiradzulu District Hospital also acts as a secondary level facility and has 11 health centres that offer primary level care, of which 10 provide maternity services (antenatal, labour and delivery and postnatal care) and refer women with complications during perinatal period to the District Hospital.

Study Population

The study population was pregnant women who were attending ANC at Chiradzulu District Hospital. The pregnant women in this age bracket in Chiradzulu are 15,916 (Chiradzulu Health Management Information System (HMIS). The women were likely to have encountered IEC offered during antenatal care and may know if it was beneficial or not.

Sampling

Sampling is the process of selecting a portion of the population to represent the entire population (Polit & Beck, 2010). The study used the systematic random sampling

method to select the sample for the study. Systematic sampling is a form of probability sampling, which allows every element of the population to have an equal chance of being selected (Ary, Jacobs, Sorensen and Razavieh, 2010). The sampling technique involves the selection of every K^{th} individual or site in the population until the desired sample size is reached (Creswell, 2008; Polit & Beck, 2010).

Sample Size

The population of women who attended ANC at chiradzulu was large (2085) from July 2014 to June 2015 (Chiradzulu HMIS). The sample size was then calculated according to Lemeshow, Hosmer, Klar, & Lwanga, (1990) 's formula. The proportion of women who find the information offered from antenatal to be of good or bad quality was not known. In order to maximize the sample, this proportion was estimated to be 50%. A 95% confidence interval was also used in the calculation.

Sample

$N = Z^2 p (1-p)/e^2$

Where by: n was the required sample size, Z = 1.96 (95% CI),

P was the proportion of what was to be measured expressed as a decimal, which was 0.5

e = allowable error of 95%, i.e. 5%. This was also expressed in decimals i.e. 0.05

$n = Z^2 p (1-p)/e^2$

$n = (1.96)^2 \times 0.5 (1- 0.5) / (0.05)^2$

$n = 3.84 \times 0.5 \times 0.5/0.0025$

$n = 3.84 \times 0.25/0.0025$

$n= 0.96/0.0025$

n= 384

The sample size for pregnant women was 384.

Inclusion and Exclusion Criteria

a) Inclusion criteria

The inclusion criterion was:

- Pregnant women aged 18 to 49 years since this is the reproductive age for Malawi (NSO, 2011).
- Pregnant women who have had two or more pregnancies and had reported for ANC at the hospital.
- Pregnant women who once attended ANC with the previous pregnancies

b) Exclusion Criteria

The exclusion criterion was:

- Pregnant women less than 18 years of age
- Pregnant women who were unable to comprehend consenting process
- Pregnant women who were unwilling to participate
- Pregnant women with first time pregnancies
- Pregnant women who were attending ANC for the first time regardless of the number of deliveries they had.

Instrumentation

The study used a structured questionnaire which was developed by the researcher. The content of the questionnaire was drawn from the participants manual in integrated maternal and neonatal care for Malawi (Ministry of Health, 2013), as well as the review of other literature on IEC during ANC to ensure that it covered all the aspects of IEC required during ANC.

The questionnaire had closed ended items with fixed response to ensure comparability of responses and facilitate analysis. Furthermore, the closed ended items enabled respondents to answer to the same questions in the same order (Polit & Beck, 2010). The instrument was divided into three parts. The first part covered information on structure component according to Donabedian's SPO model. The information included available resources used for provision of IEC, venue for provision of IEC as well as teaching and learning resources used during IEC. The second part covered 'process' information which included the teaching methods used during IEC, type and amount of information provided during ANC and duration for giving IEC. The third part covered information concerning 'outcome' component of the model which covered information on women's satisfaction towards IEC offered during ANC.

The questionnaire was developed in English and translated in Chichewa, the local language spoken by most people of Chiradzulu.

Pretesting Data Collection Tool

Before the actual data collection, the instrument was pretested on 12 pregnant women who reported for ANC at Thyolo District Hospital. The questionnaire was pretested in order to assess the feasibility of the study and to test the accuracy and reliability of the questionnaires. In so doing, the proposed methods or instruments were assessed if appropriate in producing required information. The pre test was conducted at Thyolo District Hospital after approval of the proposal by the College of Medicine Research and Ethics Committee (COMREC) and the authorities for the hospital. Thyolo was chosen because of its common characteristics with Chiradzulu District Hospital. The hospital offers similar maternal and child health services like the chosen study setting. Furthermore, both hospitals are closer to Blantyre, and that Lomwe people are found in both districts and people make their living by selling their farm produce to people living in Blantyre,

Data Collection

The study used a structured questionnaire as an instrument of collecting data on pregnant women attending ANC at Chiradzulu District Hospital antenatal department. The researcher collected data from all the respondents in a private room at the antenatal clinic by administering the questionnaire verbally. The administration of the questionnaire by the researcher ensured that all respondents understood the information that was being asked there by assisting those who had problems with comprehension. About 30 minutes was used for collecting data from each respondent from 31st May 2016

to 28th June, 2016. The structured questionnaire assisted the researcher to be systematic and ensure that similar questions are asked to all participants (Polit & Beck, 2010). The questionnaire was used in order to collect appropriate data, to make questions engaging and varied and to minimise bias in formulating and asking questions. Furthermore, the questionnaire was used in order to assist the researcher to be systematic and ensure that similar questions are asked to all participants (Polit & Beck, 2010).

During data collection the questionnaires were assigned numbers from 1 to 384 based on the number of respondents in the study. A code was used to identify the questionnaires, for instance, the questionnaires were coded as Q1 to Q384. The researcher administered the questionnaires to all the 384 pregnant women since they were people with different levels of education as some women had reading skill problems while others were able to read. The researcher was clarifying information on the questionnaire in order to make sure that each respondent understood the content before giving in responses.

However, there were limitations on the use of questionnaire. These included; possibility of low response rates and inability to probe responses since they were structured instruments and allowed little flexibility to the respondent with respect to response format. The researcher physically met each respondent, and read out the questionnaire items to them and ticked their responses. This promoted response rate. Similarly, the lack of flexibility was addressed by ensuring that the questionnaire was exhaustive, by covering all the necessary aspects of IEC during ANC, as prescribed by

manuals and literature. Thus the questionnaire requested factual information such that it was not probably affected by the lack of personal contact.

Data Management and Analysis

Each questionnaire was given a number for easy identification. Variables extracted from the questionnaire were named and data was coded for easy data entry. The coded data was then entered into a Statistical Package for Social Sciences version 20.0 for analysis. Data were presented in the form of frequency distributions and cross-tabulations. The variables that were analysed include age, marital status, education level, residence, gravidity, available resources for provision of IEC, teaching and learning methods used during provision of IEC, and IEC offered during ANC.

The researcher organized the data by systematically arranging the variables on each objective according to the number of times each variable was obtained (frequency) from the lowest to the highest and their percentages. The researcher then described the available resources, teaching methods used, and satisfaction by identifying the variables with the highest frequency on each of the three objectives. Type and amount of IEC was compared with the WHO standards based on Likert scale (adequate, not adequate, not provided and no idea). Scores above 80% were regarded as the facility was providing quality IEC.

Validity.

Validity means that researchers can draw meaningful and justifiable inferences from scores about a sample or population (Creswell, 2008). The data collection

instrument must accurately reflect a construct it measures in order to be able to draw truthful conclusions. A valid scale is the one that actually measures what you think it is measuring (Burns & Grove, 2011) To ensure that there was content and construct validity, a comprehensive review of literature was done before formulation of the data collecting instrument to ensure that the data collecting instrument had adequate questions addressing the phenomena under study. The questionnaire was translated in local language. Furthermore, the WHO guidelines of ANC and Donabedian SPO model were used during construction of the questionnaire. The questionnaire was reviewed by two supervisors. The College of Medicine Research and Ethics Committee also reviewed the tools before data collection in order to ensure its validity. Informed decisions and alterations on the questionnaire were made where necessary basing on the feedback from the supervisors in order to improve the effectiveness of each question and ensure content validity.

Reliability.

Reliability is the extent to which a tool provides the same measurement on different occasions and overtime (Polit & Beck, 2008). It is a means that individual scores from an instrument should be nearly the same or stable on repeated administrations of the instrument and that they should be free from sources of measurement error and consistent (Creswell, 2008). In the study, the questionnaire was pre tested and refined where necessary in order to ensure its reliability before the actual data collection.

Ethical Considerations

Prior to commencement of data collection, approval for research was sought from the COMREC. This was done in order to ensure that ethical issues have been considered. Following the approval, letters seeking permission were written by the researcher to Chiradzulu District Hospital.

Consent forms explaining the purpose of the study, its nature, benefits and risks, how anonymity, privacy and confidentiality were handled and maintained in the process was used. Participants were assured of anonymity and confidentiality by using identification numbers and not names. In addition, right to privacy, fair treatment and protection from any harm were considered. Participants were also informed that the data collected was only accessible by the research team and other health personnel, who may use the information to promote the provision of IEC. Respondents signed a consent form after full understanding and were interested to voluntarily participate in the study. Right to participate or not, or with draw any time during the study was respected. This did not affect respondents' access to health care services. Study benefits to the society were also highlighted and respondents were informed that there were neither direct benefits nor risks to individuals for participating in the study.

CHAPTER 4

Presentation of Results

Introduction

This chapter presents the results of a study whose aim was to assess quality of IEC during ANC**.** The study was guided by Donabedian quality of care framework and used quantitative data collection method. The first part of this chapter presents the demographic information of respondents, followed by results on specific objectives which were: available resources used for provision of IEC, teaching and learning methods used during IEC, type and amount of information offered during IEC and client satisfaction towards IEC offered during ANC.

Socio Demographic Characteristics of the Participants

The study recruited 384 women who reported to Chiradzulu District Hospital for ANC and response rate of 100% was achieved. The demographic characteristics for this study were respondents' age, marital status, level of education, residence, occupation, gravidity, parity and number of visit to the antenatal clinic (Table 1).

Table 1: Socio demographic characteristics of antenatal women who attended ANC at Chiradzulu District Hospital

Variable	n (%)
Age in years	
18-24	135 (35)
25-34	206 (54)
35-44	42 (11)
45-49	1 (0)
Marital Status	
Married	320 (83.3)
Not married	56 (14.6)
Divorced	6 (1.6)
Separated	2 (0.5)
Education	
No education	5 (1.3)
Primary	218 (56.8)
Secondary	139 (36.2)
Tertiary	22 (5.7)
Residence	
Semi Urban	64 (16.7)
Rural Chiradzulu	258 (67.2)
Other	22 (5.7)
Occupation	
Not working	166 (43.2)
Civil servant	30 (7.8)
Business	128 (33.3)
Other	60 (15 .6)
Gravidity	
2	122 (31.8)
3	132 (34.4)
4	75 (19.5)
5-8	55 (14.3)
Number of visit	
First	66 (17.2)
Second	139 (36.2)
Third	108 (28.1)
Fourth	59 (15.4)
Fifth	12 (13.1)

The demographic characteristics help to know the type of people you are dealing with in the study. The majority of the participants were between the ages of 25 and 34. The mean age was 27.55 years and a standard deviation of 5.5. At least ¾ of the respondents were married representing about 83.3%. More than half 56.8% (218) attended primary education and 36.2% (139) reached secondary education. Most of the participants, 67.2% (n=258) lived in rural areas of Chiradzulu and the remaining participants lived at Chiradzulu boma, a semi urban location and Blantyre district.

The results of the study further show that 43.2% (n=166) of the participants were housewives, not doing any business. However, 33.3% (n=128) of the respondents were doing small scale business. The number of pregnancies (gravidity) for majority of the respondents 93% (360) was 2 to 4.

Structure

Available Resources for Provision of IEC

The study wanted to find out about the available resources be it human and material for the provision of IEC. Respondents were asked to identify the people who provide the service and whether materials for the provision of these services are available.

Human Resources

About the human resource, the researcher wanted to find out the nature of people who provide the IEC during ANC. The figure below provides the detailed results from this question

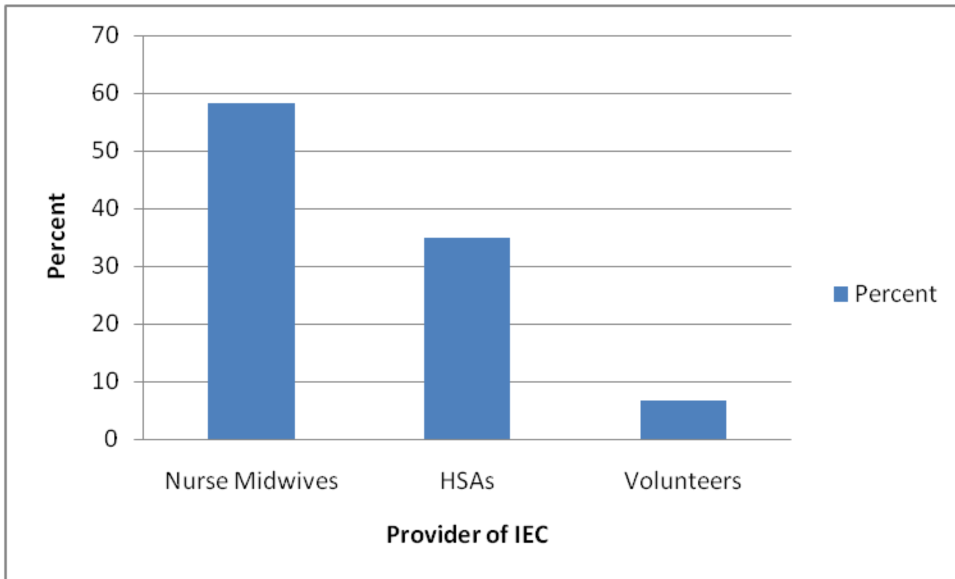

Figure 2: People who provide IEC during ANC

It will be observed from figure 1 that more than half of the respondents 58.3% (n=224) mentioned nurse midwives as people who provide IEC during ANC. In addition, 34.9% (n=134) mentioned Health Surveillance Assistants. However, when respondents were asked about the most credible person to provide IEC, majority 71.4% (n=274) prefer to receive IEC from nurse midwives (figure 2).

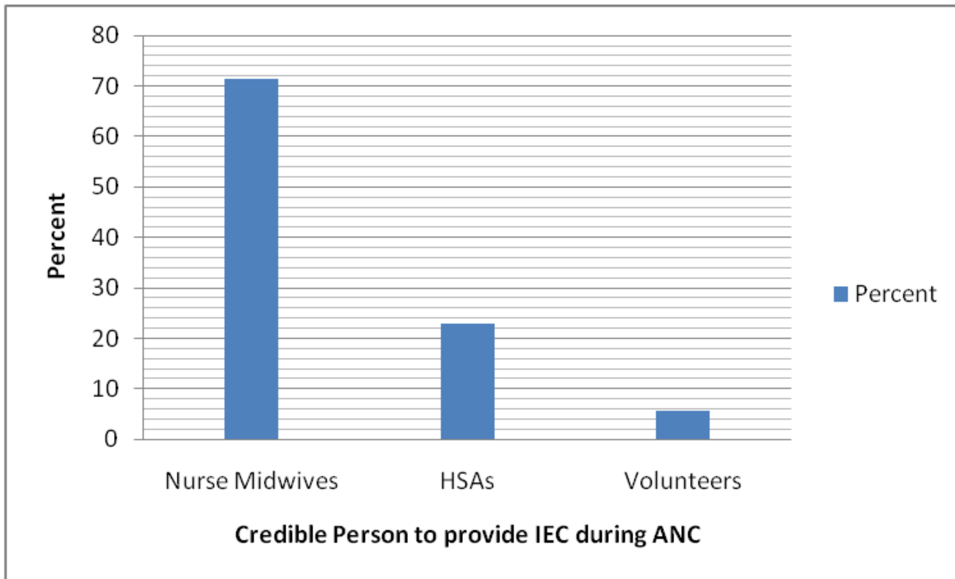

Figure 3: Credible person to provide IEC

Material Resources

Respondents were asked about teaching and learning resources used during IEC and the results are presented in figure 4.

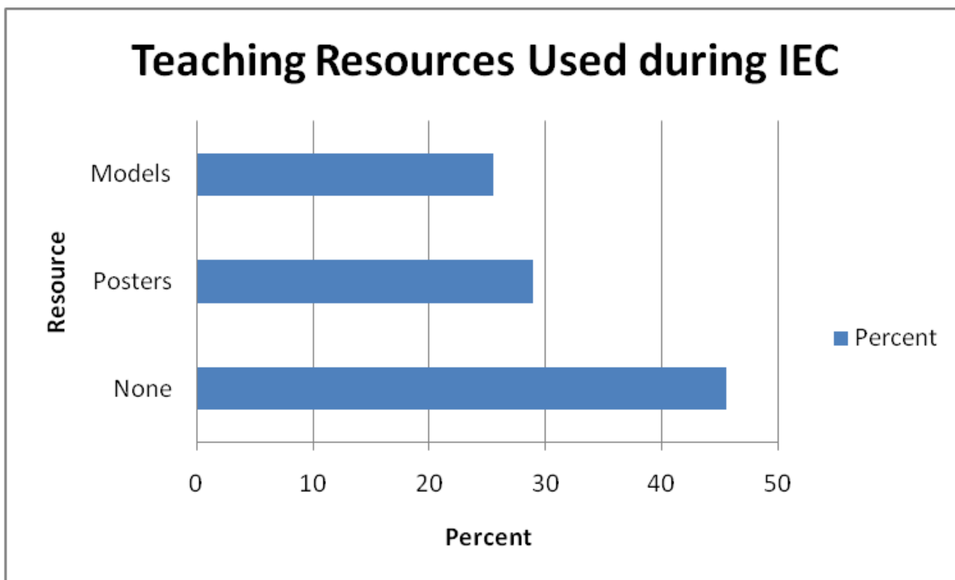

Figure 4: Teaching Resources used during IEC

Majority of the respondents 45.6% (n=175) recalled that no teaching and learning resource was used during IEC. However, about 30% mentioned posters and models each. No respondent mentioned video as a teaching and learning aid used during IEC.

Venue for IEC

Most of the participants report that IEC is offered to pregnant women in the cubicles 63% (n=242). However, 37% (n=142) said they received IEC at the waiting area in the clinic.

Process

Client Participation

Figure 5 shows client participation towards IEC offered during ANC. Results show that most respondents participate by listening and responding to questions.

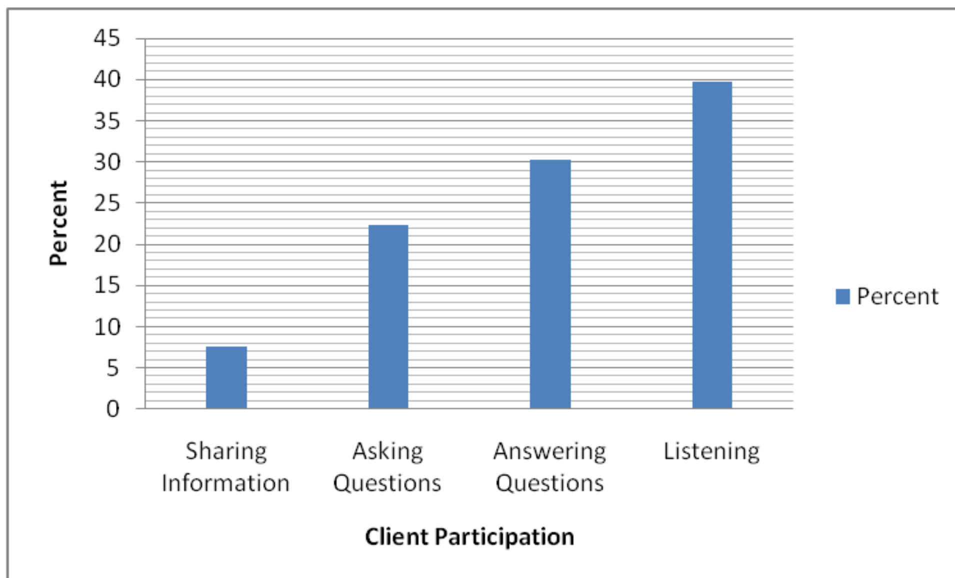

Figure 5: Client participation during IEC offered at the ANC

Results show that 40% (n=154) of the respondents said they take part during IEC sessions by listening and 30% (n=115) by responding to questions and only 8% (n=31)

participates by sharing information on what they know regarding the topic being discussed.

Teaching methods used during IEC

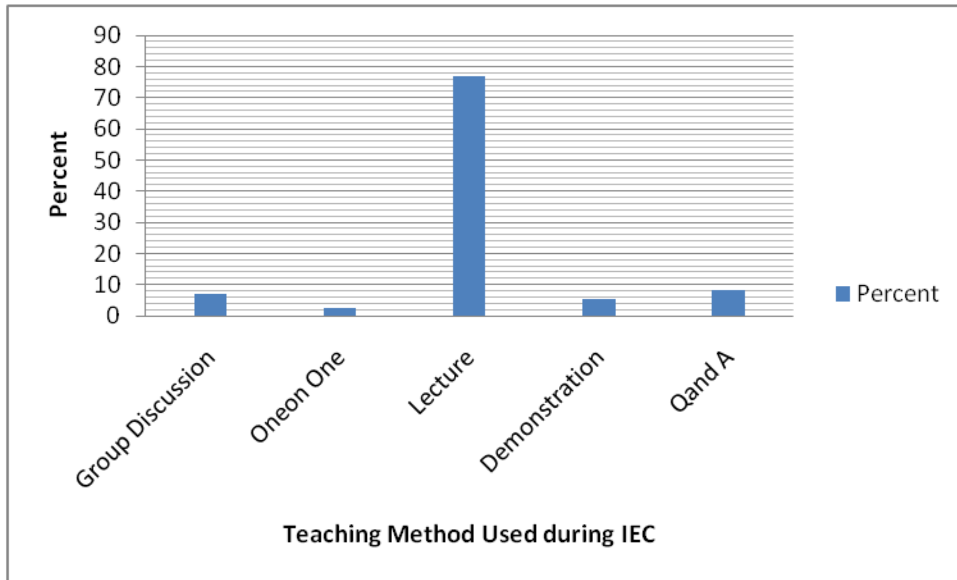

Figure 6:Teaching Methods Used during provision of IEC

It will be observed from figure 6 that lecture method was the most common method 77.1% (n=296) used during IEC with *one on one* method and *question and answer* being the least methods used 2.3% (n=9) and 8.3% (n=32) respectively. The respondents were further asked on the choice of their preferred method of receiving IEC, most of them 43.8% (n=165) mentioned group discussion followed by lecture method 31.8% (n=122) and demonstration 16.7% (n=64)

Type and Amount of IEC offered during ANC

Table 2: Topics taught during IEC

	Adequate n(%)	**Not adequate n(%)**	**Not provided at all n(%)**	**No idea n(%)**
Process of pregnancy and its complication	152(36.9)	124(36.2)	102(26.6)	6(1.6)
Diet and nutrition	263(68.5)	113(29.4)	2.1(n=2)	
Rest and exercise in pregnancy	160(41.7)	117(30.5)	102(26.6)	5(1.3)
Personal hygiene	254(66.1)	126(32.8)	1(0.3)	3(0.8)
Danger signs in pregnancy	268(69.8)	102(26.6)	6(1.6)	8(2.1)
Use of drugs in pregnancy	211(54.9)	149(38.8)	17(4.4)	7(1.8)
Effects of STIs/HIV	262(68.2)	119(31)	3(0.8)	
Exclusive breastfeeding	247(64.3)	116(30.2)	10(2.6)	11(2.9)
Symptoms/signs of labour	271(70.6)	103(26.8)	4(1.0)	6(1.6)
Importance of colostrums, early initiation	233(60.7)	132(34.4)	13(3.4)	6(1.6)
Plans for delivery (birth preparedness)	266(69.3)	110(28.6)	8(2.1)	
Plans for postpartum care	215(56)	132(34.4)	31(8.1)	6(1.6)
Family planning	174(45.3)	122(31.8)	81(21.1)	7(1.8)
Harmful habits (e.g., smoking, drug abuse, alcoholism)	142(37)	97(25.3)	121(31.5)	24(6.3)

Table 2 displays the proportion of antenatal clients who reported that they received IEC on the selected topics at any of their antenatal visits. Their responses were based on Likert scale (adequate, not adequate, not provided and no idea). According to the respondents, symptoms of labour, danger signs in pregnancy, plans for delivery, diet

and nutrition and effects of STIs were the topics most likely to have been discussed. However, less than 40% of the respondents 37% recalled having discussed about the process of pregnancy and its complications as well as harmful social habits during pregnancy.

Duration of IEC

Respondents were asked if the pregnant women on initial and subsequent visit do receive IEC together, results show that 74.7% (n=287) responded by saying that on initial and subsequent visit, women receive IEC separately and 25.3% (n=97) responded by saying that on initial and subsequent visit, women receive IEC together. However, respondents were further asked about the duration for IEC to clients on initial visit to the antenatal clinic. About half of the women reported that IEC to initial clients take more than 20 minutes (figure 7).

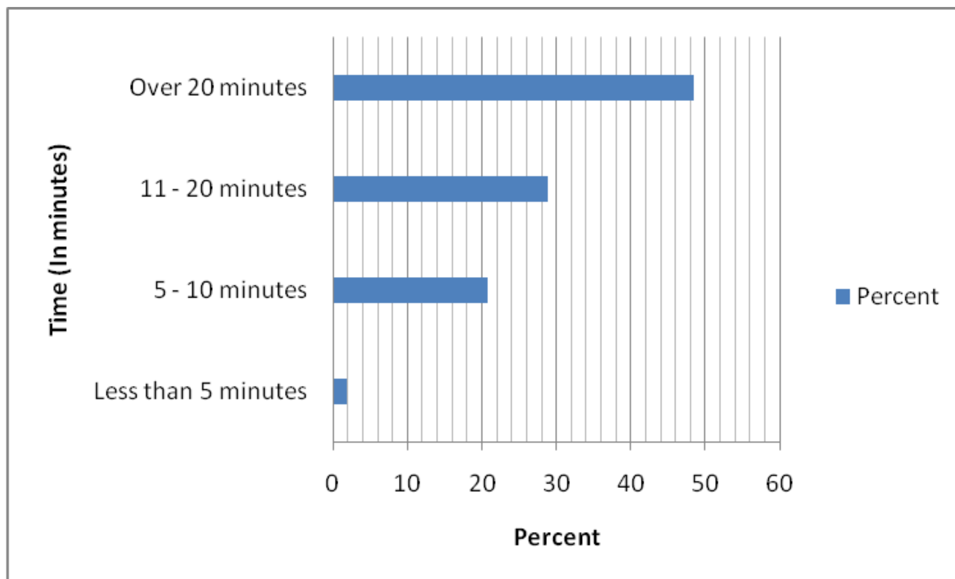

Figure 7: Duration of IEC for Initial Pregnant Women

Respondents were further asked about the duration of IEC offered during subsequent ANC. Majority of the respondents 42.2% (n=162) said that clients who reports for subsequent antenatal care do not receive IEC (figure 8).

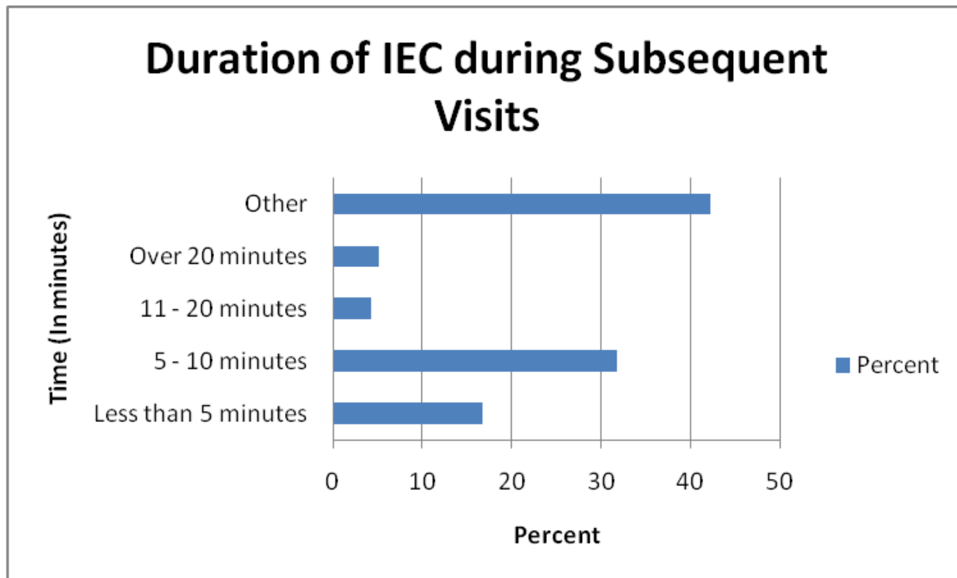

Figure 8: Duration of IEC for Pregnant Women on subsequent visit

Outcome

Client Satisfaction towards IEC Offered During Antenatal Care

Majority of the respondents 71.6% (n=275) reported that were they were satisfied with IEC offered during ANC, while 28.4% (n=109) respondents said they were not satisfied. Figure 9 shows the results about client satisfaction with IEC offered during antenatal care.

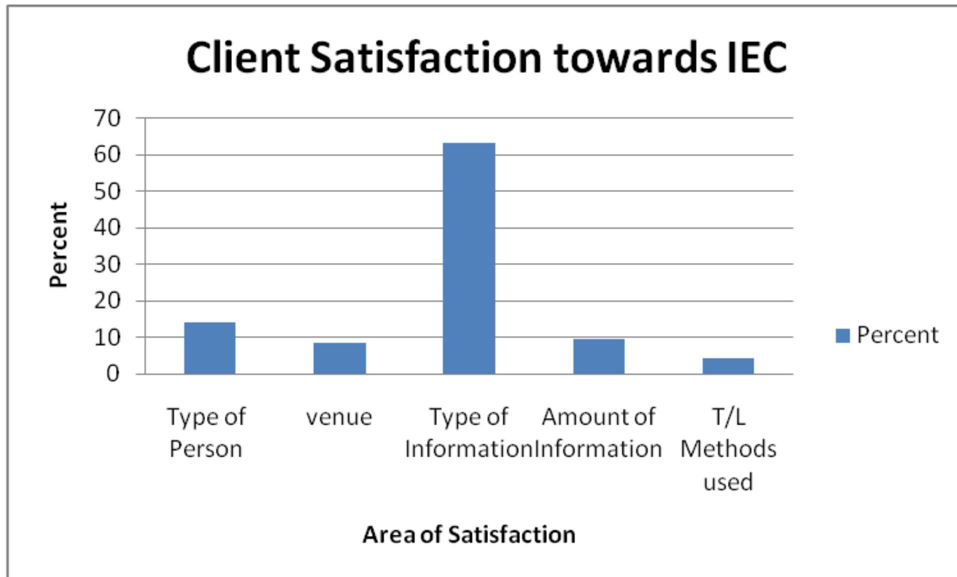

Figure 9: Client satisfaction towards IEC offered during ANC.

Figure 9 above show that 63.3 (n=243) of the respondents were satisfied with the type of information provided to women during ANC. However, only 4.4% (n=17) and 8.6% (n=33) were satisfied with teaching and learning methods used and venue where IEC was offered respectively. If a chance is to be given to the pregnant women on whether to choose Chiradzulu District Hospital antenatal department as an area of receiving IEC during antenatal care, 66.1% (n=254) of the respondents indicated that they can choose Chiradzulu district Hospital antenatal department while 33.9% (n=130) said they cannot choose the department for their ANC services.

Problems Encountered during IEC

The study also wanted to find out problems that are encountered during ANC and the results are shown in figure 10.

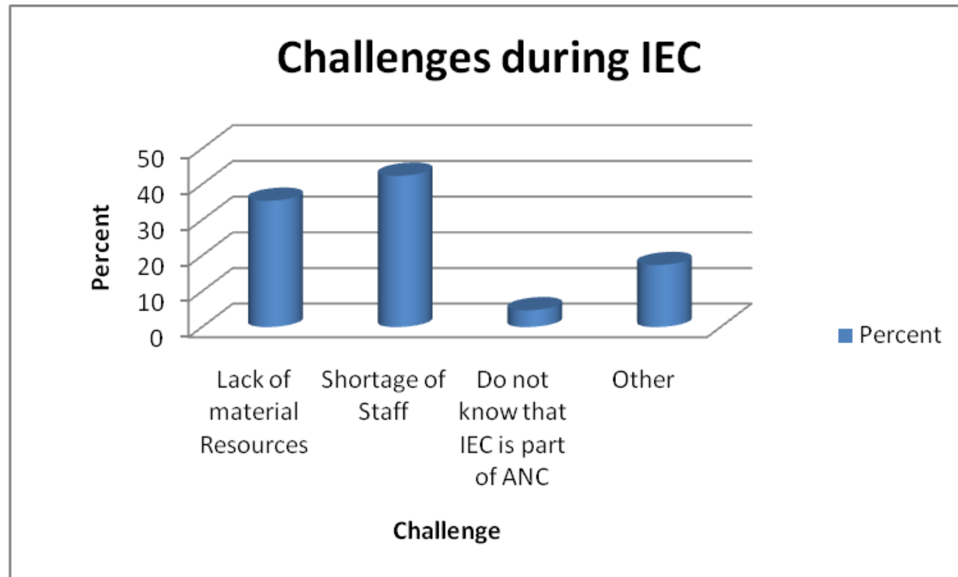

Figure 10: Challenges experienced during IEC

It is observed from figure 10 that shortage of staff is the most common challenge regarding structure that came out during the study 42.4% (n=163) followed by lack of material resources 35.4% (n=136). However, 17.4% (n=67) mentioned other challenges like not receiving IEC on subsequent visit during ANC and this belong to the process component of the model

Respondents were further asked about suggestions for improving IEC during ANC and the findings are reported in figure 11

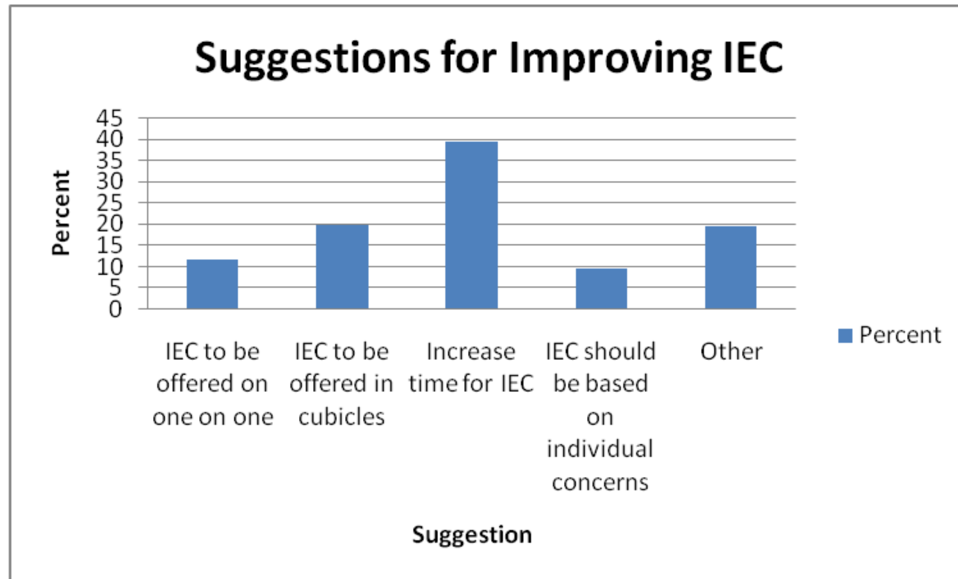

Figure 11: suggestions for improving IEC during ANC

On suggestions of improving IEC during ANC, most of the respondents 39.6(n=152) suggested that more time should be set for IEC and 19.5% (n=75) mentioned various suggestions like IEC should be offered to pregnant women on each visit to the antenatal clinic. The suggestions were affecting all the components of Donabedian's SPO model.

CHAPTER FIVE

Discussion on Results

Introduction

This chapter provides a discussion of the results on quality IEC offered to pregnant women during antenatal care. Donabedian quality of care framework was used according to research objectives. Structural component encompassed availability of resources for providing IEC; process encompassed teaching and learning methods used during IEC, type and amount of information given to pregnant women during ANC and outcome determined women's satisfaction with the IEC offered during ANC. Limitations of the study, recommendations and areas for further research have also been outlined.

Socio Demographic Characteristics of Participants in Relation to Quality IEC Offered during ANC

Almost all the women who participated in the study attended primary education, but few went as far as secondary and tertiary education. The results concur with the information reported in the Malawi Demographic and health survey where 54.5% of women had attained some primary education (NSO, 2011). Education is important because it improves people's understanding and the MDHS of 2010 further states that education makes people more receptive to health care messages (NSO, 2011). Educated women will be able to determine and report quality of IEC offered during ANC. Furthermore, education enhances health seeking behaviour as educated women are likely

to seek care, and are able to access the best choices for their health as well as their children's health. This variable also influences the status of women in the society which has been found to influence decision making in antenatal care uptake (Simkhada, Teijlingen, Porter, & Simkhada, 2008).

Educational level of participants helps the provider to plan the teaching method suitable for the pregnant women present at that particular time. Health care providers should always assess educational level of antenatal women to ensure that they understand the IEC that is being delivered and assist those who may have problems with comprehension (Tsegay et al., 2013).

The results of this study also show that a large proportion of women attending antenatal clinic are within the recommended child bearing age of 18- 49 years (Malawi National Statistical Office and ICF Macro., 2011) This may shows that people in this age range are mature and may understand the importance of antenatal care. In addition**,** results from this study show that the majority of the participants were house wives, not doing any business. The women depend on their husbands for support. With such, they may have problems in making decisions even if the women receive IEC during ANC, will still rely on their husbands to make decisions about health seeking behaviours (Nwaeze, Enabor, Oluwasola, & Aimakhu, 2013).

The number of pregnancies for the women who participated in the study ranged from 2 and 8. In addition, all the participants once attended ANC with the previous pregnancies and majority of them were on their second and third visit. The assumption is that those who once experience IEC should be able to recall the information they got during antenatal care. Major reasons behind the multiple antenatal visits were to receive

IEC on maternal and child health, to monitor progress of pregnancy and reduce dangers associated with pregnancy and treatment of ailments that arise during the pregnancy period (Nwaeze, Enabor, Oluwasola, & Aimakhu, 2013).

Available Resources for Provision of IEC

Assessment of availability of resources revealed that nurse midwives and HSAs are the most likely people who provide IEC to Chiradzulu antenatal. The HSAs are not in the category of skilled attendants and most nurse midwives who offer IEC at chiradzulu are nurse midwife technicians and enrolled community health nurses. This is in relation to the findings of Both, Fleβa, Makuwani, Mpembeni, & Jahn, (2006); Pembe et al., (2010), who found that registered nurses who are among the highest cadres of skilled attendants were the least likely health personnel to provide IEC and had shorter contact time than the lower cadres who are unskilled health attendants. In addition, most of the respondents 60.4% preferred to receive IEC from the nurse midwives. This may be so because nurse midwives are skilled attendants and one area of quality IEC is that it must be offered by skilled attendants. It is common knowledge that individuals prefer hearing about health issues from their nurse midwives or clinician with a feeling that a health worker is a trusted source of information (Pembe et al., 2010).

The results of the study also revealed that most of the pregnant women (57.6%) receive IEC in cubicles. However, the setting of Chiradzulu antenatal department is that IEC is offered at the waiting area. Group counseling for antenatal women who report to the clinic during initial visits take place in cubicles. The women are counseled about the importance of HIV testing during antenatal period and are tested in order to prevent mother to child transmission of HIV. The results of the study also show that most

(91.1%) pregnant women take part during IEC. Majority (40%) of the respondents participates passively by listening. However, few women 8.1% participates actively by sharing information on what they know about the topic being discussed. Similar results were found by Nikiéma, Beninguisse, & Haggerty, (2009) and Shabila, Ahmed, & Yasin, (2014) where women expressed that they had limited time to talk to providers regarding their ANC.

The results of the study have also shown that a variety of teaching and learning resources such as posters and models are used during IEC. However, Most of the pregnant women (41.9%) reported that they received IEC without the use of any teaching and learning resource. This may impact on the effectiveness of antenatal education as some resources are based on adult learning principles in which women identify their own learning needs (Nolan, 2009).

Teaching Methods used during Provision of IEC

Results of this study revealed that lecture method was the most common method of teaching used during provision of IEC. In lecture method, communication flows from health worker to pregnant woman (Anya et al., 2008). The health worker may not assess clients' understanding unlike other teaching methods where the health worker interacts with the pregnant women and assess their understanding within the interactions. However, it is recommended that IEC interventions should involve the active participation of the target audience and adopt channels, methods and techniques that are familiar to their world view (Gagnon & Sandall, 2007). Individuals should participate in IEC and not just being recipients of Information (Anya et al., 2008).

Topics Taught during IEC

Some of the recommended topics for IEC according to integrated maternal and neonatal care for Malawi are offered during antenatal care at Chiradzulu district hospital. Some respondents valued some topics being offered in adequate amount. Such topics include diet and nutrition, personal hygiene, danger signs in pregnancy, effects of STIs and HIV / AIDS in pregnancy, exclusive breast feeding, and symptoms of labour and plans of delivery. However, among the list of topics that need to be offered during antenatal care as suggested by IEC manual for Malawi, no topic was rated as adequate by 80% of the respondents according to the Likert scale that was used. This concurs with the results of Anya et al., (2008) who found that important subjects such as diet and nutrition, family planning, danger signs in pregnancy are not adequately taught. On the other hand, a large proportion of antenatal women in this study reported that they were not informed or educated on other important issues during pregnancy. Such information includes harmful social habits in pregnancy, importance of rest and exercises during pregnancy, family planning and the process of pregnancy and its complications. IEC provide pregnant women with important information on issues such as decision making about and during labour, skills for labour, post natal care and parenting skills. Ministry of Health, (2013) states that Pregnant women are supposed to be informed and educated on alcohol and tobacco use, safe sex, rest, sleeping under insecticide treated nets (ITNs), birth and emergency plan, post natal care, infant feeding and family planning

Duration of IEC Offered during Antenatal Care

The FANC model recommends 30-40 minutes for the first visit and 20 minutes for subsequent visits to carry out all activities including IEC (Anya et al., 2008). IEC

alone should take about 15 minutes according to simulation of FANC (Mahar et al., 2012). About 50% of the respondents revealed that IEC for initial clients take more than 20 minutes. And this includes counseling on PMTCT. For subsequent clients, majority (42.2%) of the respondents revealed that IEC was not provided with few respondents who reported that IEC took between 5 and 10 minutes.

Most of the respondents mentioned that individual IEC took about a minute and was only provided to those with specific problems. The findings of the study concur with (Anya et al., 2008; Both et al., 2006; Mahar et al., 2012; Pembe et al., 2010) who found that the average time currently spent for providing ANC service to a first visit client was 5 minutes instead of 45 minutes as recommended by FANC. Such type of communication can be a challenge and could explain poor interaction between the provider and the client. (Nwaeze et al., 2013) suggested that good provider – patient relationship are important and have been described as the single most important component of good practice not only because it identifies problems quickly and clearly but also defines expectation and helps establish trust between the provider and the patient. Spending less time with the women may compromise the quality of IEC because not adequate information is provided. Therefore health care providers should allocate sufficient time for provision of IEC thereby ensuring provision of adequate information that would help women make appropriate choices regarding their midwifery care.

Results show that about 40% of the women participated passively by listening. However, 30% of the respondents reported that they participated by answering questions, with 8% who reported that they shared information regarding the topic being discussed. Giving women chance to participate during IEC helps to clarify misunderstandings about

the information provided. In this study although the women were given a chance to ask questions only 22% of the women asked questions. Failure to ask questions could signify in adequate provision by the health care providers or lack of understanding of the given information by the women.

Client Satisfaction towards IEC Offered during Antenatal Care

The majority of the pregnant women expressed satisfaction with IEC offered during antenatal care and would choose the facility during subsequent pregnancies. Most respondents expressed satisfaction with type of information offered during antenatal care. The level of satisfaction that women had did not correspond with the services that were offered because of the shortfalls in the quantity of information given, the infrastructure under which IEC was provided and the limited time that was allocated.

Previous researchers revealed that the level of satisfaction was not always in accordance with willingness to access services. Nwaeze et al., (2013) suggested that women may generally express satisfaction with the quality of antenatal services despite inconsistence between the IEC offered and facility expectation. This may mean that women do not know what to expect from health care providers or their expectations on the care to be provided is low. Therefore, women need to be well informed about the services they should expect from health care providers and be able to demand it if not provided.

Health workers have the responsibility to inform women about the care that they should expect (Kumbani, Chirwa, Malata, Odland, & Bjune, 2012). National Statistical Office (NSO) (2011) indicated that women living in rural areas of Malawi were least likely to receive information on pregnancy complications (79%) than those living in

urban areas (82%). Majority of the women (67.2%) who participated in this study were from rural areas of Chiradzulu.

Although the majority of women expressed satisfaction with the IEC offered during antenatal care, they came up with problems encountered during IEC. Such problems include: shortage of staff, lack of resources and not receiving IEC on each visit to the antenatal care and inadequate amount of IEC offered. Some respondents said that they were not aware that IEC is part of ANC. These suggestions signify that IEC that is provided at Chiradzulu antenatal department has some quality gaps as shown in the structural and process services. Therefore, it is important that health care providers take into consideration these suggestions for the improvement of IEC provision to antenatal women.

The shortage of staff has also been reported by the Ministry of Health (MOH) in which 26 nurses provide care to every 100,000 people translating into a ratio of 100 000/26. This has an implication on the quality of IEC. Health workers available in antenatal department do not provide adequate information. Furthermore, the information and education that is offered is done in a way that helps them deal with the increased workload. Therefore it is important that the number of skilled attendants should be increased to improve the nurse client ratio thereby reducing the workload and improving the quality IEC provided.

All antenatal clinics are expected to have guidelines and IEC materials. Guidelines are important for the provision of quality care because they contain standardized elements of the care to be delivered and if implemented accordingly and they help to ensure quality of care for all recipients (Nolan, 2009; WHO, 2012). FANC

model of ANC developed guidelines which outline the information to be given to antenatal women. However, the results of this study show that IEC offered was not according to guide lines as some important information was missed during antenatal education.

Similarly IEC materials such as leaflets are important for provision of quality antenatal care because they facilitate understanding of the information being discussed. In this study few IEC materials were available. This does not support WHO recommendation that relevant IEC materials should be available and pasted on the wall at the clinic so that women can be referred to them during education and counseling. In addition, the leaflets can be given to the women who are literate to read.

Giving adequate time for IEC as recommended by FANC guidelines and providing IEC to pregnant women at each time during antenatal care are suggestions offered by most respondents in order to improve quality of IEC at Chiradzulu antenatal department.

Plans for Dissemination

The study results including recommendations will be distributed to Chiradzulu District Hospital (study setting). The results will be shared during meetings that will be conducted with the responsible people at the study setting. The study dissertation will also be submitted to COMREC as well as to KCN library and published as a journal article. Furthermore, the study findings will also be disseminated in other health dissemination conferences and other fora.

Limitations of the Study

The study results cannot be applicable to all health facilities in Malawi since the study was conducted at one district and one health facility in the southern region, because of the time and financial constraints of the researcher since the study was conducted as a partial requirement for the fulfillment of the Masters Degree and there was limited time and funds allocated for the study.

Recommendation

With reference to the findings of the study, the following recommendations are made to improve the quality of IEC offered to pregnant women during ANC at Chiradzulu District Hospital:

- Health care providers should utilize the available setting at the hospital in the provision of IEC. For instance, in cubicles where HIV counseling is done, IEC can also be provided in same rooms in order to promote active participation of antenatal women unlike giving IEC on the open place (waiting area). Midwives should always consider privacy during IEC. Furthermore, health workers should be provided with the enabling environment in terms of proper structure as well as material resources in order to provide quality IEC during antenatal care.
- In order to make sure that proper and adequate IEC is given during antenatal care, Providers should use guide lines of IEC for FANC in order to make sure that necessary information is offered to women during each visit to the clinic.
- The high antenatal coverage in Chiradzulu offers chance for IEC to pregnant women. Midwives should take advantage of this opportunity bearing in mind that IEC is part of ANC therefore adequate time for IEC should be considered.

- Ministry of Health should liaise with other sectors such as Ministry of Women and Children Affairs, and NGOs to raise the status of women in terms of education. All should work hand-in-hand to improve provision of health education to women, families and communities especially on danger signs of pregnancy, signs of labour, and the need for skilled care during pregnancy and childbirth. This will enable the women to make informed decisions concerning their own health.
- MOH should consider recruiting more skilled attendants to ease the problem of shortage of IEC providers thereby ensuring adequate IEC.
- Unskilled attendants who offer IEC services to pregnant women should also be given priority for further training in order to increase human resource of skilled attendants with good communication and counseling skills.
- Providers of IEC should familiarize themselves with the different methods of teaching. This can be enhanced by doing short courses on teaching methodologies

Conclusion

In summary, this study was aimed at assessing quality IEC offered to pregnant women during antenatal care. Quality IEC comprises of the recommended type and amount of information given to pregnant women, offered by skilled attendant using recommended teaching and learning resources as well methods. Client satisfaction is also another area that is considered when it comes to quality IEC. However, the results of this study have revealed that some information necessary for pregnant women according to participants manual in integrated maternal and neonatal care for Malawi is not provided

and the information that is provided in given in inadequate amount. Furthermore, IEC is offered by both skilled and unskilled attendants with few teaching and learning resources.

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Appendices

Appendix 1: Questionnaire for Pregnant Women

Date of interview……………………………… Participant's identification number……………

Starting time…………………………………… Finishing time…………………………………

Part A: Demographic Data

1. How old are you?

…………………………………………………………….

2. What is your marital status?

a) Married [ ]

b) Single [ ]

c) Divorced [ ]

d) Widow [ ]

e) Separated [ ]

f) Other (specify) ………………………

3. How far have you gone with your education?

a) I have never been to school [ ]

b) Primary level [ ]

c) Secondary level [ ]

d) Tertiary level [ ]

4. Where do you stay?

a) Chiradzulu Boma (Semi Urban) [ ]

b) Rural Chiradzulu [ ]

5. What is your occupation?

a) House wife [ ]

b) Civil servant [ ]

c) Business lady [ ]

d) Others specify……………………………..

6(i) What is your gravidity? ………………………… 6(ii) Parity? ………………….

7. What is your gestation age? …………………………………..

8. Which Antenatal visit is this?

a. First visit [ ]

b. Second visit [ ]

c. Third visit [ ]

d. Fourth visit [ ]

e. Other (specify) ………………………

Part 2: IEC Offered During ANC

Structure

Available Resources used for Provision of IEC

1. At the hospital, who provide IEC

a. Nurse Midwife

b. Health Surveillance Assistant

c. Volunteer

d. Other (specify) …………………………………………………..

2. Which of these sources is most credible to you?

a. Nurse Midwife, [ ]

b. Health Surveillance Assistant [ ]

c. Volunteer

e. Other (specify)...

3. Where is IEC provided at the hospital?

a. At the waiting area [ ]
b. In cubicles [ ]
c. Other (specify) [ ]

4(i) Are you actively involved during IEC sessions?

a. Yes [ ]
b. No [ ]

4(ii) If yes, how

a. By sharing any information I know regarding the topic being discussed[ ]
b. By asking question [ ]
c. By answering questions [ ]
d. Other (specify)…………………………………..

5. What teaching and learning aids that are used during provision of IEC

a. None

b. Posters

c. Videos

d. Models

f. Others (specify) …………………………………..

Process

Teaching Methods Used during Provision of IEC

6. What methods are used during IEC?

a. Group discussion [ ]
b. One-on-one [ ]
c. Lecture [ ]
d. Demonstration [ ]

e. Question and answer [ ]
f. Others (specify)..

7. Which method do you prefer?

a. Group discussion [ ]
b. One-on-one [ ]
c. Lecture [ ]
d. Demonstration [ ]
e. Question and answer [ ]
f. Others (specify)..

Topics covered during IEC and amount of information given on each topics given to pregnant women during ANC

8. How much is the following information provided at ANC?

	Adequat e	Not adequat e	Not provided at all	No idea
a. Process of pregnancy and its complication				
b. Diet and nutrition				
c. Rest and exercise in pregnancy				
d. Personal hygiene				
e. Danger signs in pregnancy				
f. Use of drugs in pregnancy				
g. Effects of STIs/HIV				
h. Exclusive breastfeeding				
i. Symptoms/signs of labour				
j. Importance of colostrums, early initiation				
k. Plans for delivery (birth preparedness)				
l. Plans for postpartum care				
m. Family planning				
n. Harmful habits (e.g., smoking, drug abuse, alcoholism)				
o. Schedule of return visits				
p. Other (specify)				

9. Do women on initial and subsequent visit have their IEC together?

a. Yes [ ]

b. No [ ]

10. How long is the IEC session take during first visit?

a. Less than 5 minutes [ ]

b. 5-10 minute [ ]

c. 11 – 20 minutes [ ]

d. Over 20 minutes [ ]

e. Other (specify) ……………………

11. How long is the IEC session take during subsequent visit?

a. Less than 5 minutes [ ]

b. 5-10 minute [ ]

c. 11 – 20 minutes [ ]

d. Over 20 minutes [ ]

e. Other (specify) [ ]

Outcome

Women's Satisfaction towards IEC Offered during ANC

11. As a recipient of care, are you satisfied with IEC offered during ANC?

a. Yes [ ] b. No [ ]

12. Which of the areas below are you satisfied regarding IEC offered during ANC?

a. Type of service provider offering IEC [ ]

b. Venue for provision of IEC [ ]

c. Type of information offered [ ]

d. Amount of information provided [ ]

e. Teaching methods used [ ]

f. Duration of provision of IEC [ ]

h. Other (specify).........................

13. If you have a chance to make a choice on where to seek ANC, would you love to come back

to Chiradzulu District Hospital?

a. Yes [ ] b. No [ ]

14. What problems are encountered during provision of IEC
    a. Lack of teaching and learning resources [ ]
    b. Shortage of staff [ ]
    c. Lack of orientation towards IEC as part of FANC [ ]
    d. Other (specify) ……………………………………………………….
15. What suggestion do you have for improving IEC at Chiradzulu District Hospital?
    a. Should be given on one on one
    b. Should be given in cubicles
    c. More time should be set aside for IEC
    d. Topics should be based on individual concerns
    e. Others (specify) ……………………………………………………

Appendix 2: Chichewa Version for questionnaire

Tsiku la mafunso: .... Nambala ya ofunsidwa mafunso.....................

Nthawi yoyambila mafunso: ....

Nthawi yomalizila mafunso: ....

Gawo Loyamba: Mbiri Yanu
Langizo: Pelekani Yankho Lanu pa Funso Lililonse

1. Kodi muli ndi zaka zingati? ....
2. Muli pa banja?
   a. Inde [ ]
   b. Ayi [ ]
   c. Banja linatha [ ]
   d. Bambo anamwalira [ ]
   e. Sitikhalira nyumba imodzi ndi abambo [ ]
3. Kodi sukulu munafika nayo pati?
   a. Pulayimale [ ]
   b. Sekondale [ ]
   c. Ukachenjede [ ]
   d. Zina (nenani) [ ]

4. Mumakhala kuti ?
   a. Pa Chiradzulu boma [ ]
   b. Ku midzi m'boma lomwe lino la chiradzulo [ ]
   c. Kwina (nenani) ………………………………

5. Mumagwila ntchito yanji?
   a. Sindili pantchito [ ]
   b. Ya m'boma [ ]
   c. Ndimapanga geni [ ]
   d. Zina (nenani) ……………………………

6. (i) Mimbayi ndi pachingati? …………………..8(ii)Mwabeleka kangati………………

7. Mimbayi ndi ya miyezi ingati ……………………….

8. Kano ndi kachingati kubwera kusikelo kuno ndi mimbayi?

   a. Koyamba [ ]
   b. Kachiwiri [ ]
   c. Kachitatu [ ]
   d. Kachinayi [ ]

Gawo Lachiwiri: Maphunziro Omwe Amapelekedwa ku Sikelo ya Amayi Apakati

Zinthu zomwe zimagwiritsidwa ntchito pa ma phunziro a amayi a pakati

1. Ndi anthu ati amene amapeleka maphunziro kwa amayi apakati kuno kuchipatala? (chongani zonse zomwe zinenedwe)

   a. Anamwino/ azamba [ ]
   b. Alangizi a zaumoyo [ ]
   c. Ma volontiya [ ]
   d. Ena (tchulani) ……………………..

2.Pa mayankho omwe mwapelekawa, inu mumakondwera ndu maphunziro opelekedwa kuchokera kuti?

   a. Anamwino/ azamba [ ]
   b. Alangizi a zaumoyo [ ]
   c. Ma volontiya [ ]
   d. Ena (tchulani) ……………………..

3.Kuno ku sikelo, maphunziro amenewa amaperekedwa pa malo ati?

   a. Pa malo odikilira tikafika [ ]
   b. Mu kachipinda koyezera amayi apakati [ ]
   c. Ena (tchulani) ………………………………………

4(i) Mumatenga nawo mbali pa ma phunziro amenewa?

   a. Inde [ ]
   b. Ayi [ ]

4(ii) Ngati yankho lanu liri inde, mumatenga nao mbali mu njira yanji?

   a. Pofotokoza zomwe ndikudziwa zokhuza phunziro la tsiku limenelo [ ]

b. Pofunsa mafunso [ ]

c. Poyankha mafunso [ ]

d. Zina (tchulani) ………………………………

5. Ndi zipangizo ziti zomwe zimagwiritsidwa ntchito pano pa nthawi ya maphunziro a amayi apakati?

a. Palibe

b. Zinthunzi zazikulu zomata m'makoma

c. Kanema

d. Zida zoyelekezera

e. Zina (tchulani) …………………………………..

Njira zimene zimagwiritsidwa ntchito popereka maphunziro a amayi a pakati

6. Ndi njira iti yomwe mumakondwera nayo?

a. Pokambirana monga gulu [ ]

b. Pophunzitsa aliyense payekha [ ]

c. Pophunzira tonse pamodzi [ ]

d. Potifotokozera pogwiritsa ntchito zipangizo zoyenera [ ]

e. Pofunsa ndi kuyankha mafunso [ ]

f. Zina (nenani) ………………………………………..

Maphunziro omwe amapelekedwa ku sikelo ya amayi ndi kuchuluka kwake

7.Kodi maphunzirowa amapelekedwa motani kuno ku sikelo ya amayi apakati?

	Mokwanira	**Mosakwanira**	**Samaperekedwa**	**Sindikudziwa**
a. M'mene mimba imakhalira ndi zozatsatira zake				
b. Zakudya zoyenenera mayi wapakati				
c. Kupuma ndi mafizo pamene mayi ali ndi pakati				
d. Ukhondo wa thupi				
e. Zizindikiro zoopsa kwa mayi wapakati				
f. Kagwiritsidwe ntchito ka mankhwala pamene mayi ali woyembekezera				
g. Zotsatira za matenda opatsirana pogonana kupatikizapo HIV ndi edzi				
h. Kuyamwitsa mwakathithi				
i. Zizindikiro zosonyeza kuyamba kwa matenda (leba)				
j. Kufunika koyamwitsa mwana mkaka woyamba akangobadwa				
k. Kukonzekera nthawi yochira / yobeleka				
l. Kasamalidwe ka mayi ndi mwana amene wangochira / wangobeleka kumene				
m. Kulera				
n. Kuipa kosuta fodya, komwa mowa ndi kogwiritsa ntchito mankhwala ozunguza bongo				
o. Kuuzidwa nthawiyozabweranso ku sikelo				
Zina (nenani) ………………………				

8. Kodi amayi amene akuzayamba sikelo ndi amene akupitiliza amaphunzira pamodzi?
   a. Inde [ ]
   b. Ayi [ ]

9. Maphunziro a kwa mayi amene wangoyamba sikelo amatenga nthawi yayitali bwanji?

   a. Osakwana mphindi zisanu [ ]

   b. Mphindi 6 mpaka 10 [ ]

   c. Mphindi 11 mpaka 20 [ ]

   d. Kuposera mphindi 20 [ ]

   e. Zina (nenani) ………………………………

10. Maphunziro a kwa mayi amene akupitiliza sikelo amatenga nthawi yayitali bwanji?

   a. Osakwana mphindi zisanu [ ]

   b. Mphindi 6 mpaka 10 [ ]

   c. Mphindi 11 mpaka 20 [ ]

   d. Kuposera mphindi 20 [ ]

   e. Zina (nenani) ………………………………

Kukhutira ndi maphunziro amene amapelekedwa kwa amayi a pakati

11.Kodi mumakhutitsidwa ndi maphunziro amene amapelekedwa ku sikelo ya amayi apakati?

Inde [ ] Ayi [ ]

12. Ndi mbali iti ya zinthu zomwe zatchulidwazi yomwe mumakwanitsidwa nayo pokhuzana ndi maphunziro a kusikelo ya amayi apakati?

a. Munthu amene amapeleka maphunzirowa [ ]

b. Malo omwe maphunzirowa amapelekedwa [ ]

c. Mtundu wa maphunziro omwe amapelekedwa [ ]

d. Kuchuluka kwa maphunziro omwe amapelekedwa [ ]

e. Njira zomwe zimagwiritsidwa ntchito popeleka ma phunziro amenewa [ ]

f. Kutalika kwa nthawi yomwe maphunzirowa amapelekedwa [ ]

g. Zina (Tchulani)........................

13. Mutakhala ndi mwayi opanga chisankho cha komwe mungafune kuti muzilandilira ma phunziro a amayi apakati, mungakondenso kubwera kuno ku chipatala cha Chiradzulu?

a. Inde [ ] b. Ayi [ ]

14. Ndi zovuta ziti zomwe zimapezeka pa nthawi yolandira maphunziro ku sikelo ya amayi apakati?

a. Kuchepa kwa zipangizo zophunzitsira [ ]

b. Kuchepa kwa ogwira ntchito oyenera kupeleka maphunzirowa [ ]

c. Kusaziwitsidwa bwino lomwe kuti maphunzirowa ndi mbali imodzi ya sikelo ya amayi a pakati [ ]

d. Zina (Tchulani) …………………………………………………………

15. Kodi maphunziro amenewa angapititsidwe bwanji patsogolo kuno ku chipatala cha Chiradzulu?

a. Aliyense aziphunzitsidwa payekha [ ]

b. Azipelekedwela mu kachipinda koyezela amayi apakati [ ]

c. Awonjezele nthawi yamaphunzirowa [ ]

d. Maphunziro azigwirizana ndi vutu lomwe munthu ali nalo patsikulo [ ]

e. Zina (nenani) …………………………………………………..

Appendix 3: Information Sheet for Pregnant Women

Dear Madam / Sir,

My name is Gaily Lungu, currently a student at Kamuzu College of Nursing, a constituent college of the University of Malawi. I am pursuing a Masters Degree in Midwifery. I am required to conduct a research study in partial fulfillment of my Master of Science degree in midwifery program. My research study is on *"assessing quality of information, education and communication during antenatal care at Chiradzulu District Hospital*". Its aim is to explore the views of pregnant women as recipients of care on the information they receive during ANC. This letter therefore serves as a request for you to participate in this research.

Your participation will involve providing information regarding the respected areas on the questionnaire. You may wish to know that your participation in the study will not have any reasonably foreseeable risks or discomfort to you**.** However, in case you experience any physical or emotional harm please forward your concerns to COMREC Secretariat, P/Bag 360, Chichiri, Blantyre 3, Telephone number 01 871911 extension 334.

There are no direct benefits in participating in the study, however, your views are important because they will assist service providers to understand the quality of information, education and communication that is ideal for pregnant women and needs to be provided during antenatal care. This in turn will help to reduce maternal and neonatal morbidity and mortality. However, the findings of the study will be shared to you upon your wish.

Whatever information you provide will be kept strictly confidential and will not be shown to other people except the researcher and other people who are directly involved in the research. You will not be asked a name instead codes will be used. However, little background information will be obtained from you in order to form part of the database.

Participation in the study is voluntary and there is no penalty for refusing to take part. You may choose to participate or not, or to withdraw from the study at any time. Your refusal to participate or withdrawal from the study will not have any negative effects on you as well as the antenatal services that are offered to you at this hospital. Should you agree to participate in this study, I will ask you to sign a consent form in order to indicate that you have voluntarily accepted to be interviewed.

The study and its procedures have been approved by College of Medicine Research and Ethics Committee (COMREC), and Chiradzulu District Hospital authorities. If you have questions or you need clarifications about this study, you can contact me on +265 888 63 40 12 / + 265 996 48 11 33 or you may raise your concerns to COMREC Secretariat, P/Bag 360, Chichiri, Blantyre 3, Telephone number 01 871911 extension 334.

Thank you for taking your time to read this information letter.

Appendix 4: Chichewa Translation of Information Sheet for Pregnant Women

Kalata Yofotokoza Ndondomeko ya Kafukufuku kwa Amayi Apakati.

Dzina langa ndine Gaily Lungu wophunzira wa pa sukulu ya za ukachenjede ya anamwino ya Kamuzu ndipo ndikupanga kafukufuku wofuna kuziwa *"maganizo a amayi apakati pankhani yokhuzana ndi maphunziro omwe amaperekedwa ku sikelo ya amayi apakati ku chipatala cha boma cha chiradzulu"*. Cholinga cha kalatayi ndikufuna kukupemphani ngati mungathe kutenga nao mbali pa kafukufuku ameneyi.

Mbali yanu pakafukufuku ameneyi ndi kupeleka maganizo anu malingana ndi mafunso omwe atafunsidwe.. Kafukufukuyu alibe chiopsezo china chilichonse pathupi lanu. Ndinu omasuka kumufotokozera mwini kafukufukuyi mutakumana ndi chiopsezo china chili chonse chokhuza moyo wanu.

Dziwani kuti palibe cholowa chilichonse kwa inu potsatila kutengapo mbali kwanu komabe mudziwe kuti zotsatila za kafukufuku ameneyu zingathe kuthandiza kupititsa patsogolo chithandizo chakuchipatala pa nkhani yamaphunziro omwe amayi apakati amalandira akapita ku sikelo. izi zingapangitse kuti umoyo wa amayi apakati ndi makanda ukhale wabwino mdziko lathu lino la Malawi. Potero, matenda ndi imfa za amayi ndi makanda zizapewedwa.

Dziwani kuti zonse zomwe tikambilane pa nthawiyi zizasungidwa bwino mwa chinsinsi ndipo sizizaonetsedwa kwa wina aliyense kupatula aphunzitsi omwe akuyang'anira kafukufuyi. dzina lanu silizalembedwa pa pepala ya mafunso ndi mayankho, m'malo mwake muzapatsidwa numbala yomwe itazayimilire dzina lanu. Kuonjezerapo, muzafunsidwa mafunso a mbiri ya moyo wanu zomwe zizathandize pakafukufukuyi.

Chonde dziwani kuti simukukakamizidwa kutengapo mbali komanso ngati mutatengapo mbali ndinu omasuka kusiya nthawi ina iliyonse mungafune opanda kulandila chilango china chilli chonse. Ngati mungavomeleze kutengapo mbali pa kafukufukuyi, mukupemphedwa kusaina kapena kutsindikiza chala chanu pa pepala la mafunso ndi mayankho ngati umboni wakuti mwavomeleza nokha opanda kukakamizidwa.

Kafukufukuyu wavomelezedwa ndi bungwe loona za kafukufuku wa zaumoyo kumalawi kuno la kusukulu ya ukachenjede ya mankhwala yotchedwa College of Medicine Research and Ethics Committee (COMREC), ndiponso akulu akulu apachipatala chino cha chiradzulu. Ngati mungakhale ndi mafunso kapena chidandaulo china chilichonse chokhuzana ndi kafukufuka ameneyu mukhoza kupeleka madandaulo anu ku COMREC Secretariat, P/Bag 360, Chichiri Blanyre 3, kapena kuimba lamya pa nambala iyi 01 871911 ekisititenshoni 334.

Zikomo chifukwa chotenga nthawi yanu kuwelenga kapena kumvetsela ndondomeko imeneyi.

Appendix 5: Consent Form for Pregnant Women

I have read or have had another person read to me the information given by the researcher above and have understood the content of the information, its aim, procedures and the expected duration of my participation. I have been given an opportunity to ask questions about the study where necessary. I understand that the information that I will share with the researcher will be kept confidential and will only be accessed by the researcher and those people who are directly concerned with the study.

I understand that I will not have any direct benefits for participating in the study but that the findings of the study will assist service providers to understand the quality of information, education and communication that is ideal for pregnant women and needs to be included during antenatal care. This in turn will help to reduce maternal and neonatal morbidity and mortality. I know that neither do I have to suffer any injury nor harm during the research process nor that the information I will give to the researcher will not be used against me in future. I also know where to complain if my rights are violated during the study. I am aware that participation is voluntary and that I am free to withdraw from the study at any time without being penalized.

I voluntarily agree to participate in the study.

Participants

signature…………………………………………………...Date…………………

Participant's thumbprint (if illiterate)……………………………………...Date

…………………

Signature of witness (if participant

illiterate)……………………………...Date………………….

Researcher's

signature……………………………………………….Date………………….

Appendix 6: Chichewa Translation of Consent Form for Pregnant Women

Chivomelezo

Ndawelenga kapena wina wandiwelengela ndondomeko za kafukufuku zomwe zalembedwa pamwambapa ndipo ndamvetsetsa cholinga cha kafukufukuyu. Ndinapatsidwa mwayi wofunsa mafunso ena aliwonse okhuzana ndi kafukufukuyi. Ndauzidwa kuti zonse zomwe tikambilane pa nthawiyi zizasungidwa bwino mwa chinsinsi ndipo sizizaonetsedwa kwa wina aliyense kupatula aphunzitsi omwe akuyang'anira kafukufuyu.

Ndamvetsa kuti kuti palibe cholowa chilichonse kwa ine potsatila kutengapo mbali komabe zotsatila za kafukufuku ameneyu zingathe kuthandiza kupititsa patsogolo chithandizo chakuchipatala pa nkhani yamaphunziro omwe amayi apakati amalandira akapita ku sikelo. Izi zingapangitse kuti umoyo wa amayi apakati ndi makanda ukhale wabwino mdziko lathu lino la Malawi. Potero, matenda ndi imfa za amayi ndi makanda zizapewedwa. Ndamvetsa kuti palibe chiopsezo china chilichonse pamoyo wanga pa kafukufuku ameneyu. Ndikudziwa kuti zonse zomwe tikambilane zizasungidwa bwino mwachinsinsi ndipo sizidzagwilitsidwa ntchito musutsana ndi ufulu wanga mtsogolo. Ndine omasuka podziwa kuti kulipo komwe ndingakapeleke madandaulo anga ngati patapezeka vuto lilonse lokhudzana ndi kafukufuku ameneyu. Ndatsimikiziridwa kuti sindine wokakamizidwa kutengapo mbali komanso ngati ndingatengepo mbali ndine omasuka kusiya nthawi ina iliyonse popanda kulandila chilango china chilli chonse.

Ndikuvomeleza kutengapo mbali mwaufulu ndiponso mosakakamizidwa.

Sayini ya wotenga mbali: .... Tsiku..................

Chidindo cha chala (ngati samatha kulemba): .... Tsiku ……………….

Mboni (ngati wotenga mbali samatha kuwelenga):
........................Tsiku...................................

Saini ya wofunsa mafunso:..............................Tsiku..

Appendix 7: Permission Letter to Chiradzulu District Hospital

Kamuzu College of Nursing
P.O Box 415
Blantyre

Email: lungu2014gaily@kcn.unima.mw
gaily.lungu@yahoo.com

The District Health Officer,
Chiradzulu District Hospital,
P. O. Box 21,
Chiradzulu

Dear Sir / Madam,

REQUEST FOR YOUR PERMISSION TO CONDUCT A STUDY AT CHIRADZULU DISTRICT HOSPITAL

I write to request for your permission to conduct a study at your facility. I am Gaily Lungu, a Master of Science in Midwifery student at Kamuzu College of Nursing. As part of the requirements for the award of the Masters' Degree, I am supposed to conduct a research study.

The topic for my study is "*Assessing quality of information, education and communication during antenatal care at Chiradzulu District Hospital*". The objectives of the study are, to describe the available resources used for providing IEC (human and material) during antenatal care (ANC), to assess IEC given to pregnant women during ANC if is according to IEC guidelines of FANC, to identify teaching and learning methods used by health providers in delivering IEC to pregnant women and to determine women's satisfaction towards IEC offered during ANC.

The study findings will determine if there are gaps in the way IEC is provided to pregnant women there by creating strategies for interventions that will help service

providers to offer recommended IEC to pregnant women during ANC. Policy makers like Ministry of Health (MOH), and regulatory bodies, nurse and midwifery educators as well as curriculum developers can also use the study findings to develop evidence based IEC interventions and materials for client education.

The study will target pregnant women with second pregnancies or more and are attending antenatal clinic at Chiradzulu District Hospital during the study period.

If you may need any clarifications please contact me on +265 888634012 or +265 996481133

Your approval will be appreciated.

Yours Faithfully,

Gaily Lungu.

Appendix 8: Letter of Commitment to Chiradzulu District Hospital

Kamuzu College of Nursing
P.O Box 415
Blantyre

Email: lungu2014gaily@kcn.unima.mw
gaily.lungu@yahoo.com

The District Health Officer,
Chiradzulu District Hospital,
P. O. Box 21,
Chiradzulu

Att: The District Nursing Officer

Dear Sir / Madam,

LETTER OF COMMITMENT IN SHARING STUDY RESULTS WITH CHIRADZULU DISTRICT HEALTH OFFICE

I am Gaily Lungu, a Master of Science in Midwifery student at Kamuzu College of Nursing. As part of the requirements for the award of the Masters' Degree, I am supposed to conduct a research study. The topic for my study is "*Assessing quality of information, education and communication (IEC) during antenatal care at Chiradzulu District Hospital*".

The study will target pregnant women with second pregnancies or more and are attending antenatal clinic at Chiradzulu District Hospital during the study period. I therefore commit myself to share the results with Chiradzulu District Health Office. The study findings will determine if there are gaps in the way IEC is provided to pregnant women there by creating strategies for interventions that will help service providers to offer recommended IEC during antenatal care. Policy makers like Ministry of Health, regulatory bodies, nurse and midwifery educators as well as curriculum developers can

also use the study findings to develop evidence based IEC interventions and materials for client education.

The objectives of the study are to describe the available resources used for providing IEC (human and material) during antenatal care (ANC), to assess IEC given to pregnant women during ANC if is according to IEC guidelines of FANC, to Identify teaching and learning methods used by health providers in delivering IEC to pregnant women and to determine women's satisfaction on IEC provided during antenatal care.

If you may need any clarifications please contact me on +265 888634012 or +265 996481133

Your approval will be appreciated.

Yours Faithfully,

Gaily Lungu.

Appendix 9: Permission Letter to Thyolo District Hospital

Kamuzu College of Nursing
P.O Box 415
Blantyre

Email: lungu2014gaily@kcn.unima.mw
gaily.lungu@yahoo.com

The District Health Officer,
Thyolo District Hospital,
P. O. Box 21,
Thyolo

Att: The District Nursing Officer

Dear Sir / Madam,

REQUEST FOR YOUR PERMISSION TO CONDUCT A STUDY AT THYOLO DISTRICT HOSPITAL

I write to request for your permission to conduct a pilot study at your facility. I am Gaily Lungu, a Master of Science in Midwifery student at Kamuzu College of Nursing. As part of the requirements for the award of the Masters' Degree, I am supposed to conduct a research study.

The topic for my study is "*Assessing quality of information, education and communication during antenatal care at Chiradzulu District Hospital*". The objectives of the study are to to describe the available resources used for providing IEC (human and material) during antenatal care (ANC), to assess IEC given to pregnant women during ANC if is according to IEC guidelines of FANC, to identify teaching and learning methods used by health providers in delivering IEC to pregnant women and to explore women's and providers views on IEC provided to pregnant women

The study findings will determine if there are gaps in the way IEC is provided to pregnant women there by creating strategies for interventions that will help service

providers to offer recommended IEC to pregnant women during ANC. Policy makers like Ministry of Health (MOH), and regulatory bodies, nurse and midwifery educators as well as curriculum developers can also use the study findings to develop evidence based IEC interventions and materials for client education.

The study will target pregnant women with second pregnancies or more and are attending antenatal clinic at Chiradzulu District Hospital during the study period. I therefore seek to do a pilot study at Thyolo District Hospital in order to test my data collection tools for validity and reliability before I do the actual study. I have chosen Thyolo District Hospital because it offers similar maternal and child health services like the chosen study setting.

If you may need any clarifications please contact me on +265 888634012 or +265 996481133

Your approval will be appreciated.

Yours Faithfully,

Gaily Lungu.

Appendix 10: Approval Letter from Chiradzulu District Hospital

Chiradzulu District Hospital
P.O. Box 21
Chiradzulu

3rd February, 2016

To : Gaily Lungu
Kamuzu College of Nursing
P.O. Box 415
Blantyre

Dear Madam,

RE: APPROVAL TO CONDUCT STUDY AT CHIRADZULU DISTRICT HOSPITAL

Your letter of request to study on the topic of "Assessing quality information, Education and Communication during Antenatal Care at Chiradzulu District Hospital" has been reviewed and approved.

It is our pleasure to have you in the district and believe to stipulated in the commitment letter that results will be disseminated for our knowledge.

All the best in your research.

Dr. C. Kabaghe
DISTRICT MEDICAL OFFICER

Appendix 11: Approval Letter from Thyolo District Hospital

Telephone: + 265 1 473 411
Facsimile: + 265 1 473 409

All Communications should be addressed to: The District Health Officer.

In reply please quote No:. TDH/R/05
Ministry of Health,
Thyolo District Hospital,
P.O. Box 21,
Thyolo.

14th January, 2016

The Chairperson.
COMREC.
College of Medicine,
P/Bag 360,
Blantyre 3.

RE: INSTITUALTINAL ENDORSEMENT

Thyolo District Health Office **do certify that we received the research proposal titled** [illegible] Assessing **Quality of Information, Education and Community during Antenatal Care at Chiradzulu District Hospital'.** Submitted by Mrs. Gaily Lungu. We endorsed the study that can be carried out in Thyolo District and recommend the proposal to the COMREC for scientific and ethical review and approval.

Dr. Yonasi Chisi
District Medical Officer
For: Health of Institution

Alfred J. Phiri
(Institutional Representative)

Appendix 12: Certificate of Ethics Approval from COMREC

CERTIFICATE OF ETHICS APPROVAL

This is to certify that the College of Medicine Research and Ethics Committee (COMREC) has reviewed and approved a study entitled:

P.02/16/1887 - Assessing quality of Information, Education and Communication during Antenatal care at Chiradzulu District Hospital by G. Lungu

On 23rd May 2016

As you proceed with the implementation of your study, we would like you to adhere to international ethical guidelines, national guidelines and all requirements by COMREC as indicated on the next page

Dr. C. Dzamalala Chairperson (COMREC)

Approved by College of Medicine 23 MAY 2016 (COMREC) Research and Ethics Committee

23rd May, 2016

Date