1.0 BACKGROUND

There are an estimated 170 million pregnancies every year around the world[1] and every time a woman is pregnant she risks a sudden and unpredictable complication that could result in her or her infant death or injury (Maine et al., 1997). At least 40 percent of all pregnant women will experience some type of complications during their pregnancies and for about 15 percent, the complications will be potentially life-threatening and will require prompt obstetric care (Koblinsky et al., 1993). About 60 million women suffer from some complications from pregnancy, also known as maternal morbidity and for more than 15 million women, these morbidities are long-term and often debilitating (Ashford, 2002). The World Health Organization (WHO) and UNICEF estimate that each year 585,000 women die from causes related to pregnancy and childbirth (AbouZahr & Warlaw, 2001). The disparity between developed and developing countries is greater for maternal mortality than for any other commonly-used index of health. Whereas levels of infant mortality are, on average, 10 times higher in developing than in developed countries, maternal mortality in developing countries is more than 100 times higher than in industrialized countries (Maine, 1997; Moss & Halsey, 2007).

Against this background this study reviewed literature on maternal health, specifically on maternal morbidity and mortality and services (safe motherhood). The study also focused on antenatal care services which is the subject for this study. Further, it has looked at an overview of late initiation of antenatal care in different selected countries and the association between late booking and maternal and infant outcomes and the determinants of late ANC. Finally, the theoretical framework has been chosen to guide the study.

1.1 Maternal health

Maternal health refers to the health of women during pregnancy, childbirth and the postpartum period. While motherhood is often a positive and fulfilling experience, for too many women, it is associated with suffering, ill-health and even death, (WHO, 2013).

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[1] This figure is calculated based on estimated global number births for 2000 (133,284,000) as cited in the UN's World Population Prospects: The 2002 Revision Population Database and assumes 20 percent pregnancy wastage

Maternal mortality refers to the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes (WHO 1994). Factors that increase maternal death can be direct or indirect. Direct maternal death are the result of a complications of the pregnancy, delivery or management of the two, and an indirect maternal death is a pregnancy-related death in a patient with a pre-existing or newly developed health problem unrelated to pregnancy (Khlat & Ronsman, 2009). Of the estimated 585 000 maternal death that occur each year worldwide, 99% occur in developing countries where Africa and Asia together account for 95% of maternal deaths. Sub Saharan Africa is estimated to have a lifetime risk of 1 in 16; the lowest rates are in Western nations (1:2800), with a global ratio of 400 maternal deaths per 100,000 live births. (UNICEF, 2006). In Zambia, 591 maternal death occur per 100 000 live birth and this mortality rate is unacceptably high (UNICEF/Zambia, 2011-15).

Maternal morbidity is an overarching term that refers to any physical or mental illness or disability directly related to pregnancy and/or childbirth. These are not necessarily life-threatening but can have a significant impact on the quality of life. There is little reliable information on the prevalence of maternal morbidity, but the number of women affected is several times greater than the number who dies (PMM. Network, 1995) Maternal morbidity has been referred to as the base of the iceberg where maternal deaths are only the tip (Fortney and Smith, 1996) and it has been argued that, for each maternal death; 20 or 30 women suffer from morbidity (Lori, 2002; Geeta et al., 2005). Fortunately, interventions that reduce maternal deaths will also reduce maternal morbidity (Maine, 1997). The WHO notes that in 2014 the major direct causes of maternal morbidity and mortality globally are: haemorrage (30%), infections (11%), unsafe abortions (8%), high blood pressure during pregnancy (pre-eclampsia and eclampsia) (14%), obstructed labour (9%) and pre-existing conditions (28%), (WHO, 2013). Indirect causes are malaria, anemia, HIV/AIDS, and cardiovascular disease, all of which may complicate pregnancy or be aggravated by it (WHO, 2005**).** Malaria

increases the risk of maternal anemia, low birth weight, premature delivery and fetal death, and compounds HIV risk to greatly increase risk of infant death. Anemia in pregnancy which is hemoglobin less that 11.0 grams per deciliter can be caused by micronutrient deficiencies in diet (folate, iron); chronic infections (malaria, HIV); parasitic diseases (hookworm, schistosomiasis); hemoglobinopathies. Anemia increases the risk of hemorrhage, sepsis, stillbirth, low birth weight, infant and maternal mortality.

Perinatal deaths are infant deaths that occur within the first week of life and stillbirth. These are directly impacted by poor maternal health or nutritional status, inadequate care during pregnancy and delivery, preterm birth and unsanitary delivery. The other causes are maternal infections such as malaria and syphilis (WHO, 2006). Low birth weight is infant birth weight less than 2500 grams at birth. 20 million low birth weight infants are born each year around the world. 96% of these are from developing countries; Asia and Africa having estimated incidences of 18.3 and 12-16% respectively. Many of the known contributing factors are directly related to, maternal health, nutrition, diseases and other conditions such as HIV and Syphilis (UNICEF & WHO, 2004). There are several conditions that must exist for a maternal death to occur. First, the woman must become pregnant. Second, she must develop a medical problem. Third, in order for the woman to die, the complication must either be treated inadequately (e.g., treated too late or not treated) or not treatable (Maine, 1997). These data suggest that if we could prevent the above leading causes of maternal mortality, by reducing the likelihood that a pregnant woman will experience a serious complication of pregnancy or childbirth we could potentially eliminate between 63% and nearly 75% of maternal deaths worldwide, (Laurel, 2007).

Safe motherhood; a concept which was born in 1987 is as an initiative aimed at reducing maternal mortality and illness associated with pregnancy and childbirth throughout the world and particularly in developing regions. The safe motherhood Initiative outlines strategies and specific interventions, referred to as the 'Pillars of Safe Motherhood', for the reduction of maternal morbidity and mortality: (i) family planning – to ensure that individuals and couples have the information and services to plan the

timing, number and spacing of pregnancies; (ii) antenatal Care – to prevent complications where possible and ensure that complications of pregnancy are detected early and treated appropriately; (iii) clean/safe delivery – to ensure that all birth attendants have the knowledge, skills and equipment to perform a clean and safe delivery and provide postpartum care to mother and baby; (iv) essential obstetric care – to ensure that essential care for high-risk pregnancies and complications is made available to all women who need it. Safe motherhood programs emphasize addressing all of these issues as well as other reproductive health issues: sexually transmitted infections, unplanned pregnancy, obstetric fistula, The aim is to ensure that all mothers receive the care they need to be safe and health throughout pregnancy and child birth (WHO, 1994).

1.2 Antenatal care services

Antenatal care refers to the care given to a pregnant woman from time the conception is confirmed until the beginning of labor (Fraser & Margaret, 2009). It is one of the "four pillars" of safe motherhood, as formulated by the Maternal Health and Safe Motherhood programme (WHO, 1994, Sohag, et al., 2013). The first antenatal care was first offered in the late 1920s (Fraser & Margaret, 2009). Ideally, it is envisage that, early contact with health care providers by 10 weeks is important so that appropriate and variable advice related to nutrition and care of the developing fetal organs which are almost formed by 12 weeks gestation may be given. Medical conditions, infections and lifestyles which have the profound and detrimental effect on the fetus may also be attended to. The purpose of the initial visit, therefore, is to introduce the pregnant woman to maternity service in order for a woman and health care providers to discuss, plan and implement care for duration of the pregnancy, birth and postnatal period (Fraser & Margaret, 2009). Early commencement of antenatal care by pregnant women as well as regular visits has the potential to affect maternal and fetal outcome positively (Villar & Bergsjo 1997; Yousif & Hafeez, 2006). Timely antenatal care is associated with attendance of full recommended regimes of antenatal care (Hagey, 2012). However, many pregnant women in developed and developing countries initiate antenatal care late (Karin et al., 2012).

The World Health Organization has proposed a model of antenatal care that is aimed at providing quality care to women in an efficient, cost- effective way called focused, or goal-directed, antenatal care. This model proposes 4 to 5 focused antenatal visits (fewer than previously recommended) for women not having problems or complications at the outset. The specific elements of care are designed to prevent, detect early and/or manage conditions that impact pregnancy outcome for the mother and newborn. The care package recommends routine blood pressure measurement, testing of urine for bacteriuria and proteinuria, blood tests for anemia, and screening and treatment for existing conditions that may impact pregnancy outcome such as tuberculosis, HIV, malaria, sexually transmitted infections, hookworm and nutritional deficiencies. Routine weight and height measurement at each visit is considered optional, (Laurel, 2007). The goal of antenatal care is to help women maintain normal pregnancies through focused assistance and individualized care. It aims at detecting and treat existing conditions or complications, prevent complications and diseases, prepare for the birth and be ready for complications and include health promotion education. The rationale for antenatal care is therefore, to ensure women have contact with the health care system and increase the likelihood of skilled attendant at birth, (WHO, 2005).

The cost-effectiveness antenatal Care is to provide Tetanus immunization, Syphilis and Tuberculosis screening, early detection of maternal HIV and prevention of maternal-child transmission of HIV and malaria prevention in endemic areas. Early detection & treatment of anemia, detection & treatment of hookworm, Iron and folate supplementation and Vitamin A and iodine supplementation in areas of deficiency (WHO, 2005b). Tetanus; while eliminated in developed countries by the 1950's, 90% of all cases of neonatal tetanus come from 25 countries, 18 of which are in Africa. Effective immunization and safe deliveries provided by a skilled birth attendant are the major interventions to prevent maternal and neonatal tetanus (UNICEF, 2004).

1.3 Initiation; Mother and Infant outcome
In the developed countries such as United States of America and the United Kingdom, the recommended gestational age for initiating antenatal is within the first twelve (12)

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weeks of pregnancy (Ndipi, 2010; Trinh & George, 2006). In other areas in United States, women are advised to attend antenatal care even earlier than the recommended gestation, that is as early as eight (8) weeks (Martimer, 1991) and ideally before conception in order to identify and treat conditions that could affect the fetus (Trinh & George, 2006). However, many developing countries do not have national guidelines on antenatal care but initiation of antenatal care within the first 14 weeks of gestation is widely accepted as early (Low, et al., 2005a) and many previous protocols have defined initiating of ANC after the 14th week of pregnancy as late (Low, et al., 2005b). In Zambia, the traditional approach recommends 12 visits and the first visit should take place in the first trimester (12 weeks) of pregnancy (ZDHS, 2007). However, the country is transitioning to World Health Organization (WHO) approach's Focused Antenatal Care (FANC) that recommends 4 visits and the first visit to go up to 16weeks (ZDHS, 2007). FANC schedule emphases that, the first visit should occur by the end of 16 weeks of pregnancy; the second visit; by 28 weeks, the third visit is scheduled at 32 weeks and the fourth visit, at 36 weeks. However, expectant women with special needs beyond the basic care may require additional visits (ZDHS, 2007c).

Although many different antenatal care practices exist and disagreements remain about the appropriate number and timing of antenatal visits, for instance, Finland and Norway, (14 visits); New Zealand, (9 visits) (Blondel et al., 1985); Zambia (4 visits) (ZDHS, 2007), the benefits of initiating antenatal care early during pregnancy are not disputed (Villar & Bergsjo, 1997; Kupek et al., 2002; Maris et al., 2005). Good ANC links the woman and her family with the formal health care system, increases the chance of using a skilled health worker and contributes to good health through the life cycle (Lincetto et al., 2002). Pre-existing medical conditions that may influence the course and outcome of pregnancy such as cervical incompetence, chronic hypertension, diabetes mellitus and anemia are detected early (Yousif & Hafeez, 2006). The early detection of problems in pregnancy, therefore, leads to more timely treatment and referral in case of complications (ZDHS, 2007). It also allows for early commencement of health education and counseling on expected physiological changes and preparing a woman for normal labour, puerperium and care of a new baby (Yousif & Hafeez, 2006).

Inadequate care during this time breaks a critical link in the continuum of care and affects both women and babies (Lincetto et al., 2002).

Globally, studies in selected countries reveal the situation of late initiation of ANC as follows: America – Utah, 12.5%; Minnesota, 14.4% & California, 27.3% (Karin et al., 2012); New Zealand, 26.6% (Low, 2005); England and Wales, (31.7%). Saudi Arabia, 28% (El-Gilany & El-Wehady, 2009). Australia, 41% initiated after 12 weeks (Trinh & Rubin, 2006). In Niger Delta (Nigeria) in Africa, figures are as high as 73.6% (Ndidi et al., 2010; Ebeigbe, 2005). Selected countries in the sub Saharan countries showed that, Kenya, 45% of pregnant women initiated in the third trimester (Magadi et al., 2001). In Tanzania, more than 80% initiated ANC later than 17 weeks (Mrisho et al., 2009). Malawi, 91% and only 9% initiated early (Chiwaula, 2011). An over view of Zambia situation revealed that, although over 90% of expectant women had some antenatal care, 84% of those, were initiated by 36 weeks gestation (McDonald, 2003). The other study indicated that, only 6% of pregnant women initiated earlier (Maimbolwa et al., 2003). The latest study by Kyei et al., (2012) states that, although 94% of mothers in Zambia reported at least one ANC, only 8% attended in the first trimester.

Several studies have shown an association between late initiation of antenatal care and the adverse maternal and infant outcomes (Gortmaker, 1979). If ANC is delayed or underutilized, expectant mothers could deliver by spontaneous vaginal delivery, but are likely to deliver pre-term babies and other complications because of a lot of risk factors associated with pregnancy (Owalobi et al., 2008). Risk factors associated with late initiation of ANC are complications such as pre-eclampsia, anemia, chorio-amnionitis and placental abruption (Magadi et al., 2004). Some studies have revealed that, late registering for ANC was associated with premature births, inadequate number of visits was associated with 63% higher risk of intra uterine growth retardation, and poor ANC had a 76% excess risk of low birth weight compared to those who received adequate ANC (Magadi et al., 2001). In Finland, chorio-amnionitis or placental abruptions were common complications of women reporting late for ANC (Raatikainen et al., 2007**).** Fraser et al., (2009) outlined abnormalities which occur in early pregnancy such as

vaginal bleeding (up to 25%), spontaneous miscarriages (15-20%) occur prior to 13 weeks gestation. Sporadic miscarriages (50%) are associated with genetic abnormalities. Endocrine factors, maternal illness and infections such as syphilis and febrile illness as malaria, influenza, pyelitis predispose to miscarriage. Other factors which may lead to pregnant women experience miscarriages are abnormalities of the uterus and cervical incompetence (Frazer et al., 2009b). During the process of miscarriage or after, infections maybe introduced in the uterine cavity leading to severe complications such as sepsis, and other systemic and organ complications (Fraser et al., 2009c).

Obstetric risk factors identified at booking includes; previous lower segment cesarean section, previous stillbirth or neonatal death, preterm delivery, intrauterine growth restriction, and delivery of low birth weight infant (<2500g) (Kupek et al., 2002). Other obstetric risk factors detected at booking are of those expectant mothers with previous problems of prolonged or obstructed labor, repeated miscarriages, premature labor, severe vaginal bleeding or any kind of bleeding (Bartlett & Bull, 1997). Women who have had several pregnancies irrespective of the outcome (grande multigravida) or who have had given birth five times or more (grande multipara) or too close together are said to be at risk (Bartlett & Bull, 1997b; Fraser et al., 2009). History of still birth or neonatal death, small or large baby for gestational age, congenital abnormalities, Rhesus Isoimmunisation, pregnancy induced hypertension are other risk factors that need early attention (Kupek et al., 2002). Two or more previous termination of pregnancy, three or more spontaneous miscarriage are all risk factors that have been indicated (Kupek et al., 2002; Fraser et al., 2009). The presence of these risk conditions means that; the woman is more likely to have problems during pregnancy and delivery (Bartlett & Bull, 1997). Early antenatal care therefore, helps to reduce these maternal and foetal complications and mortality rates through early detection of the risky factors, referral and ultimately early management. Screening tests conducted early such as ultra sound scan, biochemical markers, blood tests: full blood count, HIV antibodies, venereal disease research laboratory (VDRL), and fetal haemoglobinopathies, urinalysis and other activities such as comprehensive history taking, identify individuals mostly likely to

be affected by any disorder and makes it possible to target further investigation towards those with apparent need (Fraser et al., 2009)

On the other hand, the baby is likely to be affected by the risk conditions of the expectant mother. Some conditions such as long term maternal malnutrition, HIV/AIDS, recurrent malaria, hard work and poor pregnancy health care can lead to low birth weight (LBW) (Wilcox & Skjaerven,1992; Malik et al., 1994; Kaushik, 1998; Zeitlin et al., 2010) and LBW is major determinant of neonatal infant morbidity and mortality (Deshpande, et al., 2011). Other conditions that affect the outcome of the baby are pre - term delivery (McIntire & Leveno, 2008; Khashu et al., 2009; Mathews & MacDorman (2010), Diabetes types 2 (Clausen, et al., 2005; Macintosh, 2006;Dunne, et al., 2009; Persson, et al., 2009; Reddy, et al., 2010). Diabetes type 1 has also been associated with serious outcome such as still birth, congenital malformation and prenatal death (Jensen, et al., 2004; Evers et al., 2004). Babies who are born to smoking mothers are frequently smaller by 458g (Roquer et al., 1995), they frequently have respiratory problems at birth and in their first year, have higher rates of prematurity, stillbirth and low birth weight (Floyd, et al., 1993; Li & Windsor 1993). There is also increased risk of asthma and otitis media (Nafstad, et al., 1996). Smoking in pregnancy also increases the risk of babies dying from sudden infant death syndrome (SIDS) (Blaire et al., 1996). The effects of alcohol on the fetus are marked particularly in the first trimester when fetal alcohol syndrome can develop, thereby restricting fetal growth and cause facial abnormalities, central nervous system problems, behavioral and learning difficulties (CDC, 2007, DH, 2007; NOFAS-UK 2007). The above problems justify the need for expectant mothers to initiate antenatal care early.

Several authors have identified a number of factors related to the late initiation of ANC and these include: Age (Ileen, 2003; Phafoli, 2007), high Parity (McDonald & Cobum, 1988; Goldenberg et al., 1992; marital status, (Woods, 1990; Kogan, et al., 1998; Ileen, 2003; Liu, 2007), Low socioeconomic status (Joseph,1989; Lee, et al 1995; Kupek et al., 2002; Low, et al., 2005) and low educational achievement (Misra & Guyer, 1998; Gharoro, 2000; Akukwe, 2000). Others are ethnicity, (Reis et al., 1992; Kupek et al.,

2002, Low et al., 2005), reliance on traditional practices (Abrahams et al., 2001; Chapman, 2003; Low et al., 2005) and traditional beliefs and misconceptions (Chiwaula, 2011). Unplanned pregnancies and substance abuse (Nichols & Zwelling, 1997, O'Callaghan et al., 1999; Low et al., 2005; Alderliesten et al., 2007), Woman's reaction to the pregnancy, (Young et al., 1990; Kogan et al., 1998; Magadi et al., 2000), getting pregnant outside marriage, refusal of pregnancy by a boyfriend and delayed diagnosis of pregnancy (Phafoli et al., 2007), contemplation of abortion and lack of social support (Kupek, 2002). Other factors are lack of transport, employment status, and difficulties in arranging child care (Stevens-Simon & McAnarney, 1994; Denis & Young, 1995; Lee & Grubbs, 1995; Phafoli, et al., 2007) and distance to the health facility (Roghmann & Zastowny, 1979; Kaliszer, et al., 1981; Stock, 1983), long waiting hours, inconvenient service hours and attitudes of health providers (Dennis & Martin, 1995). The planned patterns of antenatal care and type of hospital at booking have also been reported (Tann et al., 2007; Phafoli et al., 2007).

Some studies especially conducted in rural areas and those dealt with ethnic minority groups have revealed the behavior of women attaching great value in traditional antenatal care and this is one reason that makes them delay in initiating antenatal care (Abrahams et al., 2001; Chapman, 2003). Traditional antenatal care involves a communal approach, with extended family members and other members of the community playing a role in looking after the pregnant woman (Low et al., 2005). Expectant rural women in Uganda are satisfied with social support they get from elders because they even give herbs like "emumbwa" during pregnancy (Anisha, 2006). In Zimbabwe, when a woman is five month pregnancy, she is handed to her grandmother by his husband in a binding ritual sealed with ceremonial meal and there, she is prepared and given herbal medicine by her grandmother (Miura, et al., 2006). These cultural patterns are some of the factors that make mothers to delay initiation antenatal care. The study is therefore, guided by the theoretical framework below to present a systematic way of understanding events relating to phenomenon of late initiation in the study population.

1.4 Theoretical Framework

1.4.1 Andersen health seeking behavioural model

Andersen's Health Seeking Behavioral Model was developed in 1968. It is a conceptual model aimed at demonstrating the factors that lead to the use of health services. According to this model, usage of services is determined by three dynamics: Predisposing factors, enabling factors, and Need based factors (Andersen, 1995). Under predisposing factors there are social cultural characteristics of individual that exist prior to a health event such as; Social structure, Health belief and demographic characteristics. The other component is the enabling factors such as personal, family and community resources and in addition, a possibility of genetic and psychological factors. The last component according to Andersen is the Need factor that encompasses most immediate cause of health service use. These generate the need for health care services and are categorized under perceived and evaluated needs. Perceived is related to how people view their own general health and functional state as well as how they experience symptoms of health event, and worries about their health and whether or not they judge their problems to be of sufficient importance and magnitude to seek professional help (Andersen, 1995). Evaluated need represents professional judgment about health status and their need for health service (Andersen, 1995b).

Predisposing factors are based on the argument that, there are some individuals or families that have the propensity (advantages) to use services than others (Andersen & Newman, 1973). The advantages can be predicted by individual characteristics that exist prior to onset of specific health event. These are measured by characteristics such as education, occupation of an individual or family head, Age, sex, family size, ethnicity, social cultural factors and the social class. These indicate the location of the individual or family in society which could influence their life style and points to their physical, social environment and associated behavior pattern to the use of health services (Andersen & Newman., 1973). The enabling component is based on the argument that, though a family has the predisposition to use health services, certain characteristics must be in place to enable him access services. Any condition which permits an individual or family to act on a value or satisfy the need regarding health service use is defined as enabling (Will et al., 2008). Such enabling factors include material resources,
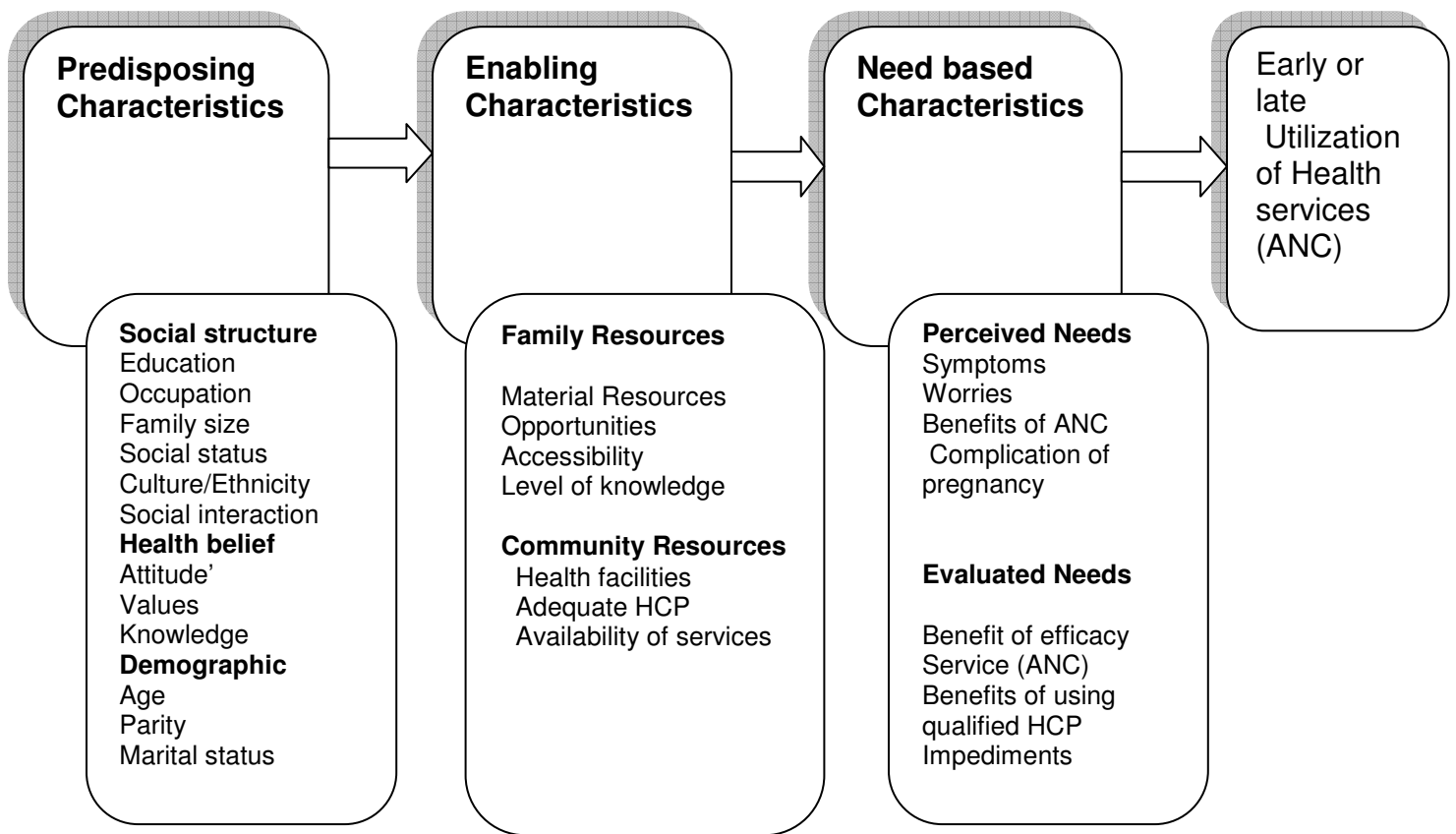
level of knowledge, social relations, health insurance and other opportunities. Without the ability to access services, predisposition will not necessarily translate to utilization. Apart from family attributes, certain enabling characteristics of the community in which the family lives also affect the use of services. Availability (amount) and accessibility of health facilities and health personnel in the community must be adequate. If resources are plentiful and can be used without queuing up they may be used frequently, (Andersen & Newman, 1973).

Finally, in order for health services to be used, there must be a need to use that service. Therefore the need factors are included in the model. These are illness variables and response variables but they must also respond appropriately in order to access the services. The individual experiences symptoms in a given time period and self report of general health status, illness level for example; excellent, good, fair or poor, represent cause of action. In addition to perception of symptoms, evaluation is included in the model. Once the individual seeks care from the formal system, the nature of the care is determined by them. The symptom the individual has is the need for care. Other services are viewed as less necessary than others (Andersen & Newman, 1971).

The motivations and assumptions of the model were meant to discover conditions that facilitate or delay utilization of health service and ultimately develop a measure of access to health service (Willis et al., 2008). Anderson discusses four concepts within accesses that can be viewed through conceptual framework: Potential access is the presence of enabling resources, allowing the individual to seek care if needed. Realized access is the actual use of care, shown as the outcome of interest. Andersen also makes a distinction between equitable and inequitable access. Equitable is said to be driven by demographic characteristics and need based component, whereas inequitable access is a result of social structure, health belief and enabling resources (Anderson, 1993). Andersen's model views access to services as a result of decisions made by individuals who are constrained by their position in society and the availability of health care services (Anderson & Newman 1973).

Andersen also introduced the concept of mutability of his factors. The idea here is that if a concept has a high degree of mutability (can be easily changed) perhaps policy would be justified in using its resources to do rather than a factor with low mutability. Characteristics that fall under demographics are said to be quite difficult to change, however, enabling resources is assigned a high degree of mutability as the individual, community, or national policy can take steps to alter the level of enabling resources for an individual. For example, if the government decides to expand the health program or improve conditions of service of workers, individuals may experience an increase in enabling resources, which in turn may lead to an increase in health services usage (Newhouse, 1993). Andersen model does not specify which variables must be used to operationalize the predisposing and enabling factors and need based factors. Instead, the decision of how to operationalize them should derive the theoretical relationship between the independent and the dependent variables. As such the choice of variables within the framework of need, predisposing and enabling factors is up to each researcher and context of the study (Willis et al., 2008).

The study opted for this explanatory model because it hinges on varying conditions that include; social, cultural and economic situations and seemed relevant to the study population which was heterogeneous and in a peri-urban setting. Considering the magnitude and the complex nature of the phenomenon under investigation, it was assumed; varying forces could influence individual health behaviors of the study population and therefore, the model could help the researcher in understanding situations that were dynamic and had a reciprocal relationship between an individual, their behaviors and the environment. This, in turn, would assist the researcher in explanations and creation of interventional programs aimed at providing opportunities for change of the existing health behaviors in the study population. The model is depicted in figure 1.4.1

Predisposing Characteristics	Enabling Characteristics	Need based Characteristics	Early or late Utilization of Health services (ANC)
Social structure Education Occupation Family size Social status Culture/Ethnicity Social interaction **Health belief** Attitude' Values Knowledge **Demographic** Age Parity Marital status	**Family Resources** Material Resources Opportunities Accessibility Level of knowledge **Community Resources** Health facilities Adequate HCP Availability of services	**Perceived Needs** Symptoms Worries Benefits of ANC Complication of pregnancy **Evaluated Needs** Benefit of efficacy Service (ANC) Benefits of using qualified HCP Impediments	

Figure1.4.1 Andersen's Health Seeking Behaviour Model

Adapted From Wolinsky, 1968)

2. RESEARCH FOCUS

2.1 Statement of problem
Late initiation of ANC in Zambia is still a big challenge as several literatures have showed (McDonald, 2003; Kyei et al., 2012). The 2007 Zambia Demographic Health survey (ZDHS) also indicates that, only 19% of mothers have had their ANC visit in the first trimester of pregnancy. Although the proportion of women with no care has decreased from 5% (ZDHS, 1992) to 2% in 2007, the median gestational age at the first visit has only decreased from six to five months in the last 15 year period (ZDHS, 2007).

Data collected from the Health Centre Aggregate Form (HCAF) at Kanyama health center show that, out of a total 12 170 expectant mothers who attended antenatal care in 2007 and 2010, only 1,233 registered early in the first trimester (HCAF, 2011). This figure represents a paltry 10.1%. The rest (89.9%) initiated antenatal care late which is contrary to WHO/FANC recommended approach for developing countries and also adopted by the government of the republic of Zambia (MOH, 2005). In the same year (2010), the health centre recorded 661 home deliveries, 221 abortions, 143 other complications such as hypertensions, haemorrhages disorders, sepsis and obstructed labour (HCAF, 2011) and these may be attributed to late ANC and inadequate information on the importance ANC. This is despite of the fact that, ANC services in Zambia are by policy provided free of charge (MOH/HMIS, 2007). Many studies reviewed and conducted in Zambia including the ZDHS (2007) have focused on finding percentages of late and early attendees of ANC, average number of ANC visits and overall percentages of expectant mothers who had some ANC in the duration of pregnancy (ZDHS, 2007). Very few researches have been done in Zambia especially in Kanyama Township to account for the behaviors expectant mothers attach to antenatal and possible determinants of late initiation of antenatal care, hence this study.

2.2 Rationale for the study
Late initiation of ANC has negative implications for safe motherhood and the Lusaka District Health Office has critical interest in this area and has set as a priority withstanding the rates of maternal morbidity and mortality. The research done especially

in Maternal Child and Health is likely to generate knowledge in the areas where gaps exist. The findings may stimulate the district in planning health promotion and other pertinent programs. The study is likely to contribute to developing community strategic based interventions as indicated in the Sixth National Development Plan (SNDP, 2011-2015) and all this is for improving maternal health and is in line with the Nation's desire to meeting promotion of human development and achieving targets or progress as espoused in the Millennium Development Goals (MDGs), (SNDP, 2011-2015).

2. 3 Research question

 What are the determinants of late initiation of antenatal care among expectant mothers in Kanyama Township?

2.4 Research Objectives

General objective

To investigate the determinants of late initiation of antenatal care among expectant mothers in Kanyama Township.

Specific objectives

1. To explore the characteristics of antenatal mothers who initiate antenatal care late.

2. To describe the patterns of late initiation of antenatal care among expectant mothers.

3. Using lay accounts; to understand the motive and meaning attached to the late booking behavior of expectant mothers in Kanyama Township.

4. To determine to the extent Andersen Health Behavioral Model is relevant to the understanding of late initiation of expectant mothers in Kanyama Township.

METHODOLOGY

3.1 Research Setting & Population

The study was carried out in Lusaka District/province in Kanyama Township at Kanyama Health Centre, which have been upgraded to a first level hospital. This is located at the western side, about 1½ kilometre from the main city. Kanyama Township catchment area is densely populated with wide range of population that cuts across all social, cultural and economic groups. According to statistics gathered prior to the survey, health facility provided health service to an estimated catchment population of about 161 151 (CSO, 2013). The reproductive age group (15-49); which is the target population for the catchment area was estimated to be 35, 453 mothers. This is the population that meets the criteria of interest which the researcher wishes to make a generalization (Basavanthappa, 2007).

3.2 Design & Sampling processes

This was a mixed study that combined quantitative and qualitative approach. The reasons for the combinations of these approaches were that, the research objectives embraced two epistemological assumptions and these were positivist and anti-positivist (phenomenological) assumptions. Research objectives 1, 2 and 4 were within the positivist epistemology and called for quantitative data where as objective 3 which did not call for measurement was within the anti-positivist epistemology. Given these positions (Blaikie, 2000) advises researchers to employ mixed methods as they call for the effectiveness of data collection, analysis and the interpretation of the methodologies selected thereby enhancing the outcome of the study. . As such, the study took an explorative, descriptive and explanatory type of approaches. The researcher employed sequential paradigm crossing, starting with induction, deduction (quantitative inquiry) and ended with abduction (qualitative inquiry) (Baltes, et al.,1988; Creswell, 1994; Blaikie, 2000; Nueman, 2000).

3.2.1 Survey method

3.2.1.1 Design description

The study used a cross-sectional design. This design was appealing in this study for reasons of economy, though it severely limits the research ability to address developmental issues or offer causal-effects interpretations generally or more elaborative over time (Johnson & Renaud, 1997). It was also appealing for the participants and the researcher because there was only one period of time for collection of data and the researcher was not faced with difficulties and cost of maintaining contact with participants over long time. The design was also appealing in this study because enough information could be collected at one point in time and provided the researcher to look at numerous variables at one point as was the case in this study (Pine et al., 1997; Bland, 2001, Kate, 2006).

This study was anchored around all attributable characteristics and determinants for late initiation (as independent variables) and time of initiation of antenatal care as (dependent variable). The variables were operationalized on the basis of Andersen health Seeking model as (i) predisposing factors. (ii) enabling factors and (iii) need based factors. The predisposing factors composed of three subcategories involving social structure, health belief and certain demographics; example of variables included in this component were; education status, ethnicity (tribe), and other demographics such as age, parity and marital status. The other variables considered in this component were attitude, beliefs, values and knowledge and these were assumed to be attitudes toward ANC and reaction towards the pregnancy (planned or unplanned), and how somebody valued ANC services, and knowledge about importance of early antenatal care. Enabling characteristics were family or individual income and job status: whether mother was working or not, area of residence, attitudes of trained health care providers at health facility and condition of health service provided (whether it was accessed without queuing or spending much time. Need based characteristics were divided into perceived and evaluated needs. Perceived needs were how the client perceived her health status and pregnancy whether she felt the need to initiate ANC in time. The evaluated needs were decisions made by expectant mothers on the value of ANC,

benefits of using qualified health care providers. Others could be evaluated barriers, with respect to early ANC. The perceived and evaluated needs were considered as decisions that could prompt someone to attend or not to attend ANC early and were regarded as proximate determinants.

Age was measured on an interval and numeric scales. Educational status was measured on a numeric scale as the number of years one has been in school as well as on categorical scale as; no education, primary, lower secondary, upper secondary and tertiary (college and university). Income was measured on ordinal scale in which expectant mother were told to rate themselves in terms of basic needs. This was to assess the levels of household incomes of expectant mothers. In addition, mothers were categorized into those working and not working. The other measure used was to categorize those expectant mothers who were working or involved in income generative ventures in order to determine the nature of the economic activities they were involved in. Marital status was measured on a categorical scale as: single, married to one, in a bigamous marriage, divorced and single, widowed and single and cohabiting.

The deterministic variables were 15 in numbers and they were measured on a likert (ordinal) summated eleven (11) point scale named by the inventor Rensis Likert (Basavanthappa et al., 2006). There are general weaknesses associated with rating scales in general as respondents tend to avoid extreme positions and this leads to errors of central tendency, leniency and halo effect (Basavanthappa et al., 2006b). However, measures to counteract these were: (i) to ensure that the later had the necessary information, (ii) to adjust the length of descriptive adjectives, and (iii) to use more points in the linear scale in order to give respondents latitude in terms of response. It was for this reason that the researcher had opted for an eleven (11) point scale instead of three (3) or five (5). The other advantage why the researcher had opted to use the above scale was that, it is more sensitive and informative than Yes and No choice of answers. It could also be used with a large number of variables like in the situation of this study in which we expected varied responses (Basavanthappa, et al., 2006c). The researcher expected that the expectant mothers would give responses that

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vary between two extremes and the mid-points. Mothers rating 1, 2, 3 and 4 were considered as unlikely to agree with the factor if they got such scores on the deterministic questions. Mothers rating 5, 6, and 7 were considered as neutral while those rating 8, 9, 10 and 11 were considered very likely to agree with the determinants. Based on this grouping rule, we could easily measure the percentage of determinism.

Starting antenatal clinic as an event of initiating first contact with the maternal and child health clinic, was operationalized in gestational weeks and was treated as continuous variable and classified as late entry which was defined as entering ANC after 16 weeks. This was demonstrated by expectant mothers attending antenatal clinic after 16 weeks from the day she missed her menstrual cycle. The last monthly period used to be checked on the antenatal records of the respondents. Below is the table1.3.1 with the list of variables.

Table 1.3.1. The list of all variables operationalised and associated with determinants of late initiation of antenatal care

No	Independent variable	Dependent variable
1	Age	
2	Marital status	
3	Social economic status	
4	Educational status	
5	gravid,	
6	Ethnicity. (main languages)	**LATE INITIATION OF ANTENATAL CARE**
7	getting pregnancy outside marriage, still feeling ashamed	
8	Intention to abort	
9	Parents were still negotiating for marriage	
10	Reliance on traditional herbs	**(After 16 weeks)**
11	Value of communal care than ANC	
12	Lack of social support (relatives neighbors	
13	Difficulty arranging for child care	
14	Long waiting time and congestion, at the health facility	
15	Refusal of Pregnancy by a partner	
16	Long distance to the health facility	
17	Waiting for pregnancy to advance	
18	Negative attitude of health care providers	
19	Long distance to the health facility	
20	Lack of better clothes to wears for ANC	
21	Pre-existing medical conditions (heart & Kidney disease, HIV	

3.2.1.2 Selection Process

The study population for this study was expectant mothers who used to come and access ANC service at the health facility, which met the inclusion criteria in the study and were available to the researcher. It was this group of expectant mothers that made up the sampling frame (a list containing all sampling units) from which a sample was drawn. The study population earmarked for recruitment was all expectant mothers, who initiated antenatal care late after 16 weeks. Mothers who were not eligible in this study were all expectant mothers who initiated antenatal care early according to the

WHO/FANC approach and that is up to 16 weeks of pregnancy. Expectant mothers who had difficult in recalling their last monthly period and without consent used to be excluded. Expectant mothers used to be first examined by midwives to ensure that only those with required gestations and necessary documented obstetric records were considered. Simple random technique was the procedure used to select the participants so that each expectant mother who met the inclusion criteria was given an equal chance of being selected for the sample. Those who met the inclusion criteria were gathered and given serial numbers on daily basis. A lottery method was used to pick those who finally participated in the study.

This study had opted for the formula developed by Cochran (1963) for population that is large to yield a represented sample (Israel, 1992).The study opted for this formula since there has not been any such a similar study conducted in the area and the population variability was not known. Also, the sampling strategy that the study had adopted was a simple random sample. (P = 0.5 maximum variability).

$$n = \frac{Z^2Pq}{e^2}: n = \text{Sample Size}$$

Z^2 = Is the abscissa of the normal curve (desired confidence level is 95%)

$\quad$ P = Is the estimated proportion of the target population.

q= is (1-P)

e = Desired level of precision (which is generally at 0.05 (±5%) and using that formula the sample size could have been 384.

However, in this study, we decided to reduce the level of precision to 0.03 (±3%) in order to increase the sample size and thereby augmenting the power of the study.

 Sample Size Calculation

$$n = \frac{Z^2Pq}{e^2} \quad = \quad \frac{(1.96)^2(.5)(.5)}{(0.03)^2}$$

Sample Size =1067.   This figure was rounded off to 1070

3.2.1.3 Data management

Before data collection, the investigator trained the research assistants who included (nurses and lay counsellors) on the requirements of data collection. This included procedures for monitoring how data was documented by respondents; how participants were filling in questionnaires. The study triangulated different methods by employing documentary reviews and survey questionnaires. Documents reviewed were antenatal records of the expected mothers to check for details such as LMP, EDD and height of fundus. The obstetric information gathered on antenatal records used to assist in the calculations of the gestational weeks and months when participants initiated antenatal care and ultimately selecting participants who initiated antenatal care late. All the information used to be captured on the survey instruments that were used. The respondents who could not read and write were assisted to answer the prepared questionnaires, (Assisted Structured Standard Questionnaires (ASSQs) by trained research assistants (Nurses and lay counsellors). This was done, in order to avoid wastage of stationary and gathering inaccurate information. The study did not encounter problems in contact with study participants within the prescribed period of data collection as responds were actually captured in the health facility. Data collected used to be stored in Epi-data software later exported in Stata version 13 for analysis.

During data collection, the researcher ensured that self-checks were carried out by checking the completeness and correctness of data recorded. The screening for data abnormalities used to be done on daily basis after questionnaire completion. This was done to check for forms (questionnaires) missing, answering box or options left blank or more than one option selected when not allowed. The other inconsistencies were to correct values used to be filled out in wrong box and that not readable, writing error and if answers given were out of expected range. The researcher used to ensure errors or wrong values were corrected especially when the respondent were available. During entering data, the values incorrectly entered used to be checked especially in the storage software (Epi data) and outliers during data cleaning and analysis

The study used linear regression analysis to identify factors related to late entry to ANC. Descriptive statistics were first explored to observe the basic characteristics of the variables.The study considered running the normality test to assess how well the data could be approximated by the normal distribution using the histogram. Linearity was checked to assess the association between explanatory variables and outcome variable. Univariate analysis was done to assess the relative contribution of each explanatory variable to the outcome variable. The significant variables at univariate level were used as contending variables and fitted in the multiple regression models to assess for adjusted estimates and account for confounders. The study also checked as to which regression model fitted the data well by accounting for the proportion of variations in the outcome accounted for by the explanatory variables. This was done through checking the evidence of the adjusted r squared.

3.2.2. Phenomenological design

3.2.2.1 Design description

A researcher applying phenomenology is concerned with the lived experiences of the people involved, or who were involved, with the issue that is being researched (Greene, 1997; Holloway, 1997; Kruger, 1988). The purpose of the phenomenological approach is to illuminate the specific, to identify phenomena through how they are perceived by the actors in a situation (Lester, 1999). For Giorgi; as cited in Stone (1988), the operative word in phenomenological research is 'describe'. The aim of the researcher was to describe as accurately as possible the phenomenon, refraining from any pre-given framework, but remaining true to the facts as being accounted for by the social actors. In this vein, an explanation of the model by Andersen or researcher's preconceptions or personal views (Husserl, 1970; Miller and Crabtree, 1992) did not influence the outcome of the interviews. The design of the study, therefore, was explorative, descriptive and understanding in nature and this was with the intention from the outset to gather data regarding the perspectives of research participants about the phenomenon under investigation (ANC and Late initiation). The procedure involved studying small number of subjects (FGDs); in which there was extensive and prolonged engagement with the aim of developing pattern and relationship of the meaning of late Initiation (Moustakas,

1994). An interview guide (Appendix II) was used to provide an overall direction for the discussion on the topic and issues to be covered in the FGDs. Two Focus Group Discussions (FGDs) composed of heterogonous expectant mothers were used. Heterogeneous in the sense that the researcher composed groups of expectant mothers with varying patterns of late initiation or gestations, extreme of ages, marital status, area of residence, varying gravidity and parity; ethnicity (main languages) and social economic status (working not working) (Patton, 1990). The questions focussed on the following key issues; knowledge of antenatal care, ideal time for initiation of ANC, motives for initiation of ANC, barriers for initiating ANC at ideal time, competing needs and attitudes of health care providers

3.2.2.2 Selection process

The expectant mothers were purposively sampled among those who used to answer the survey questionnaires. The justification for choosing purposive sampling as the most important non probability sampling (Welmer and Kruger, 1999) was based on the logic of selecting only those respondents that would provide specific data necessary to answer the research questions especially when it came for interviews (Babbie, 1995; Geig & Tailor, 1999). The study decided to target expectant mothers who delay in starting antenatal care with the purpose in mind to provide specific data necessary for the phenomenon of late initiation of ANC. The study used maximum variation sampling strategy proposed by (Patton, 1990) as already stated in the design description above in which expectant mothers were selected according to the varying patterns of social demographic attributes. This was in order to cover multiple realities of causes of late initiation of ANC in Kanyama Township. The heterogeneity selection process was seen as an appropriate technique for this study as it enabled the selection of unique cases, which was assumed would provide rich data concerning the phenomenon of late initiation of ANC in Kanyama Township. The two FGDs used had a total of 22 participants; the first had 12 and the second FDG had 10.

3.2.2.3 Data management

FGDs were used to gather data from the participants who took part in the discussions. An interview guide (Appendix II) was used to provide an overall direction for the discussion on the topic and issues to be covered in the FGDs and contained unstructured questions and inductive probing during data collection process to obtain in-depth information about knowledge, attitudes, values and ANC practices in the community. During the process of interview, the researcher bracketed (Miller & Crabtee, 1992) himself consciously of what he knew about the phenomenon under investigation in order to understand the hidden dimensions (Daly, 2005) or what Mouton & Marais, (1990) called insider perspectives of the participants. The essence was to understand the meaning expectant mothers ascribe to the phenomenon of ANC and late initiation (Donalek, 2004). The interviews were conducted in both English and local language (Nyanja) and discussants were free to express themselves even in Bemba because all these three are common languages in the study area which participants were conversant with. This was done because discussants were of varying educational background in which majority were modest. The interviewer (researcher) also had no difficult in communicating with the discussants because being a practicing clinician, he has been doing almost the same job for more than ten years. Each FGD used to last for about 1.5 hours. The FGDs were recorded and this used to be done after permission was sought from participants.

During this data collection period (October 2013 to January 2014), observations were conducted and field notes deemed important enough to the researcher concerning the phenomenon were recorded. Bailey (1996) emphasises the use of all senses in making observations and therefore, field notes included what the researcher used to see, hear, experience and think in the course of collecting and reflecting on the process. The guiding questions or emphasis was on; what happened and what was involved, who was involved, where did the activities occur, why did an incident take place and how did it actually happen (Lofland & Lofland, 1999). The antenatal care routines and other events related to Midwives, others support staff and expectant mothers were observed at the health facility. The observation followed a pre-designed protocol (Maimbolwa, 2003) of

all antenatal activities that are done by Midwives and other support staff on daily bases at the MCH department. The researcher being a clinician used to assist in screening programs and this assisted him to relate well with both midwives, support staff, expectant mothers and had a prolonged engagement and persistent observation in most of the happenings at the MCH department that included noticing average number of expectant mothers who used to come in the morning to seek antenatal service and those that used to be considered for booking (initiation of ANC) per day and who used to return without booking on account of limited number that used to considered per day. The researcher also took note of the average number of qualified staff (midwives) that used to work per day and other support staff such as lay counsellors and other activities that used to be done at the department such as administration and postnatal activities. The researcher used to discuss with midwives, other support staff and expectant mothers to get an insight into the antenatal activities. Attention was also paid to events such as congestions and duration of time spent by expectant mothers at the health facility, male involvement at ANC and other aspects of participants' perspectives that they used to express, including on the attitude of staff.

Thematic content analysis has been defined as: "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005). The emphasis of thematic content analysis is on integrated view of speech/texts and their specific contexts. It goes beyond merely counting words or extracting objective content from texts to examine meanings, themes and patterns that may be manifest or latent in a particular text. It is mainly inductive, grounding the examination of topics and themes, as well as the inferences drawn from them, in the data (Hsieh & Shannon, 2005b). It allows researchers to understand social reality in a subjective but scientific manner. Pranee & Douglas (1999) pointed out that; at the heart of thematic analysis is the process of coding, sorting and organizing data. Coding is one way of exploring bits of information and looking at the similarities and differences within the bits to categorize and label the data (Padgett, 1998; Patton, 2002; Tutty, Rothery & Grinnel, 1996). To code; data are broken down, compared and then placed in a category. Similar data are placed in

similar category and different data creates new category. Dey (1993) suggests that, we break down data in order to classify it and the concept we create or employ in classifying the data and the connection between these concepts provide the bases for fresh descriptions. It is an iterative, inductive, yet reductive process that organizes data from which research can then construct the themes, essences, description and theories (Walker & Florence, 2006).The unit of analysis refers to the basic unit of text to be classified during content analysis (De Wever et al., 2006) and Weber (1990) argued that, defining the coding unit is one of the fundamental and important decisions. Messages have to be unitized before they can be coded as differences in the unit definition can affect coding decisions as well as the comparability of outcomes with other similar studies (De Wever et al., 2006).

As such, all the recorded data in this study from the main questions in the interview guide, inductive probing and audible observable behaviors were transcribed by the researcher into textual material. The transcripts served as the primary source of data for content analysis. Thereafter, the researcher had extensive and intensive reading to familiarize with the data and allow all subthemes and themes to emerge. As such the units of analysis in this study were defined as 'a word', a 'group words', or a sentence and subthemes were chosen as coding units which mainly looked for the expression of an idea (Minichiello et al.,1990). The codes were therefore assigned to a text/chunk of any size as long as that chunk represented a single idea or an issue of relevance in the study and the subthemes were grouped into similar categories that represented one pattern that fell under each theme. Categories were developed inductively, from raw data using constant comparative method in order to stimulate original insight thereby able to make differences between categories apparent (Glaser and Strauss, 1967). This helped to systematically compare each text assigned with those already assigned to the same category. During this process, researcher was looking at context, condition, action, interactional strategies, intervening conditions and consequences for establishing these categories and relationships (Straus & Corbin, 1990). Nvivo software version 10 was used to further help in data coding, management and retrieval. The

analysis yielded a set of codes at subthemes and thematic level as presented in figure 3.4.3 in the subsequent result section.

Finally, the themes and subthemes were cross-checked with interview transcripts to ensure that they were applied to relevant responses found within and across the interviews. The focus was placed on identifying, summarizing and retaining the pattern and similarities, differences and new emerging themes. Data from the FGDs were then triangulated with other sources such as information gathered through observations. The triangulation involved assessing the consistence and potential variations of the findings by comparing data patterns across the material generated by different methods. This process showed that, the major issues raised by expectant mothers such as congestions and long time spent at the health facility, attitudes of health care providers, the issues of coming with partners at ANC care, including some of the researcher's reflections such as the small structural area, tight working schedules by few health care providers were consistent across the different types of data.

Denzin (1989) stressed that, when presenting qualitative content analysis results, one should strive for a balance between description and interpretation. He pointed out that, description gives the readers background and context and thus needs to be rich and thick (Denzin,1989b). As such this study presented the analysis results in two perspectives; Manifest content analysis is shown in this study by presenting reality in verbatim (quotations of part of the speech or the whole speech). This is that part of the data that speaks for itself as described by the respondent and allows the reader to make his/her own conclusions. Manifest content analysis involved looking at what the text said thus dealt largely on giving description of the visible and obvious components of the text (Oiler, 1982, Kochi, 1995). This type of presenting data falls in the Husserlian transcendental descriptive phenomenology.

In contrast, latent content analysis required the researcher to interpret the underlining meaning of the text, thus looking at the social actors' expressions (Draper, 1997). This involves the process of the phenomenological reflection of grasping and makes clear

the essential characteristics of the experience of the underlining meaning contained in the textual data (Downe-Wambolt, 1992; Kondracki et al., 2002). It is an extended analysis to an interpretive reading of the symbolism underlying the physical data. It elicits deep structural meaning conveyed by the message. In all the sections of the findings, latent content analysis is presented and this augurs well with Heideggerian hermeneutic phenomenology in that it augments the revelations of the essence of the phenomenon, which exist independently of conscious experience, so that issues could also be known through the researcher's examination of such experience (Heidegger, 1962). The researcher has offered some excerpts from relevant statements that document the researcher's interpretations.

3.3 Ethical Consideration

Since the study involved human beings, it was paramount to obtain consent to undertake this study from designated research and ethics committee and to the participants which were assigned. In this vein, the researcher got the approval from Excellence Research Ethics (ERES) (I.R.B. No. 00005948; E.W.A. No.00011697, reference number, 2013-June-004) and the Lusaka District Health Office and Kanyama Health Centre administration (Appendix V and letter of approval attached). The participants involved in this study were given informed written consent prior to data collection (survey questionnaires) and also verbal consent was sought before FGDs. The information sheets and consent forms were translated in the main common language spoken in Lusaka (Chewa) to ensure that expectant mother understood the decisions they were making and that, they participate with full consent. The researcher explained to the participants about the importance of the study towards improving the quality of health delivery and to their wellbeing as expectant mothers before they accepted to participate in the study. They were told of their rights to decline or withdraw their participation any time if they so wished. Assurance was given to the participants that all information that would be given would be treated with utmost confidentiality. This anonymity was guaranteed by virtue of the respondents not disclosing their names and where they came from in terms of their house numbers. Above all, the interviews were also carried out in exclusive places to ensure confidentiality and to have freedom of expression.

4. RESULTS

4.1 Survey Findings

4.1.1 Population description

The total expectant mothers sampled were 1070. The age distribution pattern of the expectant mothers indicates that, the maternal age of the study population ranged from 15 to 44 years with 24 years as the median age and standard deviation of 5.8. Majority of expectant mothers 36.4% (388), were in the age group 20-24 years and this was followed by age group 25-29 years, 22.8% (244). About 19.3% (206) respondents were aged below 20 years while 14.7% (157) and 7.0% (75) represents the age group 30-34 and that which was 35 years above respectively. The characteristic feature observed especially with the last three age groups (25 to 44) is that, respondents were decreasing as the age increased. Pooled results show that majority of the expectant mothers 55.6% (586) were those aged between 15-24 years. In terms of tribe; majority pregnant mothers were of Chewa tribe 29% (310), followed by Bemba 26.3% (281), Tonga 23.4% (249), Lozi 8% (86), Luvale 5.3% (57). The rest of the tribes were; Kaonde 2.6% (28), Lamba 1.4% (15) and Soli 1.3% (14) constituted the least of the respondents. Expectant mothers of foreign tribes made up 2.8% (30) of the study population. With regard to area of residence, majority of pregnant mothers 48.8% (523) came from Old Kanyama, followed by Kanyama site and service 18.7% (199). John Laing and garden house constituted 16.1% (172), 11.0% (118) respectively while Makeni had the least group of 5.4% (58) came from Makeni.

On the education status, most respondents 95.4% (1021) had indicated that, they had attended school at one point in their life time while only 4.6% (49) had no formal education. In terms of levels of education, about 36.5% (390) of the sample population had lower secondary education and these were in the majority, followed by those with primary education 35.6% (381) though, there is a marginal difference between these two groups. The upper secondary category constituted 21.9% (234) and those with tertiary education made up only 1.5% (16). Assessment of the household levels of income showed that most of expectant mothers; 55.5% (594) were in the lower category. This is the category which could not meet all their monthly basic

requirements. This was followed by expectant mothers whose house hold incomes were just enough to meet all their monthly basic requirements; 41.3% (442). The least group of expectant mothers 3.6% (34) indicated that their household incomes were high and were able to meet their basic requirements.

Regarding marital status, most expectant mothers; 85.4% (914) indicated that they were married to one husband, while 11.5% (123) were single and never married. This was followed by those in bigamous marriage 2.2% (24). The rest were those who were divorcees and single 0.5% (5), widowed and single 0.3% (3) and cohabiting, 0.1% (1). In terms of job status, the study population was divided into two groups; those who were involved in income generative activities, and enabled them to have an earning and another group constituted those who were not in meaningful productive venture such as house wives, students and those who have been out of school for some time but still being taken care of by parents or guardians. With this division, it was found that, those not working constituted majority of the sample population 73.9% (791) as compared to those with productive life 26.1% (279). The table1.4 below shows the summary of the background characteristics.

Table 1.4: Background characteristics

Variables	Study Population N=1070
Maternal age (age group)	**n (%)**
15-19	206 (19.3)
20-24	388 (36.3)
25-29	244 (22.8)
30-34	157 (14.8)
35-above	75 (7.0)
Tribes	
Nyanja (Chewa)	310 (29.0)
Tonga	249 (23.4)
Lozi	86 (8.0)
Luvale	57 (5.3)
Kaonde	28 (2.6)
Bemba	281 (26.3)
Lamba	15 (1.4)
Soli	14 (1.3)
Others (Non Zambians)	30 (2.8)
Residence	
Kanyama site and service	199 (18.6)
Old kanyama	523 (48.8)
Makeni	58 (5.4)
John Laing	172 (16.1)
Garden House	118 (11.0)
Job status	
Not working	791 (73.9)
Working	279 (26.1)

Job category	
College/University	1 (0.1)
Primary/Secondary	44 (4.1)
Professional	14 (1.3)
Clerical jobs	7 (0.7)
Business	1 (0.1)
Small scale business	256 (23.9)
House wife(not working)	709 (66.3)
Others(Not working/schooling/married	38 (3.6)
Educational level	
No education	49 (4.6)
Primary	381 (35.6)
Lower Secondary	390 (36.5)
Upper secondary	234 (21.9)
College/university	16 (1.5)
Marital status	
Single (never married)	123 (11.5)
Married to one	914 (85.4)
Bigamous marriage	24 (2.2)
Divorced and single	5 (0.5)
Widowed and single	3 (0.3)
Cohabiting	1 (0.1)
Levels of income	
Low	594 (55.5)
Medium	442 (41.3
High	34 (3.2)

An assessment was done to have more insight on the job status of expectant mothers. It was observed that, of the 132 expectant mothers who were single; pooled together, (combing single, divorcees and single, widowed single and cohabiting), only 25 were involved in income generative activities and the rest depended on their parents or guardians. Of those who were married (938), only 254 had something to do to earn a living or supplement their family incomes. Most expectant mothers were dependent either on their spouses' income. Below is a table showing mothers in relation to their economic activities (whether working or not).

Table 1.4.1 Description of expectant mothers in relation to job status

Job status

Marital status	Not working	working	Total
Single	104	19	123
Married to one	669	245	914
Bigamous marriage	15	9	24
Divorced and single	1	4	5
Widowed and single	2	1	3
Cohabiting	0	1	1
Total	791	279	1070

Of the total 1070 expectant mothers, 10.5% (112) got pregnancy outside marriage and the rest 89.8% (958) indicated that, they got their pregnancies in marriages. With regard to the people who were responsible for the expectant mothers' pregnancies, the study found out that, of the 10.5% (112) expectant mothers, who got pregnant outside marriages, 5.5% (59) had indicated that, the persons who were responsible for their pregnancies were their boyfriends while 5.0% (53) had indicated that, the people who were responsible for their pregnancies were just known to them. The rest 89.8% (958) however, indicated that, the men responsible for their pregnancies were their husbands. The percentage distribution by gravidity shows that, prime gravid mothers constituted 27.7% (296); followed by those who came with their second pregnancies 24.7% (266). Those who came with third pregnancies constituted 17.9% (192) followed by those with the fourth pregnancies 13.7% (144). The least group; 15.9% (169) were expectant mothers with gravid from five to ninth. Pooled data however, indicates that multipara constituted the majority of the respondents 72.3% (774).

Data was also collected on when expectant mother noticed that they were pregnant from their last menstrual cycles. This was to determine whether delay in noticing that one is pregnant could have contributed in the delay of initiation of antenatal care. It was found that, of the total 1070 expectant mothers, majority 95.8% (1025) noticed that they were pregnant within the first month from their last menstrual cycle. Only few pregnant mothers 4.3% (45) noticed late that is from the fifth week to the eighth week of their last menstrual cycle. This indicates that, delay in noticing that someone is pregnant cannot be linked to late initiation of antenatal care in this study population since majority noticed in time for them to make decisions to initiate ANC early if they so wished. The table 2 below provides a summary of the pregnancy characteristics.

Table 2.4: Pregnancy Characteristics

Variables	Study population N=1070
	n (%)
The way respondent got pregnancy	
Outside marriage	112 (10.5)
In marriage	958 (89.5)
Person responsible for pregnancy	
Boy friend	59 (5.5)
Just someone I know	53 (5.0)
Husband	958 (89.5)
Gravidity	
First pregnancy	296(27.7)
second Pregnancy	266(24.7)
Third pregnancy	192(17.9)
Fourth pregnancy	147(13.7)
Fifth to Ninth pregnancy	169 (15.9)
Week of noticing pregnancy from LMP	
Week Three	202(27.7)
Week Four	823(76.9)
Week Five	28(2.6)
Week Six	6(0.6)
Week Seven	4(0.4)
Week Eight	7(0.7)

From the deterministic variables which were constructed in the questionnaire, majority responded 61.4% (657) had indicated that, they were waiting for their pregnancies to advance. It is interesting to note that, this phenomenon of waiting until pregnancy is advanced has implication in the study population especially with regard to late initiation. The other deterministic variable that followed was lack of proper clothing to wear for ANC in which 19.1% (204) had indicated that they were still preparing for proper clothing to wear for ANC. Those who had indicated that they were very likely to have been delayed due to congestion at the ANC constituted 13.6% (146). Apart from the above three variables, very few respondents indicated that they were very likely to have been delayed to initiate ANC by the subsequent deterministic factors constructed in the survey questionnaire. Majority had indicated that they were unlikely to have initiated ANC late as a result of the other factors that acted as deterministic in the study population. Table 3.4 below shows the summaries of responses of expectant mothers.

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**Table 3.4: Deterministic variables of late initiations**

Variables	Study population N = 1070
	n (%)
State of feeling ashamed	
Unlikely	1027 (96.0)
Somewhat-likely	2 (0.19)
Very likely	41 (3.8)
My parents were still negotiating for marriage	
Unlikely	1030 (96.3)
Somewhat-likely	2 (0.2)
Very likely	38 (3.6)
Refusal of pregnancy by partner	
Unlikely	1047 (97.5)
Somewhat-likely	6 (0.6)
Very likely	21 (2.0)
Intention to abort and this took part of the time	
Unlikely	1047 (97.9)
Somewhat-likely	4 (0.4)
Very likely	19 (1.8)
I was just waiting for pregnancy to advance	
Unlikely	353 (32.9)
Somewhat-likely	21 (2.0)
==Very likely==	==657 (61.4)==
Not believing in ANC for good result	
Unlikely	1.067 (99.7)
Very likely	3 (0.3)
Valuing other things before ANC	
Unlikely	1069 (99.9)
Very likely	1 (0.1)
Lack of social support from parents/Husband	
Unlikely	1058 (98.9)
Somewhat-likely	1(0.1)
Very likely	11 (1.0)
Long distance to clinic used to discourage me	
Unlikely	1057 (98.8)
Somewhat-likely	3 (0.3)
Very likely	10 (0.9)
Attitude of nurses is bad as they do not provide good care	
Unlikely	961 (89.8)
Somewhat-likely	83 (7.8)
Very Likely	26 (2.4)
Long waiting time due to congestion	
Unlikely	894 (79.3)
Somewhat-likely	30 (2.8)
==Very likely==	==146 (13.6)==
I had no better clothing to wear for ANC	
Unlikely	848 (79.3)
Somewhat-likely	18 (1,7)
==Very likely==	==204 (19.1)==
Relying on extended family before antenatal care	
Unlikely	1070
Difficulty in finding who leave young siblings with	
Unlikely	1070
Delayed due to pre-existing medical conditions	
Unlikely	1070

However, even though very few respondents indicated on some of the deterministic variables, it was interesting to note that there were those who indicated as feeling ashamed, 3.8% (41); those who were still negotiating for marriages 3.6% (38) and who had intention to abort 1.8 (19). These indications are synonymous with unplanned pregnancies and are suggestive of teenage pregnancies and have a health and social economic implications.

4.1.2 Initiation of antenatal care

The second objective of this study was to determine the pattern of late initiation of antenatal care of the study population. Since the country has adopted World Health Organization (WHO) approach's Focused Antenatal Care (FANC) that recommends 4 visits and the first visit to go up to 16 weeks (ZDHS, 2007), this study used this guidelines in determining late initiation. The distribution pattern of late initiation of the study population, therefore, ranged from the minimum of 17th week and maximum of 32nd week, with the mean gestational week of initiating ANC standing at (21.3), which is in the sixth months. The peak week of initiation of expectant mothers was the twentieth week which is in the fifth months. This pattern of initiation of ANC by the expectant mothers indicates a skewed distribution more to the right of the peak week of first ANC visit. The mean gestational week at the first ANC is similar to what is indicated by the ZDHS and therefore, this study has confirmed what has been documented by ZDHS and that has been declared for programs interventions (ZDHS, 2007). Below is figure 2.4 of graphical presentation of pattern of initiation of ANC.
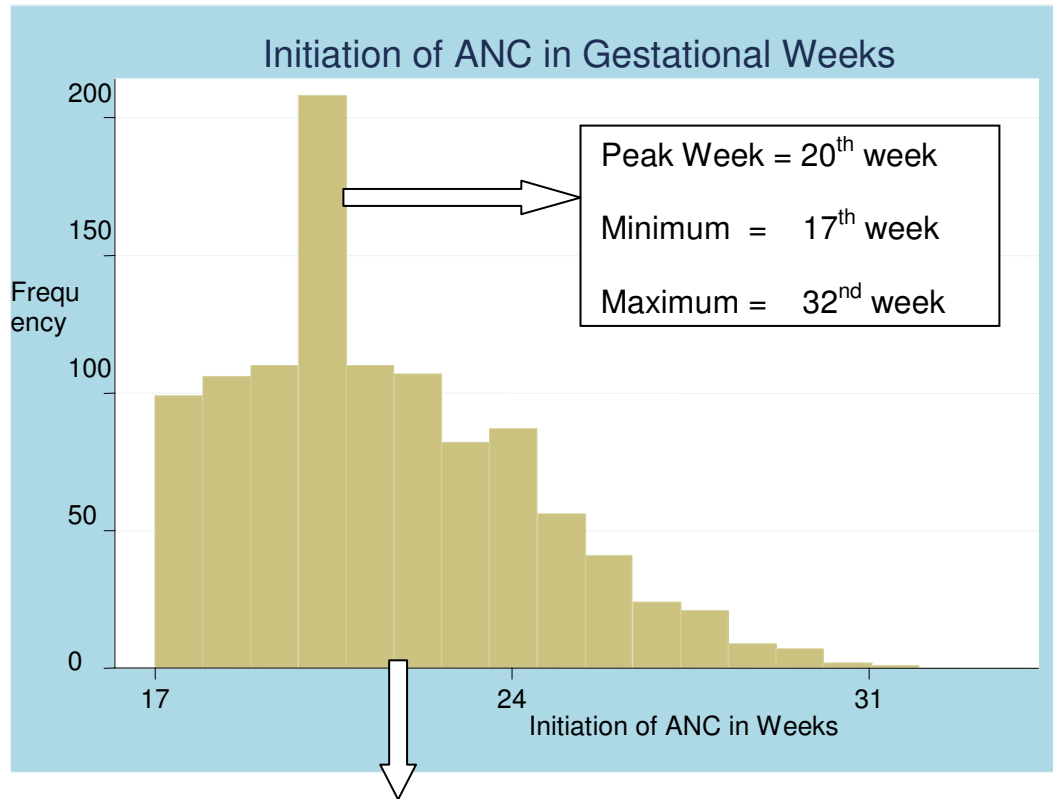
Figure 2.4.2: Initiation of ANC of expectant mothers in week

Descriptive information on the same objective indicates that, 48.9 (523) initiated ANC in the fifth months with the peak of initiation in the twentieth week standing at 19.4% (208). This was the highest ANC visit by expectant mothers per week in the study population. 36.0% (385) initiated in the sixth months in varying weeks, followed by 13.5% (144) in the seventh months and in the eighth months, expectant mothers reduced to 1.8% (19). Overall, it can be seen from the table 4.4 below, that majority expectant mothers 51.1% (547) initiated antenatal care after five months and this may reflect the decisions and behaviors of the expectant mothers of the sample population

Table 4.4: Distribution Pattern of late initiation

Initial ANC visit (months/ weeks gestation)	523 (48.9)
Fifth month:	**523 (48.9)**
Seventeenth week	99 (9.3)
Eighteenth week	106 (9.9)
Nineteenths week	110 (10.3)
Twentieth week **(PEAK)**	208 (19.4)
Sixth month:	**385 (36.0)**
Twenty-first week (MEAN)	110 (10.3)
Twenty second week	107 (10.0)
Twenty third week	82 (7.7)
Twenty fourth week	87 (8.1)
Seventh months:	**144 (13.5)**
Twenty fifth week	56 (5.2)
Twenty sixth week	41 (3.8)
Twenty seventh week	24 (2.2)
Twenty eighth week	21 (2.0)
Eightieth months	**19 (1.8)**
Twenty ninth week	9 (0.8)
Thirtieth week	7 (0.7)
Thirty first week	2 (0.2)
Thirty second week	1 (0.1)

4.1.3 Determinants of antenatal care

The study used linear regression analysis to identify factors related to late initiation for ANC. These were demonstrated by the probability value of 0.05 and 95% confidence Intervals. All the variables were therefore subjected to statistical test to assess their effects in determining late initiation of expectant mothers in Kanyama Township. The outcome variable is 'week of first visit', that is, the week at which the expectant mothers initiated their first antenatal care and this was treated as continuous or discrete variable. A simple linear regression was conducted to assess the effect of each variable against the outcome variable. The findings at univariate level revealed that, all the factors that were reviewed from the literature and are known to cause delay in initiation of antenatal care were insignificant when they were tested at alpha 0.05, except three variables related to earnings of expectant mothers, p. value 0.000, lack of proper clothing to wear at antenatal clinic, p. value 0.052 and gravid, p. value 0.054 became significant. The study considered the last two being significant even though, they were slightly above the critical value of .05, or border line. This was due to the fact that, the margin from the

critical value was very minimal and they could behave differently in the multiple regression model. The findings are indicated in table 5.4 below.

Table 5.4 : Univariate Analysis		Outcome variable: Week of initiation of ANC	
Predictor variables	**Regression Coefficient**	**P Value**	**95% CI**
Maternal age	.022	0.166	-.009, .053
Tribe	.023	0.565	-.055, .101
Residence	-.010	0.887	-.152, .132
Job status	-.053	0.799	-.463, .357
Job category	.045	0.566	-.109, .199
Educational level	-.029	0.781	-.233, .175
Marital status	.365	0.082	-.046 .776
Low Levels of income	-.439	0.000	-.645, -.232
Manner of getting pregnancy	.408	0.173	-.180, .995
Person responsible for the pregnancy	.283	0.127	-.080, .647
Number of pregnancy (gravid)	-.105	0.054	-.002, .211
Week of noticing the pregnancy from LMP	-.156	0.306	-.455 .143
Feeling ashamed	-.286	0.228	-.752, .179
Parents were still negotiating for marriage	-.115	0.639	-.599, .368
Refusal of pregnancy by my partner	-.346	0.280	-.974, .282
Intention to abort	-.291	0.390	-.956, .373
Still waiting for pregnancy to advance	.074	0.450	-.118, .266
Belief that ANC does not produce good outcome	.372	0.668	-1.329, 2.074
Value of other thing before ANC	-1.631	0.277	-4.573, 1.312
No social support	-.605	0.178	-1.487, .276
Long distance to the clinic used to discourage me	.354	0.441	-.548, 1.257
Attitude of nurses is good as they provide good care	.199	0.387	-.252, .457
Long waiting time due to congestion	-.209	0.113	-.050, .467
Lack of proper clothing to wear for ANC	.222	0.052	-.005, .451
Relying on extended family before ANC	Omitted	Omitted	Omitted
Difficulty to find who to leave young siblings with	Omitted	Omitted	Omitted
Pre - existing medical conditions	Omitted	Omitted	Omitted

N.B: The three factors at the end of the table written 'Omitted' is due to the fact that, all participants had indicated that they were unlikely to have been delayed by those factors and the regression analysis regarded them as co linearity.

The three variables highlighted above are the ones that have shown to have some relations or association with the outcome variable. The above significant variables were fitted in the multiple regressions to come up with adjusted estimates in order to rule out confounding factors. Table 6.4 below provides the adjusted estimates.

Table 6.4:	Multivariable Analysis for Adjusted estimates		
Predictor variables	**Regression Coef**	**P value**	**95% CI**
Low levels of income	-.410	0.000	-.623, -.197
Lack of proper clothes to wear for ANC.	-.243	0.036	-.016, -.471
Number of pregnancies	.063	0.262	-.047, .173

It can be seen from the table above that, the two variables; levels of income and lack of proper clothing in the model are still significant at a critical value of 0.05 and these variables are very much related as they are to do with finances or social economic position of participants. In fact lack of clothing to wear became more significant than when it was assessed as an individual variable. However, the variable; number of pregnancy, is insignificant as can be seen by the probability value of 0.262. This according to the model indicates that, the number of pregnancies expectant mothers have had, has no effect in explaining the late initiation in the study population. The fact that gravid is insignificant after adjusting it with other variables, can be regarded as a confounder as its effect has been diluted in the presence of others variables. On the hand, it can be seen from the regression coefficient that the rate of income of expectant mothers tends to reduce by 0.410 with every week that that passes and this reduction in the population where the data come from is as low as -.623 to as high as -.197 with 0.95% probability, controlling for the number of pregnancy and lack of clothes. The effect of this reduction is highly significant as can be seen from the probability value of 0.000. Since the level of income is a deciding factor in this study population, this has shown to have some effect on the expectant mothers' financial capacity especially on material preparing (to buy better clothing to wear) as they want to initiate ANC and therefore this factor; lack of proper clothing while adjusting for gravid, has an effect in that we can rule out chance findings given that the estimate is statically significant, p value .036 with probability 0.95% and confidence interval (-.016, -.471).

4.2 Phenomenological findings

This section addresses the third objective which sought to understand the motives and meanings attached to the late booking behaviour of expectant mothers in Kanyama Township. The section describes major issues that emerged from the two FGDs regarding expectant mothers' experiences on the subject of antenatal care and the phenomenon of late initiation of ANC. The section starts by describing the characteristics of expectant mothers who participated in the FGDs.

4.2.1 Population Description

The population description of the participants who participated in the FGDs was accounted for by selecting them using the maximum variation strategy proposed by Patton (1990). In total participants who participated in the two FGDs were 22 of which the youngest was 16 years and the oldest was 37 years. With regard to parity and gravid, there were five prime gravid and the highest multipara had six children and came the seventh the pregnancy. Participants in two FGDs who were not married were five (5) of which one them was a widow. Those who were not involved in any income generative ventures were ten. In terms of tribe all main languages considered in the study were well represented. The first FDGs comprised of ten (10) participants and the second FDG had twelve (12) participants.

4.2.2 Emerged themes and subthemes

The themes that emerged from the two FGDs were eight main and several subthemes. These themes are (i) knowledge of Antenatal care (ii) starting ANC and right or ideal time. (iii) Motives for the chosen time (iv) myths and misconceptions about the pregnancy (v) Intentions of mothers for attending ANC (vi) barriers or challenges expectant mother faced (vii) competing matters (viii) views of attitudes of health care providers. The motives for the chosen time, myths and misconception of the respondents though they are themes have been linked to starting ANC and ideal time as the researcher during data analysis noted that they are some links connected to the main theme. The eight themes is followed by several subthemes that were unitized before coding. The other issues that expectant mothers were asked to give their views on were

on how they perceived the health care providers (Midwives, Lay counsellors and other support staff) in terms of attitudes. The researcher therefore, determined the views of expectant mothers and also regarded this as a theme as this factor had some implications to the study. The diagram below illustrates how data was done and the themes and subthemes that emerged.
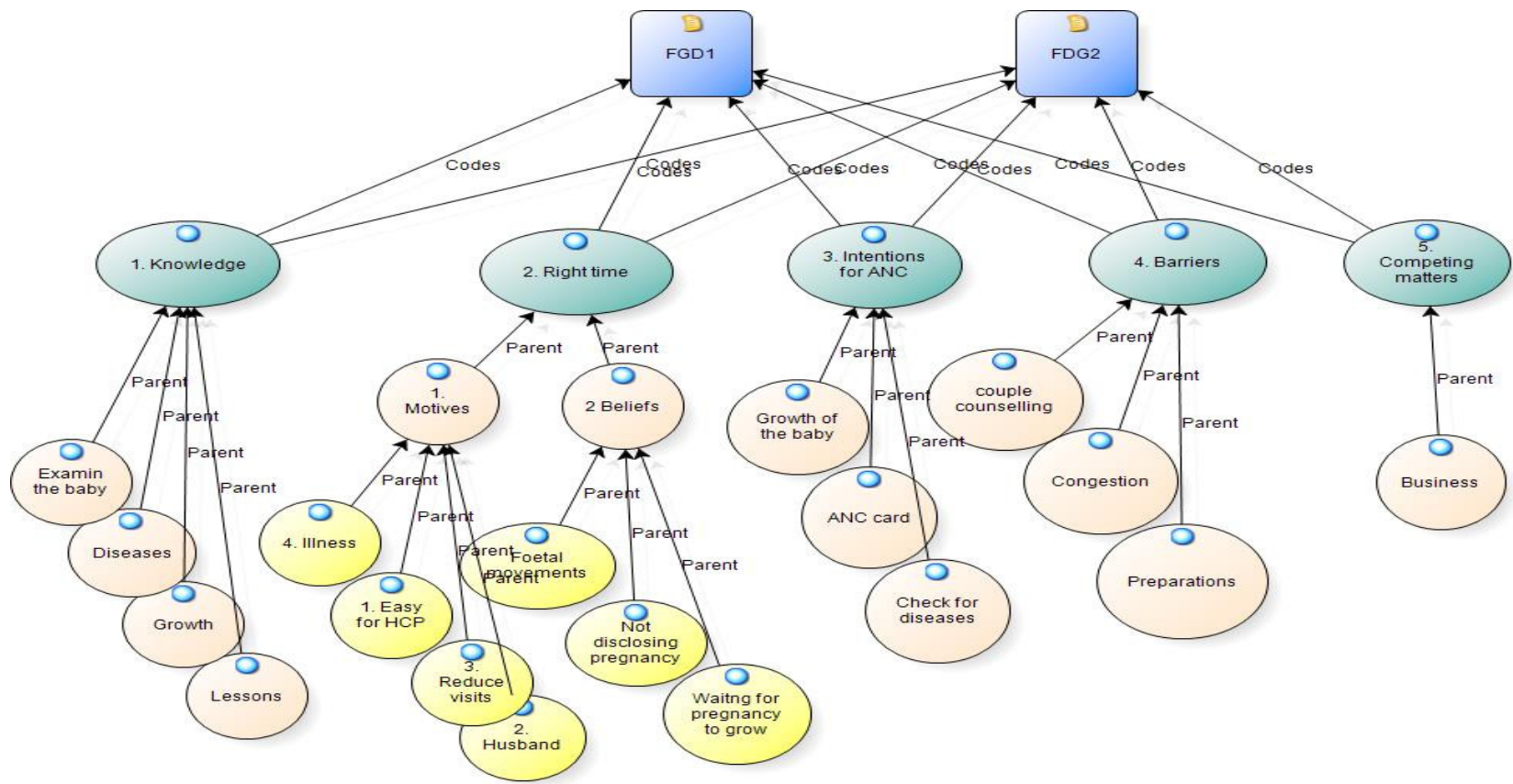
Figure 3.4.3 Thematic Content Analysis: Qualitative Model

Theme I: Knowledge about ANC and advantages

Mothers were initially asked to assess how they understood ANC and what was happening at these sessions. Below are the subthemes (monitoring of growth, examination and testing of diseases, and teachings or lessons) that the study has found and testimonies of expectant mothers regarding ANC.

Monitoring of growth

> "P9: Antenatal care; the way I understand antenatal, own my own is that, this is a place at the clinic where pregnant mothers come and be seen by nurses how the pregnancy is progressing. If the pregnant mother comes, the way we have come, there are a lot of things that are done to a pregnant mother. There is measurement of weight, height and on the abdomen."

> **[A 26 old year old mother of 2, married, marketer, grade 9, stays in Kanyama Site and Service.(FDG1)]**

> P2: Antenatal care is services which are done on a pregnant mother here at the clinic by nurses.
> **R: like what services?**
> P2: These one which they have mentioned (Ref to P9), like measurement of weight and to assess how the pregnancy is progressing and how the child is growing…]

> **[A 17 year old mother, prime gravid, married, grade 9, unemployed and stays in Makeni villa (FDG1)]**

> "P8: Antenatal, these are activities that are done on the pregnant mother like the way we have come here, you find that they take weight, height and palpate us on the abdomen."

> **[A 30 year old mother of 4, married, grade 9, unemployed, stays in Old Kanyama.(FDG2)]**.

Examination and testing of diseases

> "P6: Some of the things she has left are checking of diseases such HIV and STIs such as syphilis. In my first pregnancy they used to tell us to even submit urine but this time I have not heard them telling us to submit urine"

> **[A 24 year old mother of 1, married, grade 12, unemployed, stays in Garden House (FDG2)]**

> "…P2: On top of that, I hear these days they also check blood to see if you have HIV"

> **[A 17 year old mother, prime gravid, married, grade 9, unemployed and stays in Makeni villa. FDG1]**

Teaching or lessons

> "P2: At the antenatal they also teach us how a pregnant mother should take care of herself in terms of cleanliness and diet that pregnant women should be eating. The other things which they usually tell us are to be doing exercises."

[**A mother of 2, 28 years, married, grade 9, unemployed, stays in Kanyama Site Service. (FGD2)**

"P8: When you come at the mother's clinic, there are a lot of things that you are taught. In the morning they teach you how a pregnant woman should take care of herself like on the issues of hygiene, dressing, type of food required when you are pregnant and other things. There are many issues which they usually talk about."

[A woman of 4, 28 year, married, grade 9 selling at market, stays in Kalundu (FGD1)]

"P4: antenatal silence……………….. oh! I don't know properly"

R: You don't Know; what made you to come here?

P4: I have come with my sister who has escorted me.

R: What has your sister told you about antenatal?

" P4: She just told me that, let us go and register at the clinic."

[A 16 year prime gravid, schooling, stays with parents, Old Kanyama FDG1)]

From these narratives it is evident among multiparas unlike primiparas that, ANC was well understood. Most of the mothers observed rightly that ANC comprised checking of the baby's growth, examination and testing of diseases, except for prime gravid that were not quite sure. Multiparas used different words to explain what they knew about antenatal but the study has found out that all different expressions meant the same. The diseases commonly noted were HIV and Syphilis. The checking of the baby's growth was monitored by the checking the weight, height and position of the baby which is monitored by palpation and measuring the height of fundus.

Theme II: Starting ANC and the right time

Respondents in this study were asked to comment on what they thought could be the right time of initiating antenatal care. It was evident that nearly everyone knew that they needed to attend ANC when pregnant. There were however, differences in terms of the ideal time. Some women especially multi paras associated the ideal time of starting ANC to the growth of the pregnancy and/or when the fetal movements are appreciated. Other women had knowledge about the ideal time which were backed by good reasons and these were encouraging prepositions. However, despite this knowledge, most of these women started their antenatal around 4 months' gestation and above. Prime

gravid did not know about the ideal time because they had no previous exposures to ANC and even fore-Knowledge was missing. The descriptions of a progressing pregnancy had varying meanings and below are the testimonies;

Testimonies on growth

"P1: As I said in the beginning, I feel the right time of starting antenatal care is when the pregnancy is seen. When the pregnant is seen, no one doubts about it. To me I feel is the right time."

[A 28 year mother of 3, not married, grade 7, selling, stays in Garden House (FGD1)]

"P2: The other reason which I can say is that, at this time (five months). The pregnancy has grown and it is not difficult for anybody to see. It just feels good to go for antenatal when the pregnancy is grown and no one can doubt it, even your husband."

[A 28 year of 3, married, grade 9, selling as business, stays in Kanyama site & service (FGD2)

"Also .in our communities where we stay, if you tell people that, I'm going to antenatal when the pregnancy is small they will start saying where are you rushing? Also at the clinic the nurses have no problems to examine you."

"P8: That issue is very true. It is very rare to find a woman who can disclose that she is pregnant immediately she misses for fear of bad things to happen especially losing the pregnancy. In the communities where we stay and in other people's homes they struggle to find babies. So if you become pregnant and you start telling people some people are jealous. It is better for people to just realize for themselves when the pregnancy becomes big. There are people who are jealous."

[A mother of 4, 30 years, married, grade 9, unemployed, lived in Old Kanyama for 10 years (FGD2)]

"Me, I think the right time is once you know that you are pregnant... why I say so is because, if they want to check the disease in the body, this can be the right time so that the diseases such as HIV cannot be transmitted from the mother to the baby. This is what we hear and what they were teaching us."

"P4: I did not think about antenatal clinic when I missed the period because I had no experience of the pregnancy….. 'the thing that came in my mind was fear and I was just looking for ways of terminating the pregnancy because of school."

[A 16 year prime gravid, got pregnant while at school, stays with parents, Old Kanyama (FDG1)]

Testimonies on movements of the baby

"**P1:** ….and I start feeling some movements of the baby. This is usually the right time I usually start antenatal care."

[A single mother, 28 years, not married, grade 7, doing small business, stays at Garden House (FGD2)

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Theme III: Motive for the chosen time.

In a behavioral study like this one, we sought an explanatory understanding (according to Weber, 1998; Blaike, 2000) in which the actor's motive for elicited behavior for the chosen time could be explained. A motive or the reason of deciding to chose the particular time was part of the complex subjective behavior for the demonstrated late initiation of ANC (Weber, 1978).

Expectant mothers' motives for the chosen time were to attend ANC only when they felt sick or if they experienced problems with the pregnancy; to make it easy for the health care providers when examining the pregnancy. Other women felt when the pregnancy is grown, it was convincing even for the husband in terms of preparation for what is required for them in terms of clothes. Others had the motives of proving to neighbors when the pregnancy has grown while others were to reduce the number of visits of coming for antenatal. Here are the testimonies:

To attend ANC only when is sick

> "P3: Okay, like on my side in the first to second pregnancy, I used to be troubled by feeling of abdominal pains and sometimes with bleeding. These, I remember is what prompted me to start antenatal. I came to the clinic at the OPD. After that, I was sent to the Lab to go and check urine and after that, I was advised to start antenatal. So in short I can say, when you have problems during pregnancy or in your previous pregnancy, this is the thing that can prompt you to come for antenatal."

[A 30 year woman of 4, married, grade 9, business, stays in Kanyama Site &service(FGD1)

> "P3: Yes. If you have no problems that you are feeling, usually I see no need for coming here to queue leaving your businesses."

[A 30 year woman of 4, married, grade 9, business, stays in Kanyama Site & service(FGD1)

> "P5: I started when the pregnancy was six. Some of us these days, the most important ……….
> Unless you have a problem during pregnancy I think it is when you can come for antenatal early"

[A 37 year mother of 6, married, grade 7, marketer, stays in Old Kanyama (FGD2)]

> "P1: when the pregnant is seen, no one doubts about it. Even men don't give problems when you are looking for something like clothes. Even neighbors can't doubt and also it is easy for nurses to examine you. This time is the right time even for preparation starting from your clothes and that of the baby. Unless those who are sick may be it is when you can start early."
> **[A 28 year mother of 3, grade 7, selling, stays in garden House, FGD1]**

Testimony about husbands and neighbors

> "P1: when the pregnant is seen, no one doubts about it. Even men don't give problems when you are looking for something like clothes. Even neighbors can't doubt."

[From a 28 yearpregnant mother with the fourth pregnancy.(FDG1)]

> *"P8:* Some *husbands also develop much interest when the pregnancy has grown and he will prepare what is required for antenatal."*

[A 28 year mother (grade nine), with 4 children, who went with the fifth pregnancy also echoed the same sentiment. (FDG1)]

> "P2: Neighbors are difficult people. If you are married and they don't see anything they will start gossiping.
> **R: what happens when it is grown?**
> P2: They will have nothing gossip".

[A prime gravid, 17 years, grade 9, unemployed, Makeni Villa (FDG1)]

> "P2: The other reason which I can say is that, at this time (five months). The pregnancy has grown and it is not difficult for anybody to see. It just feels good to go for antenatal when the pregnancy is grown and no one can doubt it, even your husband."

[A 28 year of 3, married, grade 9, selling as business, stays in Kanyama site &service (FGD2)]

> "P1: Since this was my fourth pregnancy, I like to start when the pregnancy is around four to five when the pregnancy is viable …This is usually the right time I usually start antenatal care"

[A single mother, 28 years, not married, grade 7, doing small business, from Garden House (FGD2)

Testimony about nurses

> "P1: when the pregnant is seen, no one doubts about it. …… Even neighbors can't doubt and also it is easy for nurses to examine you. "

> "P1. I feel this is the right time because even when you go to antenatal clinic the nurses have no problem to palpate the pregnancy. "

[A single mother, 28 years, not married, grade 7, doing small business, form Garden House (FDG2)]

Testimonies about average visit

When expectant mothers were asked about the number of visits they would have wanted to make for antenatal, several mothers said they would have preferred to have only two visits starting at either at 5 or 6 months old pregnancy and the last visits at 9

month. Only a few who were in their first gravid were keen to make more visits. They said that, they only go their when they were not feeling well or the pregnancy gave them problems.

About the number of visits

> "P1: I wanted to say that, because our clinic is usually very congested. When you start when the pregnancy is still very small it means you will have many trips of going there and every time you go there, you take a lot of time to come from antenatal clinic. By the time you reach at delivering you are tired.
> **R: How many trips would you want if it was on your side?**
> "P1: I think just two, the first one is for booking the second one is to just come and see how the baby is growing and the third one, you go for labor ward if you have not delivered at home

[A 28 year mother of 3, not married, grade 7, selling, stays in Garden House (FGD1)]

> "P5: the first visit in the fifth to sixth month and the second in the ninth months."

[A 35 year mother of 6, married, grade 7, marketer, stays in John Laing (FGD1)]

> "P6: myself I think three months and the first must be in the fourth."

[A 24 year mother of 1, married, grade 12, unemployed stays in Garden House (FGD2)

> "P1 The other reason is that, at five months you will just have few visits to antenatal clinic may be two to three then, time to deliver comes."

[A 25 year mother of 2, married, grade 9, selling, stays in Kanyama (FGD2)]

From the statements of expectant mothers it is evident that others were motivated to reduce the number of visit for ANC while others felt they could only initiate ANC early when they were not feeling well. All these motives suggest that expectant mothers do not value most activities done at ANC and had a bearing towards their decision making about the ideal time to initiate ANC as they had an influence expectant mothers' decision making. However, the study also found that, this complex subjective decision making of expectant mothers could be driven by other factors such lack of knowledge of the ideal time, laziness of some expectant mothers, other commitments or not perceiving the importance of attending ANC in the first trimester. Perceived need under Andersen Model is related to how people view their own general health and functional state as well as how they experience symptoms of health event, and worries about their health and whether or not they judge their problems to be of sufficient importance and magnitude to seek professional help (Andersen, 1995). The motives of some mothers

for attending antenatal clinic only when they were sick or when there was something wrong with their pregnancies could mean that, these expectant mothers did not see the need of attending ANC when they felt that they had no illness or complications with their pregnancies. To some, as long as they were not feeling anything wrong in their bodies or with their pregnancies, there was no need to initiate antenatal care early. With such attitudes and behaviors, it implies that, there is still a big problem to deal with especially with diseases like HIV and Syphilis that has a long incubation period and indeed other complications (for example anemia) which could be brought by other diseases such as malaria and dietary deficiencies. If some expectant mothers are to wait for them to get sick, that is when they would attend ANC, then this means these mothers don't understand the value of ANC because they regard it as a curative clinic instead of being more of preventive and promotive.

Theme iv: Myths and misconceptions, about the pregnancy

The common belief shared in the community among women is never to disclose a pregnancy to anyone not until the neighbors or the community just sees it for themselves when it has grown or becoming evident. The belief is of fearing losing the pregnancy mysteriously and through miscarriages. Here are the testimonies;

> "P7: Some pregnancy can disappear mysteriously. You find that, if you missed a month or two and you want to go into the third months, you find that, the pregnancy is nowhere to be seen. This is what usually makes people not talk about the pregnancy or to tell people who look suspicious when you have missed a period….."

[A 30 year mother of 2, not married, grade 9, selling, stays in John Laing (FGD2)]

> "P8: Yes. There are people who are jealous in the community who can bewitch you so that you lose your pregnancy."

[A 30 year woman of 4, married, with 4 children, grade 9, selling, Kanyama site & service (FGD1)

> "P5: That's why you usually see in the villages especially to newlywed couples, there is an elderly person who looks at such issues. Immediately the girl misses the month, there and then, they will tie a thread of white beads to protect her from bad spirits. "

[A37year mother of 6, married, grade7, marketer, stays in Old Kanyama (FGD2)]

> "P5: Also our culture as black people is that, usually when you miss a period, you can't just there and then start telling people that I'm pregnant…… A lot of things can happen especially where we stay in these compounds and that's why when the pregnancy is still small, it is better to keep it to you. "

[A 35 yrs old woman of 5, married, selling, grade 7, stays in John Laing (FGD1)]

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From the expressions given, there is an indication that, some respondents and the community are still much influenced by traditional beliefs which have a bearing on decision making and behaviors of expectant mothers towards early initiation of ANC and consequently on maternal health. The time when mothers were supposed to plan about ANC is when they are entangled in such beliefs of not disclosing the pregnancy. Such beliefs are synonymous with low levels of knowledge about the cause of miscarriages and other problems related with pregnancies. It is also suggestive of the low levels of knowledge about the importance of early ANC which could assist in demystifying or through light on such issues as expectant mothers interact with the formal health system early where there are qualified personnel. The resultant of such myths is that, apart from it, having the maternal health implications, it also delays the couple to start planning for what is required. Such beliefs suggest that, there are still many challenges the community is facing and much is needed to be done in terms of education if behaviors are to change.

Theme v: Intentions of mothers attending antenatal
Since this study is behaviorly related and knowing that studying human behavior is complex, effort was sought to try to find explanatory understanding as why people tend to behave in a particular manner. This study sought to be assisted by the theory of planned behavior espoused by (AJzen, 1988, 1991; Azjen and Driver, 1991) in which they tried to explain planned behavior and how human action is guided. This theory predicts the occurrence of specific behavior provided that, the behavior is intentional and planned. The theory assumes that, intention is a direct determinant of behavior. Behavioral intention is the probability as rated by the subject that, he/she will perform the behavior. This intention is made up of the attitude and subjective norms. According to this model, attitude towards the behavior are shaped by beliefs about what is entailed in performing that behavior and the outcome. In this study mothers were asked to describe their intentions or goal of attending ANC; some expectant mothers' intentions were to acquire ANC card in readiness for labor while others were to assess how the baby was growing. The following are the testimonies.

To acquire ANC cards

"P5: I started when the pregnancy was six. Some of us these days, the most important is just to come and book so that you are given a card so that you have no problem during delivery. Unless you have a problem during pregnancy I think it is when you can come for antenatal early"

[A 35 year woman of 5, married, grade 7, marketer, and stays in John Laing (FGD1)]

"P8: Yes, the card is very important because there are a lot of things which they normally write there."

[A 30 year women of 4, married, grade 7, unemployed, stays at Old Kanyama (FGD2)

R: who conquers what she has said?

"P11: Yes I conquer with her that a card is very important"

R: Reasons?
"P11: The very reason that she has said in that at the labor ward they are strict with antenatal card."

[A 24 year woman of 1, not married, grade 9, selling, John Laing (FGD2)]

"P5: When you have a card, it is a sign that you came for antenatal"

[A 37 year mother of 6, married, grade 7, marketer, stays in Old Kanyama (FGD2)]

"P8: Yes, the card is very important because there are a lot of thing which they normally write there."

[A 30 year mother of 2, married, grade 9, unemployed, stays in Old Kanyama (FGD2)]

"P11: The very reason that she has said in that at the labor ward they are strict with antenatal card."

[A 24 year mother of 1, not married, grade 9, selling, stays in John Laing (FGD2)]

"P10: …… But to me this issue of lessons at antenatal is not really a big problem because most of the things done are known. If you attended antenatal in the previous pregnancy you will find that, they are the same issues they talk about. What I'm always concerned about is to come and book so that they give you a card……."

[A 26 year mother of 2, married, grade 12, unemployed stays in John Laing (FGD2)]

To assess how the baby is growing

"P8: Just as the previous speaker has said, the main, main things that usually persuade mothers to come for antenatal to assess how the baby is growing and to have antenatal card. Most of these activities that we usually find there are not what us as mothers usually come for. If one feared about HIV one could have tested with the husband before becoming pregnant."

[A mother of 4, married, grade 9, unemployed, stay in Old Kanyama (FGD2)]

"P12: Apart from the card we come for antenatal for examination to assess how the baby is growing and if it is well positioned in the abdomen."(FGD2)

[A 17 year prime gravid, married, grade 7, unemployed, stays in Kanyama Site & Service (FGD2)]

"P10.usually when you plan to start coming for antenatal, the main thing is the baby that you are carrying, to know whether he is growing well. Also we know that it is only at the ANC…"

[A 26 year mother of 2, married, grade 12, unemployed stays in John Laing (FGD2)]

From the narratives above, the study has found that some expectant mothers did not see the value of certain activities that are done at ANC. They have specific issues of interest which they target at ANC. Andersen Health seeking Behavioral Model has a component of evaluated need. Evaluated need represent professional judgment of how people view their own general health and the functional state as well as how they experience symptoms of health event, and worries about their health and whether or not they judge their problems to be of sufficient importance and magnitude to seek professional help (Andersen, 1995). In relation to Andersen model one could suggest; these expectant mothers did not see the need of attending ANC early because they did not see the benefit of early ANC. This may suggest why they would only initiate ANC to acquire the antenatal card or possibly to be told about the viability of their developing fetus. This kind of behavior exhibited by expectant mothers is contrary to the essence of ANC and the importance of early initiation of ANC in which there is need for early detections of problems that may be detrimental to the wellbeing of both the mother and the developing fetus and for proper planning and management of antenatal activities which may include identification of those mothers who may have the likelihood of developing complications and may need preventive measures which may include referral system. This is synonymous with low levels of education among expectant mothers and possibly the community at large. It may also suggest that, even husbands and guardian who are close to these expectant mothers have no capacity to help in such situations.

Theme vi: Barriers for early ANC

When expectant mothers were asked as to what challenges they faced that hindered them from initiating antenatal at the ideal time, the main issues that emerged were to do with preparation for better clothes to wear for ANC, congestion at the clinic which affected both prime gravid and the multi-Para women differently and the demand by the health care providers for women to go for antenatal clinic with their partners for counseling and testing of HIV. The following are the testimonies.

Preparation for better clothes to wear for ANC

> "P3: There are things like clothes. You find you may want to start but you don't have proper clothes to wear for antenatal and money for transport and for buying food when you are there. So until you have prepared yourself it is when you may think of coming.

> **[A 24 year mother of 1, married, grade 12, small business, stays in John Laing (FGD2)]**

> "P1:… I waited first to get convinced whether it was really a pregnancy or not. When I saw that the second months I did not attend, I got convinced that I was pregnant… The second thing was what I should wear the day I will go for antennal care."

> "….when the pregnant is seen, no one doubts about it. Even men don't give problems when you are looking for something like clothes……This time is the right time even for preparation starting from your clothes and that of the baby."

> **[A 28 year mother of 3, unmarried, with small business, stays atGarden House (FGD1**

> **R: So did you come at five**
> P9: Yes, after I prepared myself, it is when I thought coming for antenatal.
> **R: what preparation were you doing?**
> P9: I was preparing to buy clothes that I have put on.
> **R: You mean maternity dress? So when did you buy or prepare your maternity dress**
> P9: I started thinking of the maternity dress when the pregnancy was four months when my clothes were becoming small.
> **R: Does it means you were also delayed because of preparing for better clothes to wear for antenatal clinic?**
> P9: Yes that was another reason; money is difficult to come by.

> **[A 25 year mother of 2, married, grade 7, not working, stays in Kanyama Site and Service]**

> **R: What are those things that may hinder you from coming at the right time?**

> "P10. I talked about the issue of congestion at the clinic. We also talked about the issues of coming with the husband. The other thing is the issue of preparing yourself to buy maternity and other things such as chitenge materials and foot wears."

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From the narratives above it is evident that, some women had financial difficulties. This could be because majority mothers are not working and depend only on their partners who most of them are also struggling to earn a living to buy them necessary clothes and even for the baby. Some mother especially those not married relied on their guardians or parents to prepare material things needed. For those involved in small businesses, the money which they acquire from their business is not enough due to competing needs at household level that require money. As a result they had to wait until these items were in place before they initiate ANC. From the above testimonies, the study has found that, the major underlining factor of these financial constraints is the high level of poverty the study population is faced with.

Congestion at the clinic

> "P7: if you have not experienced any problem in your pregnancy why can you be always coming here where there is so much congestion and spends a lot of time."

> "P10: What I'm always concerned about is to come and book so that they give you a card but the issue of congestion at our clinic is very frustrating and this one of coming with the husbands is giving us problems"

> **R: The issue of congestion is coming again. How does it affect you?**

> "P10: The issue that usually comes in my mind is the day of booking. This is very tiring and frustrating at our clinic. You find that you need to start very early in the morning to be on the queue so that you are picked. If you reach there at 07:00hrs, you will find that the number which nurses attend per day is already over and then you go back to think of coming the following day. The following day you may try to be early, sometimes you may also not be picked because you are not alone…… This is usually frustrating."

> **[A 26 year mother of 2, married, grade 12, unemployed, Old Kanyama (FGD1)]**

> "P8: This issue of congestion is really there. We pregnant mothers are many as others have already said. But also, I think even our clinic has become small."

> **[A mother of 4, 28 years, married grade 9, marketer, stays in Kalundu (FGD1)]**
> "P10. I started last month and I came alone twice but I was not picked. The first visit I was late. The second visit I came early but I came alone and so I was told to come with my husband. So I had to wait until my husband found time, that is when we have come together today.

> **[A 26 year mother of 2, married, grade 12, unemployed, Old Kanyama (FGD1)]**

From the narratives above it is evident that, congestion is a big challenge to many expectant women both prime gravid and those of higher birth order. Congestion affected

these expectant mothers differently as it can be understood from their testimonies. Some women may have initiated ANC at the right time but they could not register on the day of their first attempt (visit) due different reasons ranging from inadequate number of women attended to by midwives per day. As a result some women are sent back and this led to the postponement of booking dates. This has implication and is could be mean that, there could be inadequate number of qualified personnel such as midwives at the health facility. The ratio of expectant mothers that demand the services could be higher than the workforce or possibly the physical structure and equipment to use may be inadequate. On account of this; women were forced to start as early as 05 hours just to be early enough for them to be picked so that they could register. On the other hand, some women, especially of higher birth order with previous exposure were affected by the same congestion differently. Because of their experience of previous exposure, they make decisions of delaying to initiate antenatal care or just deciding to have only few visits for antenatal. Andersen health seeking model argues that, individuals do evaluate situations to their advantages. Evaluated needs which are part of Andersen model represent professional judgment regarding the need to use any service. If there are impediments being encountered, this will make individuals make decisions some of which could be detrimental to their health. If resources are plentifully as indicated by (Andersen & Newman, 1973) and can be used without queuing up, they may be used frequently. In this situation, congestion that were experienced by expectant mother could be as a result of inadequate community resources (inadequate health facilities and/or qualified health care providers) as indicated by the model.

Demand by HCP for pregnant mothers to come with partners for ANC (couple counseling)

Several sentiments emerged regarding the issue of going with partners for ANC in order to be tested together. Some expectant mother expressed that, if they come without their partners they were not attended to and forced to postpone the day of booking. This usually forces some women to wait until their husbands find time. Some expressed that their husbands were afraid to escort their wives for ANC. Some women expressed the idea as being inconveniencing, frustrating and brings problems in marriages. Most expectant mothers said their men were too committed with work, being bread winners

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while others felt men were just difficulty and regarded ANC as an activity for women. There were however, those who felt it was a good idea for them to go with their partner as this was for their own benefits. The following are the testimonies.

"P10: this issue of coming with partner sometimes is very inconveniencing. You find that, when you come for antenatal, they don't attend to you and tell you to come with your husband. Then you go back until your husband finds time, it is when you will come again."

[A mother of 2, married, grade 12, unemployed, staying in John Laing (FGD2)]

"P1: On my side I find it very inconveniencing to both of you. To men, much as they would have liked to escort their wives for antenatal time to come here is very difficult considering the work they do.

[A mother of 2, married, grade 9, sale/groceries, stays Old Kanyama (FGD2]

"P10:...... is very frustrating and this one of coming with the husbands is giving us problems"

[A 26 year mother of 2, married, grade 12, unemployed, Old Kanyama (FGD1)]

"P9: Just to add on what they have said. Sometimes you find that, your husband is doing business and travels a lot and he is not found at home. If they demand for the husband it means you have to wait for him until he comes back from his business that is when he will escort you for antenatal."

[A 25 year mother of 2, married, grade 7, unemployed, stays in Kanyama site & service (FGD2)]

"P3: Some men also work under constructions, when they go, they take time to come back home. Like my husband when he goes he may take two to three months to come back home. At times he just sends money for food.

[A 24 year mother of 1, married, grade 12, small business, stays in John Laing (FGD2)]

"P7: As for me I feel they should not be forcing because it will be making some of us not to come for antenatal."

[A 17 year prime gravid, unmarried, staying with aunt in Kanyama site and Service (FGD1]

"P5: But some men can find time, the only problem with other men is that, they fear to come with the wife for testing of HIV because they know what they do outside their homes."

[A 37 year mother of 6, married, grade 7, marketer, stays in Old Kanyama (FGD2)]

"P11: Others are just not concerned with issues of antenatal because they think that this is the work of women."

[A 24 year mother of 1, unmarried, grade 9, selling, stays in John Laing (FGD2)]

P4: On the other hand some men can be there but for him to agree to escort you, it takes time. This is what made some of us to come for antenatal late. I don't know whether it is because we are not married.

[A 17 year prime gravid, unmarried, grade 9 Makeni Simson (FGD2)]

"P9: Others are marketers, you find that these people sometimes wake up early in the morning (04 to 05hrs) to go and buy things at the market. So the time you were supposed to come with him you find that he is busy. So it is better you just come alone."

[A mother of 2, married, grade 7, unemployed, stays in Kanyama site & service (FGD2)]

"P6: As for me, I feel this program of coming with husbands is for our own good and for the baby who is not yet born……….. So when you are counseled together, if one of you is found with a disease they will find ways of protecting you so that, the baby should not get the disease."

[A 24 year woman of 1, married, grade 12, unemployed, Old Kanyama (FGD1)

"P2: On the other hand it is good to come with your husband for counseling. But on the other hand, if you as a wife you have been found with the disease, there will be problems in your marriage. There are very few men who accept to stay with a woman who is HIV Positive."

"P2: No if they want to test me let them just do me and give treatment and the baby   will be okay if this is what they want."

R: So you feel they must just do HIV test on you only?

P2: Yes, to me, I feel they must find the best way to do this program of couple counseling not during antenatal

[A 17 years prime gravid, married, grade 9, unemployed staying at Makeni Villa (FGD1

From the narratives above, it is very evident that, the issue of going with partner for ANC to be tested together is still facing some resistance and there are challenges encountered by the study population especially with regard to initiation of antenatal care in time. There could be many issues that seem to surround this program even though it may have been implemented with good intentions and is seen by the health care providers as a very effective program towards eliminating the burden of HIV especially the prevention of mother to child transmission of HIV. Men being bread winners and majority of them being in unstable employment, they find themselves in situation whereby it makes them very difficult to relate well with the program. Besides that, some work in distant places from their homes while others are involved in different businesses that requires them to leave their home for long period of time and some are struggling

just to find a day's meal to feed the family. These could be reasons enough to create resistance over the program. Besides the social economic impediments and other gender issues mentioned by expectant mothers, the fact that, expectant mothers were supposed to initiate antenatal care in time, makes the situation difficult if health worker continue to demand pregnant mothers to go with partners for ANC. The other reason the study has found is that, there could be other issues that could be due to intra-household relations and such social cultural issues could reflect that, some spouses are not open enough to each other to an extent where they could agree on such matters.

Theme vii: Competing matters

Expectant mothers were asked as to whether there were other contending issues they faced as they decide to initiate ANC; the major issues that emerged were to do with their small businesses. Some women expressed that, they were too busy to stop their business and waste time on the queue instead of raising money. Others said, they would want to look clean as they come for antenatal. The following are what some pregnant mothers expressed:

"P5: There are also other commitments at home especially our small businesses that we do at home or and at the market. You cannot just leave these things because it is a source of income where you need to buy all what is required for the family as well as what is required during pregnancy and for the baby. So when you think of coming here to come and spend all the day here, you feel it is a loss and what will the family eat."

[P5: A 35 year woman with five children, staying in John Laing and ended in grade 7 (FGD1)]

"P3: There are things like clothes. You find you may want to start but you don't have proper clothes to wear for antenatal and money for transport and for buying food when you are here. So until you have prepared yourself it is when you may think of coming. So as such these small business that we do become very important than rushing for antenatal**"**

[P3: A 30 year woman of 4. Married, grade 9, staying in Kanyama Site and Service (FGD1)]

"P1: Even if you are pregnant, you still need to eat, your children need to eat, and money is required for many things. So at times you can't think of antenatal leaving businesses."

[**P1 A 28 year woman of 3 unmarried, grade 7, small business, stays at Garden House (FGD1)]**

> "P7: ……. You think of your small business and you think of congestion, then you will be always saying I will go tomorrow. When tomorrow comes you again postpone."

[A 30 year of 2, unmarried, widow, grade 9, business John Laing (FGD2)]

From the above testimonies, the researcher found that, businesses became more important than initiating ANC. All this was in an attempt to ensure that, preparation to buy nice dress or suitable material and money for immediate basic needs were found. This is also synonymous with the low social economic situation in which some expectant mothers found themselves in that could have been a major contributing factor and this resulted in mothers prioritizing what they felt was most important (small businesses) at the expense of ANC resulting in the delay to initiate ANC. The study has found out that the underlining factor that was constraining is poverty that seemed to be in most households of the study population and this might have contributed to the decisions some expectant mothers were taking to focus on immediate requirements for survival thereby limiting their capacity to see the need for early initiation of ANC.

Theme Viii: Views concerning health Care providers

When expectant mothers were asked to comment on the attitude of health care providers, almost all discussants expressed satisfactions with health workers 'attitude as they are being attended to. Some were sympathetic with overwhelmed work which HCP do. They felt that the workers had a lot of work to. There were however other sentiments that indicated a negative attitude of health care providers. The following are the testimonies.

> "P1: These people are working and on my own I don't have problem with the staff that help us. Yes, there can be one staff that can be harsh. '***kuzazukazazuka***' but that is not a big problem. Sometimes even us mothers we usually cause these people to be harsh. However, congestion is brought because us pregnant mothers are too many and may be those who are working are few. I say so because this is what I have observed"

[A 28 year woman of 4, unmarried, Grade7, Small business garden House (FGD 1)]

> "P8: The attitude of most staff is good. There may be differences in the way they talk to us but working they really work."

[A 30 year woman of 4, married, grade 9, unemployed stays Old Kanyama (FGD 2).]

(P10: Own my side what I have observed is that, there are lot thing to do and the nurses are few. But they usually try their level best".

[A 26 year of 2, married, grade 12, unemployed, John Laing (FGD 2)]

"P6: They are the same people who give vaccination to small babies…. So there is a lot of work they do."

[A 24 year of 1, married, grade 12, unemployed, stays in Garden House (FGD 2)

4.3 Core determinants of late initiation of ANC

The common determinant that has emerged in these two epistemological approaches used is the issue of low social economic position of the study population. The survey results have shown that, the low level of income of the respondents had a significant influence on the late initiation of expectant mothers in Kanyama Township. There was a statistically significant association between low level of income and late initiation of ANC. Phenomenological inquiry has also accounted for the same factor as has been evident in the testimonies of the discussants and content analysis by the researcher. From the FGDs, the financial constraint has emerged as one of the factors that has been acting as a deterrent in an effort to initiate ANC by the respondents in the study population. This suggests that the low social economic position of expectant mothers is a major determinant in this study population.

There were however, other factors that seemed to have had an influence on the late initiation of expectant mothers in the study population. These were motives and intentions of some expectant mothers which had an influence on their attitudes and behaviors. This was synonymous with low levels of knowledge of the respondents on the importance of initiating ANC early and the consequence of late initiation of ANC. The other factors have been found to be external to individual respondents and these are congestions and long waiting time experienced by respondents. The other factors were as a result of the intra household social cultural relation.

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5. DISCUSSION

This study focused on exploring the determinants of late initiation of ANC among expectant mothers in Kanyama Township and the following were the major findings of the study: low levels of income; p value 0.000 (95%CI-623, -197). The regression coefficient of the multiple regression analysis showed that, the rate of income of expectant mothers tended to reduce by 0.410 for every week that passed and this reduction in the population where the data came from was as low as -.623 to as high as -.197 with 0.95% probability, controlling for the number of pregnancy and lack of clothes. The variable; lack of proper clothing while adjusting for gravid, had an effect in that we could rule out chance findings given that the estimate was statically significant, p value .036 with probability 0.95% and confidence interval (-.016, -.471). These findings therefore were synonymous with low social economical status of the study population.

On the other hand, qualitative results revealed systemic barriers such as congestions and shortages of staff, competing matters such as demand by the health institution for expectant mothers to go with partners (spouses) for antenatal, traditional beliefs and misconception such as waiting until the pregnancy is advanced or when mother start feeling foetal movement in order to motivate the husband to prepare for material needs for antenatal care. The other Social cultural issue (misconception) revealed, was the idea of expectant mothers of not wanting to disclose the pregnancy when it was small for fear of losing the pregnancy. The other findings were to do with motives and intentions of expectant mothers for attending ANC. The motives were the attitudes of expectant mothers for attending ANC only when someone is sick or when she is experiencing a problem with the pregnancy; to make it easy for health Care providers (Midwives) to examine and to reduce the number of visits. The intentions were to attend ANC with aim of acquiring antenatal card in readiness for labour (delivery) and to assess how the baby was growing

The maternal age of the expectant mothers in the study ranged from 15 to 44 years and 24 as a median year. This is evident that most of the pregnant women were relatively young. In terms of level of education, majority of the expectant mothers 72.1% (771) had education ranging from primary and lower secondary (1-9th grade) and 4.6% (49), with no education. The rest 21.9% (234) had education from 10th grade to 12th grade and only 1.5% (16) had tertiary education. The study has found that majority of expectant mothers were lowly or of modest educational background which could not help them contribute meaningfully to the improvement of their wellbeing including decision making. Assessment of the household levels of incomes showed that, majority of the study population 55.5% (594) were in lower category where they could not meet all their basic needs or requirements. In terms of occupation, most mothers 73.9% (791) were not working. They were dependent on either their husbands or guardians. Those who were in income generative activities 26.1% (279) were in small businesses in which they were barely surviving or supplementing on the household incomes for family survival.

 The distribution pattern of initiation of expectant mothers started with the minimum of 17th week to a maximum of 32nd week with the mean gestation of 21.3 weeks at booking (which is around six month). This is far away from the gestation of less than 12 weeks recommended by World Health Organization (WHO, 2005).The peak week of initiation was at the 20th week (last week of the fifth month). These findings are consistent with findings from of the ZDHS (2007) and other studies which also found out that most women initiate ANC late (Ebeigde, 2005; Marisho, 2009, Ndidi et al; Chiwula, 2011).

 The low social economic position which is the main determinant of this study coincide with the findings of other studies conducted by (Joseph, 1989; Lee, et al 1995; Kupek et al., 2002; Low, et al., 2005) who found that low social economic status was associated with late initiation of antenatal care. Sohag et al., (2013) also found that, inadequate use of antenatal care was associated with low education and poor economic conditions where as Karin et al., (2012) states that, not possessing money in cash when attending ANC and not receiving support from husband/partner, were independently associated

with late ANC enrolment. Rundall and wheeler (1979), points out that, while a variable may have no obvious direct relationship to accessibility and utilization of health services, it may have indirect effects which are more important especially for income, age and education. This is echoed by Alexander & Kotelchuck (2001) who in assessing 'the role and effectiveness of prenatal care' stated that; some precursors are directly related to the biological process that lead to the problem while other are not as directly linked; instead they influence. In this study, it can be suggested that, even though, age and education have not been statistically significant, they have an influence on the low level of income; which is a major precursor in this study population as majority expectant mothers were relatively young and with low levels of education which could not impact positively in their lives. Nancy and Katherine (2001) also argue that the social economic status has been found to be the most causes of health disparities and inequality in education, income, and occupation exacerbates the gaps between the health "haves" and "have-nots". Social economic status according to (Link and Phelan, 1995) has traditionally been defined by education, income and occupation and each of these displays different relationship to various health outcomes. Education is perhaps the most basic component because not only does it shapes the future occupational opportunities and earning potential but also provides knowledge and life skills that allows better educated person to gain more ready access to information and to promote health (Ross and Wu, 1995). Joseph (1989) also stated that; delay in initiation of antenatal care is associated with education of fewer than 12 years. This; according to these learned scholars suggests that; education is the hallmark as it improves decision making and uplift the standard of living. In accordance with this observation, lower educated men and women were said to face higher rates of infectious diseases and chronic illness; have a poorer self-reported health and in general a shorter life expectancy (Ross and Wu, 1995).

When it comes to health-related behavior, risky activities are often connected with low levels of education. Culturally determined explanations show that, future planning possibilities are limited, health is less valued or there is a lack of health control sensitivity. Behaviorally determined assumptions imply that resources such as time, money, social skills and energy are crucial for a beneficial health behavior pattern and

that, these factors are less present among lower educated people (Blaxter, 1990). Income on the other hand, provides the means for purchasing the necessary pre-requisites required by expectant mothers (Ileen, 2003; Phafoli et al., 2007) and the survival of the entire family. The absence of this, therefore, has negative implications towards initiation of antenatal care. As Flondorter and Fliengenschnee (2010) point out; health as a good, tends to be ignored when patients (clients) are unhappy with their lives because of their financial situation and their personal relationships or their occupational status is distressing.

Willis and his colleagues referring to Andersen' model argue that, any condition which permits an individual or family to act on a value or satisfy the need regarding health service use, is defined as enabling (Will et al., 2008) and income in this case is one the enabling factor. Though occupation is said to be more complex but what is not disputed is the fact that, the employed have been proved to have better health than the unemployed (Ross and Mirovisky, 1995), which is the common feature of this study population where majority expectant are not working and depend on either their husband and guardians as they struggle to survive and decide to initiate ANC. Several studies have revealed that employment have an influence on the initiation of antenatal care (Ileen, 2003; Low et al., 2005). Women who are married to unemployed partner are significantly more likely to initiate antenatal care late. It is also generally believed that lower classes tend to underutilize health services because of the financial cost and/or culture of poverty which Rundall and Wheeler (1979) referred to it as; a phenomenon in which poverty over time influences the development of certain social and psychological traits among those trapped within it. In this vein, Lynch et al., (1997) states that, adult health behavior and psychological orientations are associated with social economic conditions throughout the life course and effort to reduce socio-economic conditions inequalities in health must recognize that, economic policy is public health policy.

Researchers have long been interested in what facilitates the use of health services, and what influences people to behave differently in relation to their health. There has been a plethora of studies addressing particular aspects of this debate, carried out in many different countries and according to Tipping and Segall, (1995), some studies

emphasize the 'end point' (Utilization of formal system or health seeking behaviour) and others emphasize on the process (illness response or health seeking behaviour) (Tipping and Segall, 1995). The findings of this study are inclined towards a variety of socio-economic and social cultural status of women and access to services. There are therefore, difficulties which women faced in Kanyama Township where majority are not working and rely on the male head of household to secure access financially and practically. These women are also faced with different roles such as child care or household duties just to mention but a few and at the same time need to spend a long waiting time at the health facility. Therefore, the knowledge of cultural, social and structural difficulties faced by women in a variety of context in relation to their health seeking behavior need not to be ignored (Bedri, 2001; Rahman, 2000).

"P5: There are also other commitments at home especially our small businesses that we do at home and/or at the market. You cannot just leave these things because it is a source of income where you need to buy all what is required for the family as well as what is required during pregnancy and for the baby. So when you think of coming here to come and spend all the day here, you feel it is a loss and what will the family eat."

[P5: A 35 year woman with five children, staying in John Laing and ended in grade 7 (FGD1)]

The statement above has a very big implication towards decision making and behaviors of the study population. Beside social and cultural impediments on women, there are also other enabling and constraining factors and Wallman and Baker (1996) provided a detailed list of 'elements of livelihood' that are likely to affect women's capacity to obtain treatment: actual money income, potential money income, social status, social life, networks, autonomy and liability. These; they argue, will come into play after a woman has assessed how well, kind, shameful, private, feasible and appropriate options are, within the physical infrastructure of that area. These are real issues embedded in people as they are in social relationships and economic obligations which constrain all the decisions they make and (Wallman and Baker, 1996b) emphasized the importance of these crucial steps towards understanding why and how people do what they do. Bedri (2001) in her study of women's health seeking behaviour around abnormal vaginal discharge highlighted the role of the husband and the availability of knowledgeable

social contacts as key factors in securing an early diagnosis and use of health care services. She suggests; women could be empowered by policy and health system developments that encourage the creation of 'expert social networks' and 'expert husbands' in order to ensure the necessary social infrastructure is in place to support women through their health care seeking process. Ahmed et al., (2000), also suggests that, efforts are needed to raise community awareness of the immediate and future benefits of improving women's health, and this also appeals more directly to existing social structures and an opportunity to strengthen them for beneficial health outcomes rather than a further attempt to change behavior of individuals.

Evans and Lambert (1997) adopt the word 'strategy' rather than 'behaviour', to reflect the complexity of the decision making processes that women face on a daily basis, weighing up social, economic, practical, cultural and personal factors, and not simply in response to one-off isolated illness events. These; they argue, suggest a purposeful action rather than an unreflecting, predetermined behavior which is salient across the study of health seeking behavior and against this, they suggested theorizing 'reflexive communities' to understand health seeking behavior in a more meaningful way. To that end, this study finds that, there is a lot of work on women in Kanyama Township and their health seeking behavior.

On the other hand, qualitative inquiry brought out other interesting dimensions of some expectant mothers towards initiation of antenatal care. The social cultural issues are; the traditional beliefs of not disclosing the pregnancy to neighbors until they see it when it is grown for fear of losing the pregnancy; the misconception of waiting until the pregnancy in advanced, when foeatal movement are appreciated with the view of making it easy for nurses to examine and for motivating the husband to prepare material and financial needs as they want to initiate ANC. The social cultural issues though may be different in many societies but are common. These findings, therefore, are consistent with other studies which also found traditional practices, beliefs and misconceptions as factors associated with late initiations (Chiwaula, 2011; Chapman, 2003; Low et al., 2005). These practices may seem to be of little significance but have got negative

implications because they are wrong attitudes that results in holding expectant mothers to initiate antenatal care early in Kanyama Township and could bring serious maternal complications and therefore, require program interventions. Some may reflect the low levels of knowledge about the importance of early ANC. Hearing this excerpt; '***when the pregnant is seen, no one doubts about it; even men don't give problems when you are looking for something like clothes'.*** This indicates how dependent a woman is on the husband or partner and determines the woman's position within the household and one would conclude there are many issues that take place in kanyama Township. Marie and Salway (2006) argue that, these gender inequalities constrain women's access to quality health care.

On the hand, there could be restrictions on women's movement because the pregnant state is considered "shameful," especially with regard to young women and their lack of say within the family and the fact that pregnancy-related knowledge and decision-making authority are commonly vested in older women and young women's lack of influence over material resources have a bearing on the timing of ANC. (Jeffery et al., 2006). The case in this study is of the daughter who upon knowing that she was pregnant, she started thinking of abortion; '***When I reached there it is where my aunt noticed that I was pregnant, the thing that came in my mind was fear and I was just looking for ways of terminating the pregnancy because of school'.*** Such situations may suggest why some teenagers usually think of abortions which may be detrimental to the health of the girl child. Further, Kasolo, et al., (2000) argues that, perceptions of men and women depict their agitation to deny their wives or for that matter, In-laws for seeking antenatal care.

The other findings centered on motives and intentions of expectant mothers for attending ANC. The motives emerged are the attitudes of attending ANC only when someone is sick or when she is experiencing a problem with the pregnancy and to make it easy for health Care providers (Midwives) to examine. The other motive was to reduce the number of visits. The intentions were to attend ANC with the aim of acquiring antenatal card in readiness for labour and to assess the viability of the baby. Some of these findings coincide with findings conducted by (Chiwaula, 2011). When they say;***"to***

come for antenatal to assess how the baby is growing", some just want to be palpated and feel the position and viability of the baby to impress their minds. *"Most of these activities that we usually find; there are not what us as mothers usually come for."* This statement may suggest that, some expectant mothers are not interested with some others activities such as HIV testing or promotive activities. Some women only go for ANC to acquire an antenatal card since the card was required when in labour. This suggests that, these women do not see the value of attending ANC early because they think pregnancy is safe and that's why they felt the reason for attending ANC early is when one is sick. Another reason one could suggest toward this kind of attitude is to regard antenatal care as curative instead of it being more of preventive and promotive. This may reflects the low levels of education about the importance of early ANC because education impart feelings of self-worth and self-confidence, which some have argued are more important in bringing about changes in health-related behavior than exposure to relevant information (Chanana, 1996). Schooling could increase women's receptivity to new health-related information (Lindenbaum, 1990). On the other hand, Flandorter and Fliengenschnee (2010) pointed out that, continuous information can raise the knowledge on health irrespective of an individual's attainment of education. In this case, it can therefore be suggested that the expectant mothers or indeed the community at large are not exposed enough to relevant information concerning the importance of early ANC. The attitudes of some expectant mothers on the other hand can be construed as due to household commitments or reactions towards the ever persistent congestions at the only health facility in the community and all these findings suggest the need for various program interventions.

Couple counseling for HIV during antenatal care was found to be a barrier that delays expectant mothers to initiate antenatal care early. The literature reviewed has not touched on this subject matter of going with partners for antenatal care so that they can be tested together. While the program has been introduced with good intentions is seen to be the solution by Health care providers to the zero rating of mother to child transmission of HIV, this study has found that, there are still areas that need more attention so that the program should not affect the very essence of antenatal care which include early initiation to tackle the most problems that require early interventions including PMCT in Kanyama Township. The observations of this study are that, apart

from commitments of husbands raised by many discussants, there could be problems to do with intra-household gender relations among expectant mothers. While other issues unrelated to gender relation may exert a critical influence on the demand and the ability to act or initiate antenatal care early, Marie and Sara, (2006) argue that, gender relations in any particular setting can affect the ability to act on a value. Therefore, as Mullany et al., (2005) points out; more communicative marital relationship could also increase a woman's influence thereby increasing in the uptake of the reproductive health services. This plausible argument is supported by the qualitative study conducted in Nepal that concluded that, women who discuss family planning with their husbands also communicate more about other matters, reflecting a more open, egalitarian relationship (Mullany et al., 2005b).

Congestion at the health facility has negative implication to both expectant mothers and even health care providers. Hoson et al., (1996) observed that, health personnel-to-population ratio is a chronic issue in Sub-Saharan Africa. They pointed out that, the health personnel-to-population ratio in Sub-Saharan Africa is reported to be 1:23,540, ranging from 1:750 in South Africa to 1:72,000 in Rwanda. For nurses, the Sub-Saharan African health personnel-to-population ratio is 1:3,460, ranging from 1:600 in Zambia to 1:5,470 in Tanzania (Hoson et al.,1996b). This could be synonymous with poor quality of service due to pressure being felt by the health care providers. To pregnant mothers, this can discourage them to initiate antenatal care early or even not coming to such congested health facility and consequently resulting in the increase in maternal morbidity and mortality. This may suggest why some expectant mothers normally have one or two visits during the whole duration of pregnancy. This may also suggest why many complications indicated in the statement of problem (such as hypertensions and haemorrhages disorders) could have arisen (HCAF, 2011). One study found that, even when women knew about their obstetric complications, many chose not to seek care because of the poor quality of care they expected to receive (Maine, 1997) and congestion in this case, (in Kanyama health facility), can lead to expectant mothers decide not to initiate ANC early.

This study was guide by Andersen Health seeking Model in order to systematically understand the phenomenon of late initiation with regard to expectant in Kanyama Township. This model is a conceptual explanatory model aimed at demonstrating the

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factors that lead to the use of health services. According to this model, usage of services is determined by three dynamics: Predisposing factors, enabling factors, and Need based factors. Under predisposing factors there are social cultural characteristics of individual that exist prior to a health event such as social structure, health belief and demographic characteristics. These are measured by characteristics such as education, occupation of the family head, age, sex, family size and ethnicity, social relations and social status. These indicate the location of the individual or family in society which could influence their life style and points to their social, physical, environmental and associated behavior pattern to the use of health services (Andersen & Newman., 1973). These attributes determine the behavior and lifestyle of an individual in a society. According Bernardi et al (2011), these **predisposing characteristics** are constraining because they determine appropriate behavior; pervasive because as a member of the society you are surrounded by the social structure that determines your life and eventually shapes ones behavior. The findings of this study therefore, relates well with Andersen model as the situation in which expectant mother in Kanyama Township find are constraining. Most of them are lowly in education to the extent that it cannot enable them with better opportunities and are still bound by social and cultural values that tend to have a negative effect towards their decision and social relationships. They are constrained as majority of them are unemployed and therefore, just depended on their husbands and guardians who are also struggling to earn a living. Most of their husbands jobs are precarious as we head from their testimonies. Their social relations and interaction are those that cannot improve their lives or enable them with better opportunities. The other component is the enabling factors such as personal, family, and community resources. Family resources are potentials that enable a family to access health services without problems such as good income, good social relations, knowledge and other opportunities.

Community resources such as infrastructure especially health facilities and human resources which are directly related to pregnant mothers are required to reduce congestions, long waiting time and improve the quality of health care. These are inadequate as expectant mothers have expressed through their testimonies. The fact

that mother struggle to just prepare what is required (clothes) for them to initiate antenatal care is evident enough to measure their standard of living in that, they don't have **enabling resources**. In the absence of these enabling resources; Andersen model views that, the community will continue to be constrained by the conditions in which they finds themselves and some of these problems may determine the decisions made by expectant mothers and consequently reveal themselves in their attitudes and behavior which include late initiation of antenatal care (Anderson & Newman 1973). Such conditions are supported by other researchers who found that, contextual determinants of late prenatal care includes living in distressed neighborhood, living in neighborhood, with higher rates of unemployment, single parents, medium family incomes, and low educated residents were associated with inadequate use of antenatal care or entering after 6 months (Feigen-de jong et al, 2011). The study findings, therefore, relates well with Andersen model as majority of expectant mothers and the community lack these enabling resources and therefore live stressful lives.

The last component according to Andersen is the Need factor that encompasses most immediate cause of health service use. These generate the need for health care services and are categorized under perceived and evaluated needs. Perceived is related to how people view their own general health and functional state as well as how they experience symptoms of health event, and worries about their health and whether or not they judge their problems to be of sufficient importance and magnitude to seek professional help (Andersen, 1995). Evaluated need represents professional judgment about health status and their need for health service (Andersen, 1995b). This component and health belief which is part of the predisposing factors determines the attitudes of expectant mothers towards their health and how they value ANC. They underline main factors for decision making such as perceived susceptibility /risk, and perceived efficacy. In this study there was low perceived risk. Some expectant mothers did not consider pregnancy as being at risk of developing complications that is why they felt that starting ANC when the pregnancy start to show at around 4th or 5th months was appropriate. There was also low perceived susceptibility to bad pregnancy outcomes, even among women who had the history of blood pressure in previous

pregnancy could not think of initiating ANC early. *'…..Some of us these days, the most important is just to come and book so that they give a card….'.* The condition she had was sufficient to make her realize the importance of initiating ANC early. Instead she decided to just target getting antenatal card only. This indicates the low ability to perceive and evaluate consequences or risks and benefits of efficacy of early ANC. As Andersen put it, we can say there was no professional judgment of the decisions some expectant mothers have been taking and eventually initiating at six months. The behavior exhibited by expectant mothers of selecting certain ANC activities they felt were to their advantage were not good professional judgments. The study findings, therefore, relate well with Andersen model.

Anderson also discusses four concepts within access that can be viewed through conceptual framework: Potential access is the presence of enabling resources, allowing the individual to seek care if needed. Realized access is the actual use of care, shown as the outcome of interest. Andersen also makes a distinction between equitable and inequitable access. Equitable is said to be driven by demographic characteristics and need based component, whereas inequitable access is a result of social structure, health belief and enabling resources (Anderson, 1993).

In relation to the above four concepts, this study found that, there was inadequate potential that could have enabled the expectant mothers to initiate antenatal care in time. There were inadequate resources at family or individual level in terms of time, knowledge, financial, and social relationship that could positively contribute to the proper decision making. There are also inadequate community resources that has been reflected in congestions and spending long time at the only health facility that provide booking of expectant mothers. There was however realized access of the need to come for ANC, though some mothers came with certain motives and intentions and also initiated ANC late. This is reflected by the fact that almost 90% or above expectant mothers have some antenatal care of (1 or 2 visits) (ZDHS, 2007). There is however, no equity in this study population and there is evidence of inequality in terms of the distribution of public goods and to that extent, the expectant mothers are disadvantaged.

Even though, Andersen model was specifically developed, to investigate the use of biomedical health care services, the model has been adopted in the study of antenatal care services by several researchers (Okutu, 2006; Trinh and George, 2006) to provide explanations of findings and mechanisms through which the independent variables which could either be in the three components (predisposing, enabling and need factors) predict and explain the dependent variable (late initiation or utilization of antenatal care services). This is with a realization that, though pregnancy is not an illness, its possibility of adverse outcome is treated as a symptom of higher need for health care service (Okutu, 2006). The three components under Andersen health seeking model has therefore, accounted well with the phenomenon of late initiation of expectant mothers in Kanyama Township. The predisposing characteristics that include social structure, health belief and the demographics were able to assist in determining background attributes related to the study population including social cultural issues, social relations, attitudes, values, the level of knowledge, demographic characteristics and social economic position of the study population. The other issues within social structures are all institutions existing in Kanyama that determines the rules, norms and values and lifestyles of the study population. One example of the lowest social structure is the family. To that extent, determinants related to social cultural and economic dimensions were able to be captured within that framework and these formed a base of assessing individuals and to determine their potentials in terms of material, knowledge, opportunities and their social relations which are reflected as enabling characteristics. It was also easy to assess issues related to adequacy of public infrastructure and availability of adequate qualified personnel which Andersen referred to as community resources. From there, the last component was about decision making of individuals in the way they perceived their health and the benefit of accessing health services from qualified health care providers. The decision expectant mothers were making, helped to determine their attitudes and behaviors towards early initiation of ANC and whether they considered their pregnancy states as a matter that required agent attention like any other illness. From that perspective, the model seems to have been comprehensive as it has wide dimensions that fit all the situations about the study findings. It does not just look at the behaviours of recipients alone but also at the predisposing factors and

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community resources of which, partly, are the root cause of the burden of the phenomenon of late initiation in Kanyama Township that is estimated at 90%. This reflects the inequitable distribution of resources by the government and later tends to constrain the expectant mothers in the community. The incorporation of Health belief in the model adds value to the analysis of the phenomenon of late initiation in Kanyama Township. The model also gives some direction in the way problems could be managed and which programs can be feasible in the short period and those that need time to tick off.

Andersen also introduced the concept of mutability of his factors. The idea here is that if a concept has a high degree of mutability (can be easily changed), perhaps policy would be justified in using its resources to do rather than a factor with low mutability. Characteristics that fall under demographics are said to be quite difficult to change, however, enabling resources is assigned a high degree of mutability as the individual, community, or national policy can take steps to alter the level of enabling resources for an individual. For example, if the government decides to expand the health programs in terms (health facilities and health workers) or improve conditions of service of workers and employment opportunities of the community, individuals may experience an increase in enabling resources, which in turn may lead to an increase in health services usage (Newhouse, 1993).

In winding up with the discussion, the researcher cannot end without acknowledging some biases (limitations) of the study. Like all studies, this study has its own peculiar biases. This study was non-comparable and non-experimental and as such, caution is warranted in the interpretation of the data because there is no other setting to compare with to assert causal factors. The data was based on residents of Kanyama Township only and from expectant mothers only and as such the results can only generalizable to expectant mothers in Kanyama. The participants attending antenatal clinic are not representative of all mothers in Zambia. The study was also biased towards expectant mothers who initiated antenatal care late and as such, this study has no evidence of what motivates the very few expectant mothers who initiate antenatal care early.

However, despite the limitations stated above, this study has the notable strengths and the following ought to be recognized. The significance of the study is that it is one of the first studies in an urban setting in Zambia that has tried to focus on the determinants of the late initiation of expectant mother in the study setting and therefore the research design could be used in other settings in Zambia.

This study has credible outcomes as compared to research outcomes from ZDHS which collect indirect data not from the expectant mothers and further gathers information from respondents on events that happened longer than a five year period. The study is also significant in the methodology it has adopted in that quantitative data interleafed with qualitative data has provided a holistic picture of events in Kanyama which either method would not have done. The rich descriptions of the phenomena, the multiple methods of data collection and triangulation helped provide important contribution to the knowledge base on determinants of late initiation in the study area. Therefore, the combination of these two approaches has enhanced the outcome of these findings. The use of maximum variation sampling in qualitative part of the study has assisted the study to draw upon multiplicity views of the study population thereby augmenting the study outcome. Another significance of the study is the development of themes, subthemes. These themes and subthemes could be used in the quantitative research to test the development of qualitative association.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

The study has explored the determinants associated with late initiation of ANC among women of Kanyama Township. The study has demonstrated that the determinants of late initiation are associated with low social economic position of the of households and the unemployment status of majority of expectant mothers to the extent that their levels of income are very low to meet family demands as majority depend on their husbands' incomes, guardians and on small businesses. The study has also demonstrated that, the low social economic position of majority expectant mothers is suggestive of the predisposing factors that are characteristic of the study population and these are constraining and pervasive. The predisposing factors include **social structure** indicated by education, occupation, family sizes and their social interactions**; health beliefs** indicated by the attitudes, values and knowledge and **demographics** such as age, parity and marital status and these shape their behaviors and eventually determine their life styles. These predisposing factors also determine their social and economic resources they posses in the society at individual, family and community level and the attitudes and values they exhibit towards health. On account of that, most expectant mothers have no adequate enabling factors needed to assist them initiate ANC early.

Phenomenological results has also shown that, the other factors associated with late initiation are the traditional belief and myth of not disclosing the pregnancy when it is still small for fear of losing the pregnancy, the misconception of waiting until the pregnancy in advanced and when foeatal movement are appreciated with the view of making it easy for nurses to examine and the motive of making the husband to prepare the material and financial needs as they want to initiate ANC. These are wrong beliefs and attitudes and as such, delay in initiating antenatal care could bring serious complications among pregnant women in Kanyama Township. These beliefs are synonymous with low levels of knowledge on the proper time for initiation of antenatal care or inability of pregnant women to decide when to start ANC**,** and the effects of initiating antenatal care late. The results has also demonstrated that, pregnant mothers

were being in the perception of low reference risk group as they were unable to perceive the risks accompanied with the pregnancy and the benefit of initiating antenatal care early. Their capacity to anticipate and evaluate risks of pregnancy and benefits of initiating ANC is low. The results have also shown that couple counseling or male involved in antenatal care was perceived to be a barrier for initiating antenatal care early due to conflicts in timing, male commitments and also social cultural and gender relations. The results has also shown that, congestions and long waiting time has a negative effect on the initiation of ANC early among pregnant mothers and unplanned pregnancies that has an effect on material and psychological preparedness.

These results reflect inadequate empowerment of pregnant women with key information about the right knowledge of modern ANC services especially the importance of early ANC. The beliefs and misconception also influence attitudes and the behaviors of pregnant women as a result; they were not able to recognize the risks to their health and benefits of initiating ANC early. These are wrong attitude could be removed through counseling and education. The results also reflect the inadequate empowerment of women in Kanyama Township in terms of income generative activities to reduce dependence on their husbands. The results also reveal that, there are social cultural issues that are still very evident and these have an effect in their decision making and practices and act as deterrent to smooth social relationship among households. These results also reflect the inadequate strategies that are aimed at reducing teenage or early pregnancies among young girls. The results also reflects existing gaps in terms of public goods (infrastructure development) such as adequate health facilities to reduce congestions including schools within the township which could facilitate empowerment of girl child.

6.2 Recommendations

From the above findings, the following are the recommendations:

(i)   The Lusaka District Health Office should come up with health promotion activities that should target the problems that has been found especially the lack of knowledge on the importance early initiation and the effects of late initiation on the health of the mothers and bad pregnancy outcomes and the existing traditional beliefs and misconception in Kanyama Township. The goal of these activities is to empower women with relevant information that will impact positively on their decision making towards early initiation of ANC.

(ii)   Effort must be made to establish key links in the continuum of ANC from the community to health facilities to offer tremendous opportunities to pregnant women and community to access ANC promotion interventions. In this continuum there is need to foster collaboration with community influential leaders such as civic authorities, church leaders, business men, lay counselors and other informants within the community. The goal is to ensure that the community gets involved in matter of reproductive health so that they become aware of the challenges pregnant women face and be part to the solution.

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(iii)   There is also need to create social structures in the community that should focus on the welfare of women so that they create opportunities where they can be regularly sharing information regarding reproductive health issues and problems encountered by expectant mothers and women in their reproductive affairs. These strategies are aimed at findings best ways of how to target health messages that is; from individual women, to family level and community at large. The goal is to possibly shift from individual view of health seeking to an understanding of how the family and community deal with health system and how individual draw on their community to address health problems in this case late initiation of antenatal care.

(iv)   There must be a deliberate monitoring and evaluation programs that should be conducted periodically to ensure that there are effective program interventions and behavior change among pregnant women and possibly their partners

(v)   Greater attention should also be directed to the ways in which intra-household decision making processes play out in the reproductive health issues so that women are given space to gain influence over familial spheres that directly affect their well-being especially regarding antenatal care and family planning. Information, communication and education between partners about the challenges women encounter about ANC and the importance of early ANC and completion of the recommended ANC visits may indicate greater involvement of male in matters that are traditionally regarded as belonging to the "female" realm.

(vi)   Greater attention should also be channeled to the empowerment of women in terms of income generative activities; individually, as well as in social networks. Social networks are important because, not only do they share business strategies but also information on reproductive health. The central government, local administration and civic leaders should assist in these ventures.

(vii)   There is also need to ensure that, strategies are put in place that will create enabling environment and encourage girl child to complete school so they become assertive and reduce the likelihood of them become pregnant at tender ages and create opportunities for a better future. This is one way to ensure that problems existing currently are reduced with time.

(viii)   Government should provide public goods (community resources) such as adequate health facilities, schools in prime locations and adequate qualified personnel in these institutions to facilitate the smooth running of these institutions. This will reduce inequalities existing within and outside the community thereby fostering equity distribution of recourses and enhance the standard of living of people in Kanyama Township. The goal is to provide the community with an enabling environment.

(ix)   There is need for multispectral approach and integration of programs to maximize the contact between women and health services as well as effective utilization of meager resources where there will be need to use financial and material recourses.

(x)   Finally, there is need to be orienting key informants and establish forum task forces where they can be sharing information to enable them participate fully in ANC programs because they have a greater role of advising, counseling and encouraging women to initiate ANC in time. Another reason is that it is easier for women to accept their opinions than from those considered as experts.

Bibliography

AbouZahr, C. and Warlaw, T. Maternal mortality at the end of the decade: what signs of progress? Bulletin of the World Health Organization 2001. Geneva: World Health Organization. 79(6).

Abrahams, N., Jewkes, R., Mvo, Z., (2001). Health care-seeking practices of pregnant women and the role of the midwife in Cape Town, South Africa. Journal of Midwifery & Women's Health 46: 240–7.

Ahmed, S.A., Chowdhury, M.A. and Bhuiya, A., (2000). Gender, socio-economic development and health-seeking behaviour in Bangladesh Social Science and Medicine 51(3). 361-371

Akukwe, C., (2000). Maternal and Child Health Services in the Twenty-First Century: Critical Issues, Challenges and Opportunities. Health Care for Women International, 21: 641–653.

Alderliesten, M. V., Van Der Wal, M. and Bonsel, G., (2007) Late start of antenatal care among ethnic minorities in a large cohort of pregnant women. BJOG; An International Journal of Obstetrics and Gynaecology, 114: 1232-1239. Academic Medical Centre. Amsterdam. Netherlands. Email Marianne@alderliesten.

Alexander, G.R., & Kotelchuck, M., (2001). Assessing the role and effectiveness of prenatal care: History Challenges and direction for future research. Public Health Report, 116:306-316.

Anisha, M.J., (2006). Maternal Health Care Access: An Exploration of the Socio-cultural and Environmental Factors Impacting Maternal Health Care Access among Rural Ugandan Women. Medical Research Council (MRC)/UVRI Uganda Research Unit on AIDS. Entebbe, Uganda.

Andersen, R. M. (1995) Revisiting the behavior model and access to medical care, Does it matter? Journal of Health Social Behavioral. 1995:36 (March): 1-10.

Andersen, R. M and Newman J. F. (1973).Societal and Individual determinants of medical care utilization in the United States. Milbank Memorial Fund quarterly Health and Society 1973 (I): 95 – 124.

Ashford, A., Hidden Suffering: Disabilities From Pregnancy and Childbirth in Less developed countries. United Nations Population Fund. From: www.unfpa.org/mother/disabilities.htm.

ATLANTIC DIP, (2010).The impact of obesity on pregnancy outcome in glucose-tolerant women. Diabetes Care. 2010 Marh;33 (3):577-9.

Babbie, E. (1995). The practice of social research (7th ed.). Belmont, CA: Wadsworth.

Baltes, P. B., Reese, H. W., & Nesselroade, J. R. (1988). Life-span developmental psychology: An introduction to research methods. Hillsdale, NJ: Erlbaum.

Basu, A.M., (1998). 'Girls' schooling, autonomy and fertility change: what do these words mean in South Asia?' in: Jeffery R and Basu AM, 1996. Girls' Schooling, Women's Autonomy and Fertility Change in South Asia, New Delhi: Sage Publications, pp. 48–71.

Bedri, N., (2001). Health seeking behavior for vaginal discharge: pathway, factors and processes and influencing early modern care use for abnormal vaginal discharge in Sudan. University of Manchester, UK.

Blaike, N., (2002). Designing Social Research. Blackwell publisher Inc. Commence Place, 350, Main street Malden, MA 02148, USA.

Blair, P., Bensley, D., and Smith, I., (1996). Smoking and the sudden infant death syndrome: results from 1993-5 case control study for confidential inquiry into still birth and deaths in infancy. British Medical Journal 313:195-198.

Bland, M., (2001). An introduction to Medical Statistics. 3rd Edition. Oxford: Oxford University Press.

Blaxter, M. (1990). Health and Lifestyle. Routledge: London.

Blondel, B., Pusch, D., Schmidt, E., (1985).Some characteristics of antenatal care in 13 European countries. British Journal of Obstetrics and Gynaecology, 1985; 92:565-568

CDC (Centre for Disease Control), (2007). Fetal alcohol spectrum disorders. Online; Available: htt/www.cdc. gov/ncbddd/fas/ fsacck.htm.

Chanana, K. Education attainment, status production and women's autonomy: a study of two generations of Punjabi women in New Delhi, in: Jeffery R and Basu AM, 1996; 36; p107–132.

Chapman, R.R., (2003). Endangering safe motherhood in Mozambique: prenatal care as pregnancy risk.Social Science and Medicine Vol. 57, pp.355-374.

Chandler, D., (2002). Late entry into prenatal care in a rural setting. In Journal of Midwifery and women Health. Vol. No. 1 January/February 2002

Chen, A., Feresu, S. A., Fernandez, C, Rogan WJ. (2009). Maternal obesity and the risk of infant death in the United States. Epidemiology. 2009 Jan;20(1):74-81.

Chiwaula, H.C. (2011). Factors associated with late initiation of antenatal care among women of Lilongwe. University of Malawi, College of Medicine.

Clausen, T.D., Mathiesen, E., Ekbom, P., Hellmuth, E., Mandrup-Poulsen, T., Damm P.(2005) Poor pregnancy outcome in women with type 2 diabetes. *Diabetes Care*. 2005 Feb; 28(2):323-8.

Conchran, W.G., (1963). Sampling Techiniques 2nd Ed., New York:John Wiley and Sons, Inc.

Cresswell, J. W., (2005). Education research: Planning, conducting and Evaluating quantitative and qualitative Research (2nd Ed.). Upper Saddle River, NJ: Pearson Education.

Cryole, R.T., (200). Theory at Glance: Application of Health behavior.US Department of Health behavior and Human service, National Institute of health. Available at www,the communityguide.org.

Daly, P. (2005). Mothers living with suicidal adolescents: A phenomenological study of their experiences. Journal of Psychosocial Nursing & Mental Health Services, 43(3), 22–28.

Dennis, L. I., Flynn B. C & Martin, J. B., 1995. Characteristics of Pregnant Women, Utilization, and Satisfaction with Prenatal Services in St. Petersburg, Russia. Public Health Nursing, 12(6): 374–377.

Deshpande, J.D., (2011). Maternal Risk Factors for birth weight Neonates: A Hospital Based case - control study in Rural area of Western Maharashtra, India. National Journal of Community Medicine. Vol 2 Issue 3 October- December 2011.

De Valts, H.W, Visser, G.H, (2004) Risk complications of Pregnancy in women with Type 1. Diabetes; Nationwide prospective study in Nehterland. British Medical Journal 2004 April 17; 328 (7445): 915.

Dey, I (1993). Qualitative data analysis: A user friendly guide for social scientists. New York: Routledge.

DH (Department of Health), 2007. Alcohol and Pregnancy. Online. Available: http:/ www.dh.gov.uk/en/News/DH_074968

Donalek, J. G. (2004). Demystifying nursing research: Phenomenology as a qualitative research method. Urologic Nursing, 24, 516–517.

Downe- Wamboldt, D., (1992). 'Content Analysis: Method, Applications and Issues' Health Care for women International, 13, 3.

Draper, P. (1997) Nursing perspective of Quality Life. London: Roultledge.

Dunne, F.P., Avalos, G., Durkan M., Mitchell Y, Gallacher T, Keenan M, Hogan M, Carmody, L.A, Gaffney G (2009). ATLANTIC DIP collaborators. ATLANTIC DIP: Pregnancy outcome for women with pre-gestational diabetes along the Irish Atlantic seaboard. Diabetes Care. 2009 July;32 (7):1205-6.

Ebeigbe, N.P., (2005). 'Antenatal care: a comparison of demographic and obstetric characteristics of early and late attendees in the Niger Delta, Nigeria' (Email: petedidi 2000@ ya hoo.co,) Department of Obstetrics and Gynaecology, college of Health science, Delta state Oghara, Delta state University Teaching Hospital, Nigeria.

El-Gilany, El- Wehady A. Antenatal care in Al-Hassa Saudi: A situation analysis. Middle East Journal of Family Medicine, February 2009; 7 Volume, Issue 2, pages 3-12.

Evans and Lambert, (1997) In Mackian, S., (2004) 'A review of health seeking behavior: problems and prospects.' School of Geography. University of Manichester. Department of International Development. DFID. Health Policy and Planning 2004; 19(3):137-146

Flandorter, P., and Fliengenschnee, K., (2010). Education and Health: Theoretical consideration based on Grounded Theory study. Vienna Yearbook of Population Research 2010;pp 237-261.

Floyed, R.L., Barbra, K.R., Gary, A.G., Patricia, D. M., & Susan, E. S. A Review of smoking in Pregnancy: effects on pregnancy outosomes and cessation efforts. Annual Review of Public Health. May, 1993;14: 379-411.

Fortney, J.A., & Smith, J.B., (1996) "The Base of the Iceberg: prevalence and perceptions of maternal morbidity in four developing countries". In The Maternal Morbidity Network. USA: Family Health International.

Geeta, N., Switlick, K., Lule, E.m., (2005). Accelerating Progress towards Achieving the MDG to Improve Maternal Health: A collection of promising approaches. Washington D.C: World Bank.

Gharoro, E.P., Igbafe, A.A., (2000). Antenatal care: some characteristics of the booking visit in a major teaching hospital in the developing world. Medical Science Monitor. May-June; 6(3):519-22.University of Benin Teaching Hospital, Benin City, Nigeria. ghrroro@uniben.edu.

Goldenberg, R.L., Patterson E, Freese M. (1992) Maternal demographic, situational and psychosocial factors and their relationship to enrollment in prenatal care: A review of the literature. Women Health.1992; 19:133–51.

Goodburn EA, A prospective study of maternal morbidity related to delivery and the puerperium in Bangladesh, unpublished dissertation, London School of Hygiene and

Tropical Medicine, London, 1997; and Mumtaz Z and Salway S, Gender, pregnancy and uptake of antenatal care services in Pakistan, Sociology of Health and Illness, 2006

Gortmaker, S.L., (1990). The effects of prenatal care Upon the Health of the Newborn. American Journal of Public Health. 69;653-660.

Green, J.M., (1994). Women's experiences of prenatal screening and diagnosis. In: Abramsky, L., Chapple, J, eds. Prenatal diagnosis: the human side. London: Chapman & Hall.

Greene, M., (1997). The lived world, literature and education. In D. Vandenberg (ed.), Phenomenology & education discourse (pp. 169-190). Johannesburg: Heinemann

Hall, K. S., (2011). 'The Health Belief Model Can Guide Modern Contraceptive Behavior Research and Practice'. In Journal of Midwifery and Women Health 2012; Vol. 57: 74-81.

Holloway, I., (1997). Basic concepts for qualitative research. Oxford: Blackwell Science.

Hagey, J., (2012). Factors affecting Timely initiation of antenatal care in Rwanda, Yale University 2012, 38:154.

HCAF (Health Centre Aggregate Forms), 2011. Kanyama Health Centre, Lusaka.

Heidegger, M., (1992). Being and Time. Oxford: Basil Blackwell. (Translated by J. Macquarrie and E Robinson).

Husserl, E., (1970). Logical Investigations, vol. 1 (J.N. Findlay, Trans.). New York, Humanities Press (Original work published 1900).

Husserl, E., (1973). The Idea of Phenomenology. The Hugue: Martinus Nijhoff.

Hsieh, H.-F., & Shannon, S.E., (2005). Three approaches to qualitative content analysis. Qualitative Health Research, 15(9), 1277-1288.

IIeen, K. (2003) Factors that influence late booking among teenagers attending the Victoria Jubilee hospital. University of West Indies, Jamaica.

Israel, G.D., (1992). Sampling the Evidence of Extension Program Impact.Program Evaluation and Organizational Development, IFAS, University of Florida.PEOD-5.October.

Jeffery, P., Jeffery, R., and Lyon, A., (1989). Labour Pains and Labour Power: Women and Childbearing in India, London and Atlantic Highlands, NJ, USA: Zed Books.

Jensen, D.M., Damm, P., Moelsted-Pedersen, L., Ovesen, P., Westergaard, J.G., Moeller, M., Beck-Nielsen, H., (2004). Outcomes in type 1 diabetic pregnancies: a nationwide, population-based study. Diabetes Care. 2004 Dec;27(12):2819-23. 1997

Johnson, H.C. & Renaud, E . Professional beliefs about parents of children with mental and emotional disabilities: a cross-discipline comparison. Journal of Emotional and Behavioral Disorders. 1997;5(3):149-161

Joseph, C.L. (1989). 'Identification of factors associated with Delayed antenatal care' Journal of National Medical Asoociation, 1989 January; 81(1) 57-63.

Kaliszer, M., & Kidd, M., (1981). Some factors affecting attendance at ante-natal clinics. Social Science and Medicine

Karin, G., Sandra, A., Tracy, R.G., Joanna A.S., and Brigit, O. Timining of antenatal care for adolescent and adult pregnant women in South-eastern Tanzania. British Medical council Pregnancy and Child Birth 2012, 12:16.

Kasolo J & Ampairwe C, (2000) Knowledge, Attitude and Practices of women and Men towards safe motherhood in rural setting and insecticide treated bed nets by pregnant women in Luweto District, Uganda: Malaria Journal, 7:44.

Kate, A.L., (2006). Study design III: Crossectional studies. Evidence based Dentistry. (7):24-26.

Khashu, M., Narayanan, M., Bhargava, S., Osiovich, H., (2009). Prenatal outcomes associated with preterm birth at 33 to 36 weeks' gestation: a population-based cohort study. Pediatrics. 2009 January;123 (1):109-13.

Khlat, M., & Ronsmans, C. (2009). Deaths Attributable to Childbearing in Matlab, Bangladesh: Indirect Causes of Maternal Mortality Questioned. American Journal Of Epidemiology, 151(3), 300-306.

Koblinsky, M.A., Campbel, O., and Harlow., 1993. Mother and more: A broader perspective on women's health. In M.A. Koblinsky, J.Timyan, and J. Gay (Eds), The health of the women: A global perspective. Boulder CO: Westview Press.

Koch, T. (1995). 'Interpretive approach in Nursing Research: The Influence of Husserl and Heidegger', Advanced Nursing, 21 (5); 827-836

Kondracki, N.L., Wellman, N.S. and Amunduson, D.R (2002).'Content analysis: Review of Methods and Their Applications in Nutrition Education', Nutrition Education Behaviour, 34, 4.

Kuppek, E., Petrou, S., Vause, S. Maresh, M. (2003). Clinical Provider and Socio-demographic predictors of late initiation of antenatal care in England and Wales. International journal of Obstetric & Gynaecology. Vol.109 Issue 3 pp. 265-273.

Kruger, D. (1988). An introduction to phenomenological psychology (2nd ed.). Cape Town, South Africa: Juta.

Kyei, N.N., Collins, C. and Sabine, G. (2012). Quality of antenatal care in Zambia: A National assessment. University of Heidelberg. Institute of Public Health. In Neuenheimer Feld 324 Heilbeergy. British Medical Journal; Pregnancy and Child Birth 2012,12:151.

Laurel A. S., (2007) Introduction to Reproductive Health & Safe Motherhood. Global Health Education Consortium. Dartmouth Medical School.

Lee, S.H. & Grubbs, L.M. (1995). Pregnant Teenagers' Reasons for Seeking or Delaying Prenatal Care. Clinical Nursing Research, 4(1): 38–49. 5

Lester S., (1999). 'An Introduction to phenomenological research' Taunton Uk, Starn Lester Development.

Li, C.Q., Windsor, R.A., Perkins, L., Goldenberg, R.L., Lowe, J.B. The impact on Infant birth weigh and gestational age of cotinine-validated smoking reduction during pregnancy. JAMA. 1993;269-1519-1524.

Lincetto, O., Mathebesoane-Anoh, S., Gomez, P., & Munjanja S, 2006. Antenatal care: Opportunity for Africa's Newborn; Practical data, policy and programmatic Support for new born care in Africa, the partinership for maternal, Newborn and Child Health (PMNCH)

Lincoln, Y.S. Guba, E.G. (1985). Naturalistic Inquiry. Newbury Park, CA: Sage Publication.

Lindenbaum, S. (1990). The education of women and the mortality of children in Bangladesh, in: Alan C et al., eds., Disease in Populations in Transition: Anthropological and Epidemiological Perspectives, New York: Bergin and Garvey.

Link, B.G. and Phelan, J. 'Social conditions as fundamental causes of the diseases' Journal health and social behavior. Spectacle No. 1995: 80-94.

Liu, Y., Liu, J.,Ye, R and Li, Z. Association of pre-conceptional health care utilization and early initiation of prenatal care. Journal of Perinatology May 2006;26, 409–413.

Lofland, J., & Lofland, L. H. (1999). Data logging in observation: Fieldnotes. In A. Bryman & R. G. Burgess (Eds.), Qualitative research (Vol. 3). London: Sage.

Lori, A., (2002). *Hidden* Suffering: Disabilities from Pregnancy and Childbirth in Less Developed Countries. Washington, DC: Population Reference Bureau.

Low, P., Janis, P., Trecia, W., Sarnia C., Maynard, W., Teuila, P (2005).Factors affecting antenatal care attendance by mothers of Pacific infants living in New Zealand. Journal of the New Zealand Medical Association, 03-June-2005, Vol. 118 No1216

Lynch, J.W., Kaplan G.A and Salonen T.J. 'Why do poor people behave Poorly? Variation in adulty health Behaviours and Psychological characteristics by stages of socioeconomic life course. Social Science Medicine, Volume 44, Issue 6, March 1997, PP 809-819.

MacDonald, T., & Cobum A. (1988). Predictors of prenatal care utilization. Social Science and Medicine. 19; 27:167–72.

Macintosh, M.C., Fleming, K.M, Bailey, J.A., Doyle, P., Modder, J., Acolet, D., Golightly S, Miller, A. (2006). Perinatal mortality and congenital anomalies in babies of women with type 1 or type 2 diabetes in England, Wales, and Northern Ireland: population based study. British Medical Journal. 2006 July 22;333

Magadi MA., Madise JN., and Rodrigues, R.N, (2002). Frequency and timing of antenatal care in Kenya: Explaining the variations between women of different communities. Social Science and Medicine. African Population and Health Research Centre., The Population Council (East and Southern Africa Regional Office) Nairobi, Kenya.

Magadi, M., Madise, N., Diamond, I. (2001) "Factors associated with unfavorable birth outcomes in Kenya". Journal of Biosocial Science, 2001;33(2):199-225.

Maine, Deborah. (1991) Safe Motherhood Programs: Options and Issues. New York: Center for Population and Family Health, School of Public Health, Columbia University.

Maine, D., Murat, Z.A., Victoria, M., Ward, A.K., (1997). The Design and Evaluation of Maternal Mortality Programs, New York: Center for Population and Family Health, School of Public Health, Columbia University.

Malik, S., Ghidiyal, R.G., Udani R, Waingankar, R. Maternal Biosocial factors affecting low birth weight. Indian Journal of Paediatrics 1994;33:1222-25

Marie, F. and Sara S (2006). 'Women's position within the Household as Determinant of Maternal Health Care use in Nepal. International Family Planning Perspetictives. Volume 32, No.1, March 2006.

Mathews, T.J., MacDorman, M.F. Infant mortality statistics from the 2006 period linked birth/infant death data set. National Vital Statistics Report. 2010 Apr 30;58 (17):1-31.

McDonald, R.W., (2003) Prevention of Mother-to-Child Transmission in Zambia: Antenatal practices and implementation challenges in Zambia: The Rwanda/Zambia HIV Research Group; IAS Conference on HIV Pathogenesis and Treatment. Zambia-UAB HIV Research Project (ZUHRP), 2003; 8 (Suppl.1): abstract no. 1063. Lusaka, Zambia

McIntire, D.D., Leveno, K.J. Neonatal mortality and morbidity rates in late preterm births compared with births at term. Obstet Gynecol. 2008 Jan;111(1):35-41.

Miller, W. L., & Crabtree, B. F. (1992). Primary care research: A multimethod typology and qualitative road map. In B. F. Crabtree & W. L. Miller (Eds.), Doing qualitative research. Research methods for primary care (Vol. 3). Newbury Park, CA: Sage.

Ministry of Health (2007). Integrated Technical Guidelines for Front line Health Workers. Ministry of Health, Lusaka, Zambia.

Misra, D.P and Guyer, B., (1998). Benefits and Limitations of Prenatal Care: From Counting Visits to Measuring Content. JAMA, 27(20): 1661–1662.

Mrisho, M., Obrist, B., Schellenberg, J.A, Haws, R.A., Mushi, A.K., Mshinda. H., Tanner, M., Schellenberg, D. The use of antenatal and postnatal care: perspectives and experiences of women and health care providers in rural southern Tanzania. BMC Pregnancy Childbirth 2009, 9:10.

Moss, W.J., and Halsey, N. A. The Effects of Maternal Malaria and HIV-1 Infection on the Effort to Eliminate Neonatal Tetanus. Editorial Commentary. Journal of Infectious Diseases 2007; 196: 502-504.

Moustakas, C. (1994). Phenomenological research methods. Thousand Oaks, CA: Sage.

Mouton, J. & Marais, H.C., (1990). Basic concepts in the methodology of the social sciences (Revised ed.). Pretoria, South Africa: Human Sciences Research Council.

Muela, S.H., Joan, M.R. and Isaac, N. (2003) Health Seeking Behaviour and Health system response. Swiss Tropical institute, Basel Switzerland.

Mullany, B.C., Hinde, M.J. and Becker, S., (2005). 'Can women's autonomy impede male involvement in pregnancy health in Kathmandu, Nepal? Social Science & Medicine, 2005, 61(9):1993–2006.

Nancy, E. A., and Katherine, N., (2001). 'Socioeconomic Disparities In Health: Pathways And Policies'. Departments of Psychiatry and Pediatrics at the University of California, San Francisco (UCSF).

Neuman, W.L., (2000). Social Research Methods: Qualitative and Quantitative Approaches (3rd edition). London: Allyn & Bacon.

Newhouse, J., (1993). Free for All Lessons from the RAND Health Insurance Experiment. Harvard University Press. ISBN 0-674-31846-3.

Nichols, F.H & Zwelling, E., (1997). Maternal-Newborn Nursing: Theory and Practice. W.B. Saunders. London.

Nielsen, B.B., Lijestrand, J., Thilsted, S., H. Joseph and Hedegard, M. (2001) Characteristics of antenatal care attendees in a rural population in Tamil, N South India: A community-based cross-sectional study. Perinatal Epidemiological Research Unit, Department of Gynecology and Obstetrics, University Hospital of Aarhus, N, Denmark.

NOFAS-UK (National Organization on fetal Alcohol Syndrome UK), 2007. Online Available: http//www.nofas-uk.org/index.asp.

Nohr, E.A., Vaeth, M, Bech, B.H, Henriksen, T.B., Cnattingius, S., Olsen, J. (2007). Maternal obesity and neonatal mortality according to subtypes of preterm birth. Obstetric Gynecology. 2007 November;110(5):1083-90.

O'Callaghan, M. F., Bororkowski J. G, Whitman TL, Maxwell S. E & Keogh D., (1999). A Model of Adolescent Parenting: The Role of Cognitive Readiness to Parent. Journal of Research on Adolescence, 9(2): 203–225

Oiler, C.J. (1982). 'The Phenomenological Approach in Nursing Research', Nursing Research, 31 (3): 178-181.

Okuku, D., (2006). Access to and utilization of antenatal care services in Uganda. Affiliation: Regional Institute of Population studies, University of Ghana. Legon, Ghana.

Owolabi. A.T., Fatusi, A.O., Kuti, O., Adeyemi, A., Faturoti, S.O., Obiajuwa, P.O., (2008). Maternal complications and perinatal outcomes in booked and unbooked Nigerian mothers. Singapore Medical Journal J 49(7): 526-531.

Parmar, V.R., Grover, N., Kaushik, R. Neonatal mortality rate: relationship to birth weight and gestational age. Indian J Pediatr. (1998) May-June;65 (3):429-33.

Patton, M. (1990). Qualitative evaluation and research methods. (pp. 169-186). Beverly Hills, CA: Sage.

Perloff J. D and Jaffee K D: Late entry in prenatal care: The neighborhood context. Social work. 1999, 44;116.

Persson, M., Norman, M., Hanson, U. Obstetric and perinatal outcomes in type 1 diabetic pregnancies: A large, population-based study. Diabetes Care. 2009 November ;32 (11):2005-9.

Petersen, D.J & Alexander G.R., (1992) Seasonal variation in adolescent conceptions, induced abortions, and late initiation of prenatal care. Public Health Report.1992 November- December;107(6):701–706. Reddy UM, Laughon SK.

Phafoli, S.H., Van Aswegen, E.J., Alberty, U.U (2007). 'Variables influencing delay in antenatal clinic attendance among teenagers in Lesotho.

Pine, C.M., Pitts, N.B., Nuget, Z.J. British Association for the study of Community Dentistry (BASCD) guidance on Sampling survey of child dental health. A based coordinated dental epidemiology programme quality standard. Common Dental Health. 1997;14 (supplementary 1): 510-517.

Raatikainen, K.H.N., Heinonen, S. 'Under-attending free antenatal care is associated with adverse pregnancy outcomes'. BMC Public Health Journal, 2007;7: 268: Doi: 10.1186/1471-2458-7-268.

Rahman, S.A (2000). Utilization of primary Health Care services in Rural Bangladesh: the population and provider perspective. London School of Hygiene and Tropical Medicine. University of London.

Reddy U.M., Langhon, S.k., Sun, L., Troendle J, Willinger M, Zhang J. Pregnancy risk factor for antepartum Stillbirth in the United States. Obstetric & Gynecology. 2010. November;116(5):1119-26.

Reis J., Millis-Thomas B., Robison D, Andersen V (1992). An inter-city community perspective on infant mortality and prenatal care. Department and Health and Safety studies, University of Illinois. Public health Nursing. December; 9(4):246-256

Ritzer, G., (1992). Sociological Theory, third edition, New York, McGraw-Hill, 1992.HM24 R4938.

Roquer, J.M., Fiquers J, Botet F, Jimenez R. Influence on fetal growth of exposure to tobacco smoking during pregnancy. Acta Paediatrica 1995 February; 84(2): 188-121.

Ross, C.E., and Wu, C. 'Links between and Health,' American Sociological Review. October 1995: 719-745.

Ross, C.E., and Mirovsky, "Does unemployed Affect Health' journal of health and Social Behaviour 36, no. 3(1995): 230-243.

Rundull, G.T., and Wheeler, J.R.C. (1979). 'The effect of income on use of Preventive care: An evaluation of alternative explanations' Journal of Health and Social Behaviour

Volume 20, No. 4, Health Professions; Socialization, Organozation, Utilization. (December,1979), PP:397-406

Salihu, H.M, Dunlop, A.L., Hedayatzadeh, M., Alio AP, Kirby, R.S., Alexander, G.R., Extreme obesity and risk of stillbirth among black and white gravidas. Obstetric & Gynecology. 2007 September;110(3):552-7.

Shapiro, M.C., Najman, J.M, Chang,A. Information control and the exercise of power in the obstetric encounter. Social Science Med1983; 17: 139-46

SNDP (2011-2015) Six National Development Plan: Executive Summary. GRZ; Ministry of Finance and National Planning. Lusaka, Zambia.

Sohag, A., Samina M., Munir B., and Muhammad A. Azeem. Factors affecting Utilization of Antenatal care: The opinion of Pregnant Women. Department of Community Medicine, Benazir Bhutto shaheed University. Pak J Physiology 2013; 9(1).

Stella, M., Yu, (2001). Prenatal Care Use Among Selected Asian American Groups American Journal of Public Health. 91(11) 1865-1868

Stevens, S.C., & McAnarney, E.R, (1994). Child Victimization: Relationship to Adolescent Pregnancy Outcome. Child Abuse and Neglect, 18(7): 569–575.

Stones, C. R., (1988). Research: Toward a phenomenological praxis. In D. Kruger (Ed.), An introduction to phenomenological psychology (2nd ed., pp. 141-156). Cape Town, South Africa: Juta.

Sun, L., Troendle, J, Willinger, M, Zhang, J.(2010). Prepregnancy risk factors for antepartum stillbirth in the United States. Obstetric Gynecology. 2010 Nov;116(5):1119-26.

Tann, C.J., Kizza M, Morison L, Mabey D, Muwanga M, GrossKurth H, Elliot AM, (2007). Use of antenatal service and delivery care in Entebbe, Uganda: a community survey. London: School of Hygiene and Tropical Medicine. London and Uganda Virus Research institute (UVRI), Entebbe, Uganda. MBC Pregnancy Childbirth. 2007 October;7:23.

Trinh, T.T.L and George, R., (2006). Late entry to antenatal care in New South Wales. Centre for Health Services Research, University of Sydney and Western Sydney Area Health Services, Administration Block, Westmead Hospital, Westmead, NSW 2145, Australia

Villar, J. and Bergsjo P. Scientific bases for the content of routine antenatal care: In Philosophy, recent studies and power to eliminate or alleviate adverse maternal outcome. Acta Obstetric & Gynaecology 1997,76(1):1-14.

United Nations Children's Fund and World Health Organization (2004). Low birth weight. Country, Regional and Global Estimates. New York: United Nations Children's Fund.

UNICEF/Zambia. FACT SHEET: UNICEF''s Maternal, Newborn and Child Health Programs 2011-2015. From. www.unicef.org/Zambia/5109_8457.html.

Walker, D., and Florence M. Grounded theory: an Exploration of Process and Procedure. Qualitative Health Research. 2006,16:547

Weber, M (1978). Economy and Society: An Outline of interpretive Sociology. (2 Volumes). Edited by Guenther Roth and Claus Wittich. Berkeley: University of California Press.

Welman, J. C., & Kruger, S. J. (1999). Research methodology for the business and administrative sciences. Johannesburg, South Africa: International Thompson.

WHO, UNICEF, UNFPA and world estimates (2012). Trends in Maternal Moratlity: 1990 to 2010. Department of Reproductive Health Research. World Health Organization. From: www.who.int/reproductivehealth.

WHO (2013). Trends in maternal Mortality: estimates by WHO, INICEF, UNFPA and WB. 1990 to 2013. Department of Reproductive Health Research. World Health Organization.

Wilcox, A.J, Skjaerven, R. Birth weight and perinatal mortality: the effect of gestational age. Am Journal of Public Health. 1992 March;82(3):378-82.

Willis, R., Karen, G., Debora, P (2008) Applying the Andersen Behavioual Model to informal support among ethnic minority. Institute of Gerontology, King's college. London In advantageous Inequality or disadvantageous equality. Ethnicity and family support among older people in Britain.

Woods-perez R.C., (1990). Barrier to the use of perinatal care: critical analysis of the literature 1966-1987. Journal Perintal 1990;10(4):420-434.

Wolinsky, F.D. and John, R.J. (1991).The use of health older adults. J gerantol 46 (6): 5345- 345 – 57. PMD 140101.

World Health Organization. Focused antenatal care: A better, cheaper, faster and evidence based approach, 2005. From; www.manguel.org.tectbriefs.tbzantenatal.pdf

World Health Organization (2006). Neonatal and Perinatal Mortality. Country, Regional and Global Estimates. Geneva: World Health Organization, 2006.

World Health Organization., (2005). What is the effectiveness of antenatal care? (Supplement). Geneva: World Health Organization.

World Health Organization., (1994). Mother-Baby Package: Implementing safe motherhood in countries. Geneva: World Health Organization.

Young, C., MacMahon, J., Bowman, V. (1990) Psychosocial concerns of women who delay prenatal care. Families in Society: The Journal of Contemporary Human Services. PP:408 –14.

Yousif, E M, Abdul Hafeez, A.R. The effect of antenatal care on the probability of neonatal survival at birth, Wad Medani Teaching Hospital Sudan. Sudanese Journal of Public Health 2006; 1(4):293-297.

ZDHS, (2007) Zambia demographic health Survey. CSO, Lusaka, Zambia

Zeitlin, J., El Ayoubi M, Jarreau PH, Draper, E.S., Blondel, B, Künzel W, Cuttini M, Kaminski M, Gortner L, Van Reempts P, Kollée L, Papiernik E; MOSAIC Research Group. Impact of fetal growth restriction on mortality and morbidity in a very preterm birth cohort. J Pediatric. 2010 November;157(5):733-9. Reproductive Health Part 1:

Appendix I – Survey Questionnaire

QUESTIONNAIRES No………………PARTICIPANT No……………………

Dear Respondent;

You have been selected by chance with other people to help us know what may relate to you and starting Antenatal Care. Please read /listen to each item carefully and decide to what extent it is characteristic of you. Give each item a rating that applies to you by using a scale that is given for each question. Please remember to respond to all items. There is indeed no right or wrong answers. Your answers will be kept by me in the envelope that I have given you in the strictest confidence for only six months which time I shall have examined all the responses. There after I shall destroy them. There will be no identification mark that relates to you on the questionnaire. I am sure that you will be open in responding to these statements

SECTION A   BACKGROUND INFPORMATION

1. Age------------------------   2. Age Range: Fifteen to twenty five-------- Twenty Six to Thirty five………Thirty six to Forty five ……….and over Forty Six……..................

3. What tribe are you? (Tick) (Nyanja, Tonga, Lozi, Luvale, Bemba, Lamba, Soli, Others)

4. Area of residence (Tick) Kanyama Site & Service, Old Kanyama, Makeni, John Laing, Garden Hous

5   Are you doing something to earn a living? Yes----------------No ---------------

6. Depending on your answer, please select what applies to you?

Catergory	Tick only one
Student College or University	
Student Secondary or Primary School	
professional	
clerical jobs	
Business	
Small business	
House wife	
Others (not working, schooling/married	

7.How far have you gone in school?

Level of Education	Never	Primary	Lower Secondary	Upper secondary	College /University
Indicate years of highest level					

8. What is your marital status?

Marital Status	Tick only one
Single	
Married to one	
In bigamous marriage	
Divorced and single	
Widowed and single	
Cohabiting	

9. How do you rate your monthly earning as a family?

	Tick only one
Low: Is not enough to meet all our basic needs or requirements	
Medium: Just enough to meet our basic our needs or requirements	
High: Enough to meet all our basic needs or requirements	

SECTION B- PREGNANCY FACTORS

10. You got this pregnancy (a) Outside marriage -------- (b) In marriage------------

11. From whom did you get this pregnancy?

Person with first sex	Tick only one
A boy friend	
Just someone I know	
My husband	
A male relative (e.g. cousin)	
Some man know raped me	
Some man I do not know raped me	
Others (specify)	

12. What number is this pregnancy? --

13. When did you notice that you were pregnant?

Time you notice that you were pregnant	Tick only one
Three weeks of missing a period	
Four weeks of missing a period	
Five weeks of missing a period	
Six weeks of missing a period	
Seven weeks of missing a period	
Eight weeks of missing a period	
Ten week of missing a period	

14. When was your first antenatal visit in this pregnancy?_____

First antenatal visit in this pregnancy	Tick only one
1 month of the pregnancy	
Two months of the pregnancy	
Three months of the pregnancy	
Four months of the pregnancy	
Five months of the pregnancy	
Six months of the pregnancy	
Seven months of the pregnancy	
Eight months of the pregnancy	
Nine months of the pregnancy	

15. Difference in weeks from time of noticing the pregnancy and antenatal attendance--

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There may be something that made you start your antenatal clinic at this time. Circle the factors that best describe your position.

16.Getting pregnancy outside marriage and was still feeling ashamed

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

17. Getting pregnancy outside marriage, parents were still negotiating for marriage

1	2	3		5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

18.Refusal of pregnancy by my partner and so I had a feeling of unhappiness.

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

19. I was planning an abortion and this took part of the time (intention to abort)

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

20.Our cultures that we have to wait until the pregnancy has advanced that is when we go for antenatal clinic.

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

21Our belief is that antenatal attendance does not produce good outcome

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

22. Where I come from, there are important things that we usually value first than antenatal clinic.

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

23. There was no social support from my parents and the father of the baby and that's why I started antenatal clinic late.

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

24. Where I come from, we rely very muchon extended family members and other members of the community in looking after the pregnant woman before antenatal clinic. (traditions)

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

25. I had difficulties in arranging who to look after other young children at home because I stay alone.

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

26.Long distance to antenatal clinic is what used to discourage me.

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

27. Nurses and doctors attitude is good, as they give the required care

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

28. The long waiting times at the clinic is a factor (congestion)

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

29. I had no better clothing to wear for antenatal care

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

30. Pre existing medical conditions made me to start ANC at this time.
 (e.g. HIV, Caesarean section and other pregnancy complications)

1	2	3	4	5	6	7	8	9	10	11
Unlikely				Somewhat likely			Very likely			

Appendix II – Interview Guide

Introductions

Probe for the demographics as shown on the questionnaire.

Theme I : Assess the knowledge of antenatal care of participants

What do understand by antenatal care/ what is antenatal care.

Theme II: Behaviors expectant mothers attach to antenatal care

Mothers may start antenatal at any time please share with me when you thought about Starting antenatal

care

What do you think could be the right time of initiating antenatal care?

Theme III: Describe the intentions of your attending antenatal clinic?

Theme IV: Describe the Motives for the chosen time

Theme V: Probing for competing matters

Could there have been some competing matters please describe them?

Variables to be probed

➢ Marital status
➢ social economic status
➢ Educational achievement
➢ Knowledge of conception
➢ Getting pregnancy outside marriage or in marriage
➢ Denial of pregnancy by a boyfriend
➢ Contemplation of abortion
➢ Culture
➢ Belief
➢ Values
➢ Attitudes
➢ Availability of social support
➢ Reliance on traditional herbs
➢ Difficulty in arranging for child care
➢ Distance to health Centre.
➢ Attitudes of service providers
➢ Waiting Time
➢ Medical related condition (any condition that may have an effect)

Appendix III –Information Sheet

TOPIC:
DETERMINANTS OF LATE INITIATION OF EXPECTATNTS MOTHERS OF KANAYAMA TOWNSHIP.

Introduction

I, Mukumbuta Donald, am a student of Masters of Science in Epidemiology from the University of Zambia, School of medicine. I am kindly requesting for your participation in the research mentioned above.

Purpose of the Study

I am doing a study that is looking at what makes expectant mothers not to start antenatal care earlier than expected. The findings of the study will assist to provide necessary information to the health providers in decision making in order to help improve the situation.

WHAT WILL BE DONE?

If you decide to take part in the project, two things may happen. You may answer a questionnaire and participate in a discussion with others mothers on this subject for 25 to 30 minutes. The interview will be recorded if you are willingly. In the questionnaire, you are free to answer what you may consider to be applicable to you and in the focus group discussion; you may express your opinion freely.

RISKS AND DISCOMFORT

There are no risks and discomfort involved in the project apart from use of your time in answering questions.   However you may feel some discomfort with some questions which is common. If that will be the case and you feel like stopping the interview, you could do so as I have said before.

VOLUNTARY PARTICIPATION

Your participation in the study is free as the decision to be part of the study is entirely up to you and you are free to decline to participate or withdraw from the study any time you

wish to do so. In case you do not desire to be part of the study, you may refuse at first instance and in case you decide and feel to stop, you may do so at any time. There are no risks and you will not be denied any services as a result of your decision. Mr. Mukumbuta is not a member of the health team that provides services in the antenatal clinic.

BENEFITS

There are no direct benefits immediately on account of this study. However, your taking part in this study will help the relevant authorities to formulate policies and strategies that will help improve the welfare of the society in reducing some of the problems being faced regarding antenatal care.

CONFIDENTIALITY

All information you will give, will not be disclosed to anyone. There will be no names or any identification marks. The consent form will be kept by me in safe place locked and a key kept by me for six months which period I will enable me to finish my analysis. After this period, all information will be destroyed.

COMPLAINTS AND CLARIFICATION

In the event that you have a complaint regarding this study, you may call ERES the ethics board on or you may write them on the following address

If any time you have concerns or you want clarification about the project, you are welcome and you may contact the following:

THE CHAIRPERSON
ERES CONVERGE IRB
33 JOSEPH MWILA ROAD
RHODE PARK
LUSAKA
Tel: 0955155633/4

In case you desire some clarification on the study, you may write to me

Mr. Mukumbuta Donald or my supervisors:

Lusaka District Health Offices

Kanyama First Level Hospital

P.O. BOX 50827

Lusaka, Zambia

Email: mukumbutadonald@yahoo.com

Cell phone number: +260977-851855

(i) DR Charles C. Michelo

University of Zambia

School of Medicine

Department of Public Health

P.O. BOX 50110, Lusaka

Ridgeway Campus

Cell: 0979-232403

(ii) Mr. Mwanza Jason

University of Zambia

School of Humanities & S/Sciences

Department of Sociology

P.O. Box 32379, Lusaka

Great East Campus

Cell No: 0977-945790

(iii) DR. Born well Sikateyo

University of Zambia

School of Medicine

Department of Public Health

P.O. Box 50110

Ridgeway Campus

Cell: 0979-960170

ZOFUNIKA KUMVETSA

MUTU

ZIMENE ZICITISA KUTI AZIMAI APAKATI AYAMBE KUPITA KUCIPIMO MOCEDWA MWANA ASANABADWE: AZIMAI AKUKOMBONI YA KANYAMA

MAU OYAMBA

Ine dzina langa ndine Donald Mukumbuta ndipo ndiri kuchita mapunziro yakuya yocedwa "Master of Science in Epidemiology" pasukulu lalikulu la University of Zambia.

LINGO LA COFUZILA

Ndiri ndi chidwi kuti ndimvetse bwino zifukwa zimene tionela kuti azimai ena akakhala ndi pakati safulumira kupita kuchipimo. Conco mayanko anu adzamanga fundo kwa opereka thandizo kucipatala ndi colinga copititsa patsogolo umoyo wabwino kwa azimai apakati.

ZOCITIKA ZIDSAKHALA ZOTANI?

Ngati mwalola kutengapo mbali pa nkhani iyi, pali zinthu ziwiri zomwe zidzacitika. Coyamba mudzayankha mafunso takonza papepala mokhulupirika ndipo m'mene mudziwira pa za inu. Cinanso mudzakambirana ndi azimai anzanu kwa mphindi zokwanira 25 kapena 30 cabe. Pofuna kuti tisakaiwale pazokamirana zanu, tidzayambula mau anu m'kawailesi, ngati mudzatilola.

ZOOPSEZA NDI ZODETSA NKHAWA

Palibe ciopsezo cirri conse kaya zimene mungade nazo nkhawa potithandiza kufufuza nkhani iyi. Tingokupemphani kutipatsa mpata ndi nthawi yanu kuti muyankhe mafunso. Komabe tizindikira kuti nkotheka kuti mwina simudzankhala womasuka kuyankha mafunso ena ndipo conco, muli ndi ufulu wosiya kutengapo mbali.

KUTENGAPO MBALI MODZIPEREKA

Kutengapo mbali pa zofufuza zathu ndi kodzipereka ndipo sitikakamiza aliyanse. Ndicifukwa cace mungabvomere kapena kukana poyamba ngakhale ngati mufuna kusiya nthawi iri yonse. Palibe cilango cirri conse cymene mudzalandira ngati simufuna kutengapo mbali ngakhalenso kuganiza kuti adzakupirikitsani kucipatala mukapita. Muzindikire kuti bamboo Donald Mukumbuta sagwira nchito kucipatala canu pothandiza azimai apkati.

PHINDU LAKE

Zabwini zakufufuza kwathu sizidzagziwika pamenepo koma kutsogolo. Koma ndziwani kuti mayankho anu ndi zones mudza fotokozerana ndi anzanu zodzathandiza kwambiri kwa akulu woyanganira zofunikira kucita pokonza njira zabwino pa zaumoyo wabwino pakati pa anthu. Motero tidzacepetsa mabvuto yokhuza azimai apakati.

CINSINSI

Tidza singa cinsinsi cacikulu pazokambirana zathu kotero palibe wina aliyense adzadziwa dzina lanu ndi zomwe mudzatiuza. Motero mapepala ndi zojambilidwa zanu zizakhomedwa mkabati langa kwa miyezi isani nidi umodzi (Six months). Panthawi iyi ndidzakhala ndikuwerenga ndikunvetsa bwino zones zimene munayankha. Ngikatsiriza kulemba bwino pazofufuza zanga, ndidzatentha mapepala ndi zomwe tinakujmbulani.

MAFUNSO NDI MADANDAULO

Ngati muli ndi funso kapena dandaulo ili yonse, mungatume lamya kwa a ERES pa nambala iyi: 0955 155633/4

Kapena mungate kulembera ku malo awa:

THE CHAIRPERSON

ERES CONVERGE IRB

33 JOSEPH MWILA ROAD

RHODE PARK

LUSAKA

Pofuna Kumvetsa zones bwino pokhuza nkhani mungathe kukambirana ndi anthu awa:

Mr. Mukumbuta Donald or my supervisors:

(i) DR Charles C. Michelo

Lusaka District Health Offices

University of Zambia

Kanyama First Level Hospital

School of Medicine

P.O. BOX 50827

Department of Public Health

Lusaka, Zambia

P.O. BOX 50110, Lusaka

Email: mukumbutadonald@yahoo.com

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(ii)   Mr Mwanza Jason

(iii) DR. Bornwell Sikateyo

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Department of Public Health

P.O Box 32379, Lusaka

P.O Box 50110

Great East Campus

Ridgeway Campus

Cell No: 0977-945790

Cell: 0979-960170

Appendix IV- Consent form to participate in the study

I have read and have been explained the purpose of this study and all questions I have, regarding this study have been explained and I have understood the purpose, the benefits and risks of the study. I further understand that, it I agree to take part in this study, I can withdraw at any time without to give any explanation and taking part in this study is my free will.

I……………………………………………………………………………….(Names)

Agree to take part in this study.

Signed/thumb…………………………..Date………………………………(Participant)

Signed……………………………………Date………………………...(Witness/guardian)

Signed…………………………………… Date……………………………….(Researcher)

Translated version of the consent form in Chewa (Nyanja)

CILOLEZO POFUNA KUTENGA MBALI YOFUFUZA

Ndawerenga ndipo andifotokozera colinga ca nkhani. Ndanvetsa bwino zones pazimene tifinika kucita. Ndiri kudziwa ubwino wace wankani iyi ndi zina zimene sindingathe kuzichita. Motero ndiri ndi ufulu wotengapo mbali ngakhalenso kulekeza nthawi iri yonse. Ndidzacita zonsezi mosakamizidwa ndi munthu alinse.

Ine………………………………………………………………………………(maina)

Ndivomera kutengapo mbali

Sign/cala…………………………………Date………………………………(Wotengapo mbali)

Sign…………………………………………Date…………………………………(Mboni/kholo)

Sign…………………………………………Date…………………………………(wofufuza)

APPENDIX V - THE LETTER OF AUTHORITY

The University of Zambia

School of Medicine
Department of Public Health
P.O. BOX 50110
LUSAKA
... JUNE, 2013

The District medical Office
Lusaka District Health Office
P.O. BOX 50827
LUSAKA

Dear Sir/Madam;

RE: REQUEST FOR PERMISSION TO CARRY OUT A RESEARCH STUDY

I am hereby requesting for permission to carry out a study in your District in Kanyama Township at Kanyama first level hospital. I am student undertaking Master of Science in Epidemiology at University of Zambia. I am required to conduct a research study in partial fulfilment of the award of the degree.

The purpose of the study is to determine factors that cause Expectant Mothers to initiate antenatal care late. During my study I shall be required to interview pregnant women especially those who start their antenatal care late as they come maternal and child clinic.

The findings will be communicated to you, in the hope that, the collected and analysis of information will be helpful in the district when planning for interventions in the area of maternal and child health.

I hope and trust my request will meet your favourable response. I thank you in anticipation.
Yours' faithfully;

Mukumbuta Donald

MSc Epidemiology Student

Budget Estimate

Research proposal & Completion of the Dissertation

S/No.	Description	Estimates
1	Research proposal writing/stationary/ Internet	K 2000
2	Research tools (Voice recorder)	K 2000
3	Stationary (Reams, Pens, Pencil Rubbers	K 1000
4	Transport	K 2000
5	Refreshments	K 1600
6	Training /Research Assistant (allowances)	K 2000
7	Data Entry and Data Analysis	K 2500
8	Report writing/ supervision (stationary)	K 1000
9	Posters (presentations/transports	K 500
10	Editing & Report writing	K 1000
11	Binding Dissertation (x4 copies)	K 1000
12	Manuscript	K 2000
13	Miscellaneous	K2000
	Total Budget Estimates	**K 20,600**

Appendix vii   Activity Timeline (2012-2014)

Months	Sep 2012	Oct	Nov	DEC	Jan 2013	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN 2014	FEB	MAR	APR	May	Jun
													Data collection and Data Entry									
Activiti es	Writing Research Proposal								Submitting to Research Ethics Committe e		Correction s and Amendme nts		Data collection & entry			Data entry and analysis			Analysis, report writing & possible submission of Dissertation		

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