Barriers to antenatal care in Rwanda

A literature study on barriers for pregnant women in Rwanda to access antenatal care

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ABSTRACT

Introduction: Antenatal care (ANC) can be seen as a key factor in predicting the outcome of childbirth and can help to detect early risk factors and begin treatment for pregnant women who suffers from complications during pregnancy. In many low-income countries, and especially in sub-Saharan Africa, numerous obstacles exist in order to allow women to attend ANC-clinics during pregnancy. **Aim:** The purpose of this paper was to identify barriers for pregnant women to attend ANC and analyse it in the Rwandan context. **Method:** A literature-based study design was used and the material consisted of quality-reviewed articles. In order to analyse the selected articles the results were categorized. **Results:** Five main categories were identified as barrier to ANC: Limited access to healthcare, lack of male involvement, lack in knowledge, cultural barriers and financial barriers. Four strategies for a better ANC coverage in Rwanda were also identified: Better access to ANC clinics, more education about the importance of ANC, increased male involvement during pregnancy and better insurance coverage. **Conclusion:** In order to create a better ANC coverage among pregnant women in Rwanda these barriers need to be overcome. In order to overcome these barriers, this study suggested four different strategies. By implementing these strategies into national policies and programs more women can have a better chance of attending ANC and giving birth at a health facility in Rwanda.

Keywords: Antenatal care, Rwanda, Maternal health, Maternal mortality

SAMMANFATTNING

Introduktion: Prenatal mödravård kan ses som en nyckelfaktor för att förutsäga utfallet av en förlossning och kan även hjälpa till att upptäcka tidiga riskfaktorer och påbörja behandling för gravida kvinnor som lider av komplikationer under graviditeten. I många låginkomstländer, och framför allt i Afrika söder om Sahara, existerar många hinder för kvinnor att få tillgång till prenatal mödravård under graviditeten. **Syfte:** Syftet med denna uppsats var att identifiera hinder för gravida kvinnor att få tillgång till prenatal mödravård och analysera det i en rwandisk kontext. **Metod:** En litteraturbaserad studie design användes för denna uppsats och materialet bestod av kvalitetsgranskadeartiklar. För att analysera de utvalda artiklarna tematiserades resultaten. **Resultat:** Fem olika teman identifierades som hinder för prenatal mödravård: Begränsad tillgång till hälso-och sjukvård, brist på manligt engagemang under graviditeten, brist på kunskap, kulturella barriärer och finansiella hinder. Fyra strategier för en bättre prenatal mödravårdstillgång i Rwanda identifierades även: Bättre tillgång till prenatala mödravårdskliniker, mer utbildning om vikten av prenatal mödravård, ökat manligt engagemang under graviditet och bättre försäkringsskydd. **Slutsats:** För att skapa en bättre tillgång till prenatal mödravårds bland gravida kvinnor i Rwanda måste dessa hinder övervinnas. För att övervinna dessa hinder, föreslår denna studie fyra olika strategier. Genom att införa dessa strategier till nationella strategier och program kan fler gravida kvinnor få en bättre tillgång till prenatal mödravård i Rwanda.

Nyckelord: Prenatal mödravård, Rwanda, Mödrahälsa, Mödradödlighet

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1. Introduction

Women in sub-Saharan Africa are at high risk of dying during pregnancy and childbirth. Worldwide, about 1000 women die everyday in causes related to pregnancy and childbirth. Ninety-nine percent of these deaths occur in low-income countries (UN, 2013). Most of these deaths can be prevented and the medical actions required are well known, but many sub-Saharan women can not get access to the medical care that is needed for a safe pregnancy and childbirth (Greene and Merrick, 2005). Regardless of the initiative of the Millennium Development Goal 5 (MDG 5) in 2000, to reduce maternal mortality worldwide with two thirds and achieve a universal access to reproductive health, the maternal health is still an urgent public health concern (Hagey et al., 2014).

The main medical causes of maternal mortality are eclampsia or convulsions, haemorrhage and prolonged obstructed labour. Complications arising during unsafe abortions also contribute to maternal deaths. Although some low-income countries have made progress towards MDG 5, the number of maternal deaths still remains high. Apart from the maternal mortality, many women who get medical complications during pregnancy and childbirth can endure life long disabilities. Pelvic pain, obstetric fistula, incontinence and anaemia are all disabilities that about 20 million women live with worldwide because of poor healthcare during pregnancy and childbirth. Among the key health service strategies to prevent maternal deaths are antenatal care, skilled professionals during delivery, post partum care, safe abortions and family planning. (White Ribbon Alliance, 2010).

UN urged all governments, in 2012, to accelerate the process of creating a universal health coverage (UHC). The principles of the UHC are to provide health equity and social justice for all members of the society, ensuring that all can access to healthcare services without jeopardizing their financial assets. The UHC can be challenging for all countries and the political commitment to distribute available resources for health in an efficient and equitable manner is required. A central factor for a country to meet the expectation of UHC is to have a functioning and effective health workforce. To cover the entire population and improve the quality of the healthcare requires a workable strategy for the political management of the health care services, that should be able to distribute health care of good quality for all in a sustainable way (Campbell et al., 2013).

Rwanda has implemented a model from World Health Organization (WHO) which recommend four antenatal visits for women during pregnancy (Hagey et al., 2014). Still, only 35,4 percent of the pregnant women visit an antenatal care-clinic four times during pregnancy, while 98 percent visit at least once. The maternal mortality rate (MMR) still remains high as 476 per 100.000 women die in causes related to pregnancy and childbirth (National institute of statistics of Rwanda, 2012). There have been improvements in the overall health status in Rwanda in recent years, but there is still a large percent of women that give birth unassisted at home or by unskilled birth attendants. This is observed both in rural and urban areas. Mothers and their infants have a greater chance of surviving if giving birth assisted by trained professionals and receiving immediate and professional care before, during and after the delivery. Rwanda still struggle to provide UCH for all pregnant women and the numbers of trained healthcare staff are insufficient. The small proportion of trained medical providers is a barrier for achieving UCH for all pregnant women. Rwanda has one medical doctor per 18,000 people and one nurse per 1,690 people (Hong et al., 2011).

2. Background

2.1 Antenatal care

When a woman is experiencing pregnancy, good care is important for the health of the woman and the development of the foetus. Pregnancy is also a crucial time to promote healthy behaviours and parenting skills. Women who attend antenatal care (ANC) during pregnancy increase their chances of using skilled attendants at birth and can link her and her family with the formal health system, which may have great benefits for the health of the entire family. WHO recognize that between 33-50 percent of all maternal deaths are due to causes related to inadequate care during pregnancy, such as pre-eclampsia, eclampsia and antepartum haemorrhage (Lincetto et al., 2006).

ANC can be seen as a key factor in predicting the outcome of childbirth and can help to detect early risk factors and begin treatment for pregnant women who suffers from complications during pregnancy. Women who do not attend ANC during pregnancy and childbirth run a greater risk of having complications during delivery (Hunt and Bueno de Mesquita, 2000). Many of the deaths that occur among mothers can be prevented through proven interventions. However, in many low-income countries, and especially in sub-Saharan Africa, numerous obstacles exist in order to allow women to attend ANC-clinics during pregnancy. The lack of good infrastructure, poverty, gender inequalities, cultural beliefs etc. can all be seen as barriers for women to attend ANC (Hagey et al., 2014). The lack of political will to invest in maternal health has also been identified as a barrier to improve maternal health in many low-income countries (Grépin and Klugman, 2013).

Education, counselling, screening, treatment and the promotion of the health of the mother and child are all interventions that can be made at an ANC clinic. The health status of the pregnant women are recommended to be tested through blood pressure weight gain, testing of urine for albumin and sugar, fundal height, position of the foetus, movements and heart rate. ANC is also an opportunity for the women to be tested for sexually transmitted infections, HIV, malaria, anaemia. It can also serve as an opportunity to educate pregnant women regarding birth preparation, complications readiness, family planning and treatment of poor health (Nyamtema et al., 2012).

WHO recommends at least four ANC visits, where the first visit should be as early as possible, preferably in the first trimester, to be able to detect possible health defects and give advise and counselling. The last visit is recommended to be around the 37th week of pregnancy to ensure that the pregnant woman has been provided the correct advice and information to prevent and manage problems that may occur during delivery. ANC can also be in use to separate the women who needs standard care from those who might need special attention and more visits (Lincetto et al., 2006).

2.1.1 Challenges for antenatal care

When trying to achieve universal access to ANC, many challenges may arise. Components of these overarching challenges includes; lack of qualified health workers, poor quality of medical service, lack of infrastructure, economic, social and cultural barriers. The low numbers of staff and lack of funding for maintenance in health clinics can also be a big challenge for ANC. National and sub-national health budgets tend to be too small and rely too much on donor funding. ANC at rural districts tend to suffer from this, as it can be hard to

attract and retain skilled staff when incentives are lacking. A shortage in supplies, drugs and basic equipment can also be a problem in providing quality of ANC (Lincetto et al., 2006). Women who are poor, lacking primary education and lives in rural areas are more likely not to seek ANC. User fees for ANC can also be seen as a barrier for women to attend ANC. There are also cultural barriers for women to attend ANC, as many women, families and communities may underestimate the need of ANC visits. One study made in Indonesia suggests that women tend to attend traditional birth attendants when they give birth as they believe it leads to a healthy delivery since it is common to do so. Pregnant women also tend to follow relatives' suggestions about pregnancy care, which leads to a low ANC coverage (Agus et al., 2012). Women may further lack knowledge about the warning signs during pregnancy, which will make them less likely to seek care when having complications. When health care providers at ANC clinics fail to respect the privacy, confidentiality, and traditional beliefs of the pregnant women, this will have a negative influence on women´s use of ANC (Lincetto et al., 2006).

In a cross-sectional study made in Nigeria by Aniebue and Aniebue (2011), only 20.3 percent of the participating women desired to follow WHOs´ recommendation of four ANC visits during pregnancy. The most common reasons for not wanting to attend ANC four times were convenience and cost considerations. One study made in Sudan showed that women are less likely to attend ANC if their husband was less educated. In the same study, low ANC coverage was associated with high parity (Ali et al., 2010). In a study from Ghana, 49 percent of the 643 participating women stated that cost and distance to a health clinic influenced their decision to attend ANC during pregnancy (Asundep et al., 2013)

2.2 Health in Rwanda

In 2011, Rwanda had 625 physicians, 8273 nurses and 240 midwifes available at four referral hospitals, 41 district hospitals and 442 health centres. Rwanda had a combined health-service provider density of 0.84 physicians, nurses, and midwives per 1000 population in 2011, which is below the WHO recommendation of 2,3 per 1000. The Ministry of Health (MOH) has set up a target for 2018, in order to be able to reach a higher number of trained health personnel. The goal is to have 1,182 physicians in 2018, compared to the 625 physicians in 2011, and 11,384 midwifes and nurses in 2018, compared to 8513 midwifes and nurses in 2011. In 2012, the MOH entered in a cooperation with the Clinton Health Access Initiative. The goal with this cooperation was to increase the numbers of trained health professionals in the country, through higher education. The Clinton Health Access Initiative convened an academic consortium from USA, including 16 academic medical centres, six schools of nursing, one school of public health, and two dental schools. The objective of this is to transfer knowledge and establish a new medical residency, nursing specialty, health management, and oral health programs in Rwanda. A goal is to train more than 500 physicians in specialized areas and upgrade around 5000 nurses from secondary-school level to three years of post-secondary school (Binagwaho et al., 2013).

Since 2006, a general health practitioner has been paid three times more than any other civil servant with a similar level of qualification. Nurses have been paid four times more than other professionals with similar qualifications. This increase in salary for qualified health workers has been a part of the Rwandan government strategies to improve the number of medical staff in the country. Salaries are also the same whether the personnel is working within the government, Non-Governmental Organisations (NGOs) or donors (UNICEF, 2012).

2.2.1 Maternal health in Rwanda

Rwanda has made good progress in terms of reducing the MMR since 2000. In 2010 Rwanda's MMR was reduced to 476 death per 100.000 live births compared to 1071 in 2000. The rate is still one of the highest in the world and many women still die of complications during pregnancy, childbirth and the postpartum period. Childbirth assisted by a trained professional rose from 26 percent in 2000 to 69 percent in 2010 (National institute of statistics of Rwanda, 2012).

Thirty-five percent of women who had a live birth in the five years preceding 2010 survey met the WHO recommendation of at least four ANC visits. This proportion was only 13 percent in 2005. Fifty-eight percent had two or three ANC visits. It should also be noted that 4 percent of mothers had only one ANC visit and that 2 percent had no visits, as compared with 13 percent and 5 percent, respectively, in 2005. 69 percent of women deliver at a health facility compared with 28 percent in 2005 (UNICEF, 2012).

2.3 The Health system in Rwanda

The health sector in Rwanda is led by the Ministry of Health, whose role is to support, coordinate, and regulate all interventions with the primary objective to improve the health of the population. Besides the Ministry of Health, 15 other government ministries implement activities that either directly or indirectly impact the health of the Rwandan people. The health sector is also supported by development partners, faith-based organizations, NGOs and professional associations (Ministry of Health Rwanda, 2012).

The health system is both financed by state funds and individuals' contributions through health insurance and direct fees. The largest health insurance program is the Community-based health insurance scheme. This comprise of a social health insurance program (Mutuelles de Santé). The annual fee is around 6 USD per family member with a service fee of 10 percent paid for each visit to a hospital or health centre. The Mutuelles de Sante is optional and the payment of premiums is based on economic status. Ninety-one percent of Rwanda's population was insured by Mutuelles de Sante in 2010. (Government of Rwanda, 2014). The Mutuelles de Sante covers primary care delivered at the health-centre level, secondary care delivered at the district level via district hospitals and by qualified medical doctors. Tertiary care delivered at the national level via a few specialized, national medical institutions are also covered by the Mutuelles de Sante (UNICEF, 2012).

The health system in Rwanda is decentralized and has multiple levels. It consists of 34 health posts, 442 health centres, 41 district hospitals and 4 national referral hospitals. The health posts is mainly for outreach activities, such as immunization, antenatal care and family planning. The health centres specialize in prevention, primary health care, inpatient and maternity. The district hospitals are for regular inpatient and outpatient care, while the national referral hospitals is for specialized in- and outpatient care. Despite the decentralized health system there still remain specific health programs that are initiated as nationwide programs and continue under a structure of national management (UNICEF, 2012).

2.4 Rwanda's policies and strategies

2.4.1 Vision 2020

In 2000 the government of Rwanda adopted the "Vision 2020", which is a long-term vision of different goals and objectives, to be achieved by the year 2020. The goals include aims such as Rwanda should be a middle-income country by then, have reduced the aid dependency and have decreased the percentage of people living in poverty by 50 percent. To reach these goals, seven strategies have been implemented which includes decreasing population growth, increase access to education and improving the health of the Rwandan people. Vision 2020 recognize the importance of the health and education status of the people to be able to ensure an efficient and productive workforce. To improve the health status of the population, Vision 2020 recognises the importance of reaching the poorest and seek to improve access and quality of health care. The health paragraph of the Vision 2020 includes the vision of reducing the MMR from 1070 in year 2000 to 200 in year 2020. Vision 2020 places emphasis on the reduction of the main causes of mortality and reduce the total fertility rate in Rwanda. Family planning has been singled out as crucial for reducing birth rates and maternal mortality (Ministry of Finance and Economic Planning, 2000).

2.4.2 The Third Health Sector Strategic Plan

As a continuation of two previous Health Sector Strategic Plans (HSSPs), the Ministry of Health in Rwanda conducted the third HSSP, stretching from the period of July 2012 to June 2018. The third HSSP has been inspired and guided by the Vision 2020. Just like the two former HSSPs, the third aims to define and implement strategies to increase the maternal health through effective interventions. After a situation analysis on the population´s health status conducted in late 2011, five overall priorities were made and included in the third HSSP. These priorities are: *Achieve MDG 1, 4,5 and 6 by 2015, Improve accessibility to health services, Improve quality of health provision, Reinforce institutional strengthening, Improve quantity and quality of human resources for health.* In order to reach these targets the third HSSP is also outlining the importance of strengthening the linkages between various elements that, combined together can help achieve the targets. *Various programs* that provide preventive, curative, and rehabilitative care needs to work together with the *support systems* needed to allow the programs to provide positive results. The *governance´s role* is to provide leadership and guidance on policy development, coordination, quality control, fundraising, and oversight and monitoring of implementation. Together, these three components determine the quantity and quality of *service delivery* provided at the levels of the community, the district health services, and the national referral hospitals. The overall objective of this strategy is to ensure universal accessibility of quality health services for all Rwandans (Ministry of Health Rwanda, 2012).

The third HSSP recognize two critical challenges in reducing maternal mortality. The first challenge is described as *Health system factors* and refers to inadequate health infrastructure, limited geographic access the healthcare, inadequate quality of the health services, shortage of skilled health providers, lack of sufficient equipment and limited health management capacities. The second challenge is described as *Non-health system factors* and refers to limited capacity of the community health workers, social and cultural beliefs and practices, gender inequality and limited health seeking behaviour (Ministry of Health Rwanda, 2012).

In response to these challenges the third HSSP identifies nine different priority areas and five

different strategies for reducing the maternal mortality. For the health system, the following priorities were implemented; 1) improve the provision of the emergency obstetric care, 2) ensure that obstetric fistula cases will be found for repair, 3) provide the MOH with effective information, human resources for sexual reproductive health, monitoring, and quality assessment, 4) to promote and sustain innovations toward maternal and neonatal mortality reductions, such as the provision of safe post-abortion care services. The non-health system priorities are; 1) to integrate gender considerations into all strategies and planned activities in maternal and newborn health, 2) strengthen participation and involvement of the family and community in defining their needs and expectations, 3) scaling up early postnatal services for mother and the newborn 4) increase the power of decision-making for women, couples, and young people to enable them to freely decide when to have a child, family size, and spacing between births, while reducing incidence of unwanted pregnancies, abortion, and risk of HIV/AIDS, 5) to increase male involvement in reproductive health–related decisions. The five strategies and interventions for reducing maternal mortality are; 1) to advocate for maternal and neonatal goals and promote, implement, scale up evidence- based decisions and allocate sufficient resources to achieve national and international targets 2) health system strengthening and support capacity development at all levels of the health sector and ensure quality service delivery to achieve high population coverage of maternal and neonatal interventions in an integrated manner 3) to improve community mobilization and participation that can generate demand for services and increase access to services in families within the community 4) implement promising interventions among government, professional associations, donors, NGOs, the private sector, and other stakeholders engaged in joint programming and co-funding of activities and technical reviews 5) information, education, and communication of reproductive health behaviour and create a male involvement in issues related to maternal health (Ministry of Health Rwanda, 2012).

The third HSSP set some targets related to the improvements of the maternal health. The following indicators are the targets for 2018. MMR to 220, the total fertility rate to 3,4, the percentages of birth attended in health facilities to 90 percent in 2018, the percentage of pregnant receiving four ANC visits to 65 percent (Ministry of Health Rwanda, 2012).

2.5 Theoretical framework

At a meeting of the International Society for Equity in Health in 2000, a definition of health equity was presented. The International Society for Equity in Health believes systematic differences in various aspects of health among different social groups within a country or between countries should not exist if health equality is in place (Starfield, 2002).

Equity in health has for decades been a stated goal for different health policies in many countries and among international health organizations. Equity in health also had a prominent role in parts of the Millennium Declaration in 2000, which gave rise to the Millennium Development Goals. The UN has also identified health equity as a marker for a country 's overall development. During the latter part of the 1900s there were major advances in global health, but still there remain a great inequality in health between more and less privileged groups and the equity of access to health care in many countries widened (Östlin et al., 2011).

Sen (2002) argues that health should be valued among the essential conditions for human life and as an essential element in human life. Human health, and to live a life without curable diseases, suffering and premature death is one of the most important components of an equitable social distribution. Diseases and suffering that remains untreated due to social causes rather than by personal choice is a major problem seen from a perspective of social

justice. It is important to emphasize the differences between having a good health and the ability to achieve good health.

The health and well-being of individuals are influenced by different factors that are both within and outside the individual´s control. Whitehead and Dahlgren (1991) present a model that describes the different levels that exist for individuals in order to influence their own health status. This model tries to map the relationship between the individual, the environment of the individual and disease. All individuals have some fixed attributes such as sex, age and constitutional factors. The model presents three layers of which can contribute to understand the individuals´ health status. The first layer is individual lifestyle factors are ways that the individual can promote a healthier behaviour by choice. The second layer is social and community influences, which either can promote support towards a healthier lifestyle or they can provide no support or have a negative influence on the individual´s health. The last layer includes structural factors such as access to services and provision of health facilities etc. All these layers play a combined part in the health status of an individual. For a person to achieve a good health status these different layers need to provide support for the individual.

3. Aim

The purpose of this paper is to identify barriers for pregnant women to attend ANC and analyse it in the Rwandan context.

Two questions at issue have been identified as useful in finding an answer to the aim of this study.

- What barriers exist for women to attend ANC?
- What strategies are suggested by research that the government of Rwanda could implement to create a better ANC coverage among pregnant women?

4. Method

4.1 Study design

A literature design has been used for answering the aim and draw conclusions from the articles used in this study. Friberg (2012) describes the literature study design as suitable when the aim is to treat material on a structured approach by systematically selecting scientific papers and reports and analyse them. As the aim of this paper is to study previous research on the topic and analyse it in the Rwandan context, a literature study design is considered appropriate.

4.2 Selection criteria

To determine whether articles were useful for the purpose of this study, a few limitations were made. As the aim is to analyse the situation of maternal health in the Rwandan context, preferably articles from Rwanda would be used. As there were not enough articles from Rwanda who treated the subject, I expanded the search to include the nearby countries (Tanzania, Uganda, and Burundi). When not enough articles were found with the inclusion of these countries Kenya was included. Only studies made after year 2000 were included as

many of the policies and strategies for improved maternal health were made after the implementation of the MDGs in 2000.

Only studies that met the following requirements were *included*;
- Published work
- Full text was available and accessible
- Study was done in Rwanda or neighbouring countries
- Focus on barriers to maternal health or ANC
- Articles from year 2000 or later
- Written in english

Studies were *excluded* when containing the following;
- Focusing on medical complications at ANC clinics.
- Focusing on post-natal care
- Review articles

4.3 Data collection

In order to better understand how the different articles were selected, I will now go through how the collection of articles were done. Three different databases were used for searching articles; PubMed, SUMMON and Scopus. When using SUMMON the search was limited only to articles from scientific publications. At first, articles were selected based on the title and then abstract. Twenty-three different studies were found at first. After this selection, the full articles were read to see if they were useful for the aim of this paper, as recommended by Forsberg and Wengström (2008). Fifteen articles were then selected as relevant for this study. Only articles that met the inclusion requirements were selected. The keywords chosen were based on choice of words of the topic used in the literature that the chapter 1 and chapter 2 of this paper were based upon. The main term was *barriers*, as the aim of this study is to identify different barriers to a better healthcare access for pregnant women. Different terms, such as, *antenatal care*, *maternal care* and *prenatal care* were used as these terms are used frequently in the literature I have read dealing with this topic. Primarily I searched for studies made in Rwanda, but as not enough articles were found I extended the search to include nearby countries, though no relevant study was found from Burundi. One study (Babalola, 2014) includes data from Kenya, Malawi and Nigeria, but only the data from Kenya were used in this paper. To clarify the search for articles, Chart 1. presents the systematic search for articles. Dates, keywords, database and number of selected articles are presented in the chart. The selected articles are also summarized in Appendix 1.

Chart 1. Summary of literature search

Date	Keywords	PubMed	SUMMON	Scopus	Number of selected articles
2014-04-09	"antenatal care" AND Rwanda	18	500	19	**1**
2014-04-09	barriers AND "antenatal care" AND Rwanda	3	243	2	**1**
2014-04-09	barriers AND "antenatal care" AND (Uganda OR Tanzania OR Kenya OR Burundi)	28	1258	27	**7**
2014-04-11	barriers AND "maternal care" AND Rwanda	0	52	6	**1**
2014-04-11	barriers AND "maternal care" AND (Uganda OR Tanzania OR Kenya OR Burundi)	3	291	66	**2**
2014-04-17	barriers AND "prenatal care" AND Rwanda	1	86	2	**1**
2014-04-17	barriers AND "prenatal care" AND (Uganda OR Tanzania OR Kenya OR Burundi)	18	564	39	**2**

4.4 Analysis method

In order to analyse the selected articles the results were categorized. In order to create a better overview of the articles, they were read through and summarized. I have chosen to follow the guidelines of Graneheim and Lundman (2004) to make a manifest content analysis of the selected articles. The manifest content analysis means that the studies were analysed based on how they were directly expressed in the text (Graneheim and Lundman, 2004). To get a better understanding of the overall content of the results in the studies I read through them several times. Key findings that were relevant for the purpose of this study where then identified and analysed. Various similarities and differences in the selected articles where also identified. This process led to the identification of five main categories. All these categories had in common that they all where barriers for a better maternal health. In the analysing process I have endeavoured to carefully study and understand the content of the articles without making assumptions based on my opinions as Friberg (2012) cite as an important aspect.

4.5 Quality review

The studies selected in this paper have been quality reviewed through review templates suggested by Willman et al. (2006). Two different templates were used, one for qualitative studies and one for quantitative studies. The selected studies of this paper were then given a score, depending on the answers given when doing the quality review. One point was given if the study included the criteria asked for in the template, and no points were given if the criteria was not included or could not be found in the article. One study (Pfeiffer and Mwaipopo, 2013) used both a qualitative and quantitative approach. This study went through both templates and the score were added from both and then divided by two to get a fair assessment of the quality. The templates were modified, as some questions were not relevant for this study. The score for each article can be found in Appendix 1. After a compilation of the scores the articles were valued based on their quality. Based on recommendations from Willman et al. (2006) I graded the score of high, medium and low, through a percentage breakdown to get a fair assessment of the quality. The qualitative studies had maximum score of 13, and the quantitative studies had a maximum score of 11. Studies with at least 80 percent of the maximum score were considered as high quality, studies between 70-79 percent were considered as medium quality and studies below 70 percent of the maximum score were considered as low quality. Eleven studies were considered high quality, three studies were considered medium quality and one were considered low quality.

4.6 Ethics

Ethical aspects were taken into consideration when examining the articles selected for this study. Gustafsson et al. (2005) have stated a few general ethical principles that have guided me in my research. To tell the truth about your research, to consciously examine and report on the starting points for my study, to disclose the methods and results, to be fair in my assessment of others' research and to disclose commercial interest are all considerations done in this study.

Eleven of the selected articles reviewed that the study was either approved by an ethical committee or conducted in accordance with ethical principles. Four of the 15 selected did not state if the study was approved by an ethical committee or if the study is conducted in accordance with ethical principles. These articles were included in this study as they were all published in journals that consider ethical issues. None of the used articles were selected or excluded based on gender, origin or ethnicity of the authors.

5. Results

The first section in this chapter will focus on the first question at issue: *What barriers exist for women to attend ANC?* The second question at issue: *What strategies are suggested in the research that the government of Rwanda implement to create a better ANC coverage among pregnant women in Rwanda?* will be presented afterwards.

5.1 Barriers to antenatal care

5.1.1 Limited access to healthcare

Seven of the selected articles presented various limitations to access as a barrier for women to attend ANC. Five studies (Anyait et al., 2012, Fotso et al., 2008, Joharifard et al., 2012, Kitui

et al., 2013, Kwambai et al., 2013) showed that women who need to travel a far distance or are in need of transportation are less likely to attend ANC or giving birth at a health facility. This was apparent mainly in the rural areas, but one study (Fotso et al., 2008) also showed that women who were low-income urban residents were not able to seek proper care in places other than their close neighbourhoods, unless they had experienced serious complications during pregnancy. Two studies made in rural districts (Kitui et al., 2013, Parkhurst and Ssengooba, 2009) cited lack of transportation as a barrier to health seeking behaviour among pregnant women. One study also stated that access to traditional birth attendants were easier to access and more local, as many health facilities were far away and roads, especially in the rainy season, are impassable (Kwambai et al., 2013). Another important factor why women abstained from ANC found in Tanzania by Mubyazi et al. (2010) were that time associated with travelling long distances to ANC clinics was a major factor of discouragement in ANC visits of pregnant women because it seriously affected their domestic responsibilities.

5.1.2 Lack of male involvement

Three studies (Anyait et al., 2012, Kwambai et al., 2013, Waiswa et al., 2008) concluded that lack of male involvement during pregnancy was a barrier for women to attend health facilities during pregnancy. Many women are still dependant on male financing which can be a barrier to seek help at a health facility. One study (Anyait et al., 2012) showed that when women had support from other people (e.g. spouse) in making decisions related to the pregnancy and childbirth, she had a greater chance of delivering at a health facility. This can relate to women's reliance on male partners for funds to reach health clinics or the unwillingness of males to give the funds (Waiswa et al., 2008).

Different barriers towards more male interaction during pregnancy was identified in one study (Kwambai et al., 2013) and three different barriers related to lack of male involvement regarding pregnancy were identified. One was that pregnancy support was considered a female role and the male role were more as a provider. Many men had also experienced a negative attitude from health workers towards their participation. The third barrier was that ANC and delivery clinics were not perceived as couple friendly. Kwambai et al. (2013) also cited that male involvement during labour can be culturally disrespectful in some settings, which contributes to the fact that men are less involved in childbirth.

5.1.3 Lack in knowledge

Four studies (Babalola, 2014, Fotso et al., 2008, Hagey et al., 2014, Waiswa et al., 2008) cited either lack of education or lack of knowledge about the importance of ANC as barriers towards a better health seeking behaviour among pregnant women. Two studies (Babalola, 2014, Fotso et al., 2008) concluded that an increased level of education also contributed to an increase in ANC visits. Educated women had a greater chance of reaching the WHO recommendation of four ANC visits than non-educated women. Post-primary education was significantly positively associated with increased number of antenatal visits as compared with no education or primary education. Post-primary education significantly increases the mean number of antenatal visits by 18.2% in Kenya (Babalola, 2014). The lack of knowledge of the importance of ANC visits were also cited as barriers in two studies (Hagey et al., 2014, Waiswa et al., 2008).

Pregnant women did not comprehend the importance of attending ANC unless they felt ill or experienced complications. Many women had little information with both the timing of ANC visits and the importance of the attending. There was also a lack of knowledge in what to

expect during an ANC visit among many women (Waiswa et al., 2008).

5.1.4 Cultural barriers

In the four different studies (Byaruhanga et al., 2011, Hagey et al., 2014, Medema-Wijnveen et al., 2012, Waiswa et al., 2008) that underlined different cultural barriers for ANC, two different cultural barriers were identified. One barrier is the belief in alternative medicine as part of pregnancy care. Local herbs can be commonly used for different purposes during pregnancy and labour, and many of these are contrary to biomedical evidence based practices. Some of the evidence-based treatments for pregnant women are not always desirable and will therefore be in conflict with traditional and cultural practices (Byaruhanga et al., 2011). The second cultural barrier identified in the articles is the more socially rooted cultural barriers. The lack of influence among pregnant women was identified as a barrier by one study (Waiswa et al., 2008) as decision making tend to not involve the women in some settings. Seeking care or what type of care used can be a decision made by the male, or the elders in the family, such as mother-in-laws or older men. This can also affect the timely initiation of antenatal care as many women will not attend the WHO recommended guidelines of ANC as a previously ANC culture still exist. These previously ANC culture can relate to women coming to health centres for the first time late in the pregnancy (Hagey et al., 2014). The HIV-related stigma was also seen as a cultural barrier for women to attend ANC or giving birth at health facilities. In one study (Medema-Wijnveen et al., 2012) women who experienced HIV-related stigma from the community or their male partners were less likely to give birth at a heath facility or attend ANC.

5.1.5 Financial barriers

Six of the articles (Basinga et al., 2011, Hong et al., 2011, Joharifard et al., 2012, Mrisho et al., 2009, Mubyazi et al., 2010, Waiswa et al., 2008) used for this study cited lack of money or lack of insurance as a barrier for pregnant women to attend ANC or to give birth at a health facility. Both poor women in cities and rural part had a greater risk of not attending ANC. In one study (Mubyazi et al., 2010) cost in terms of money associated with ANC such as transport and food were one reason women in the rural districts of Tanzania did not attend all four recommended ANC visits. Lack of money to make several ANC visits, as it costs money with transport and food etc. was also a barrier shown in a study by Mrisho et al. (2009). In the urban settings, one study (Fotso et al., 2008) found that high costs of living in the cities and lack of money resulted in many women engaging in jobs and trading during business hours when most health facilities are open. The poor economic conditions of the urban poor women were also seen as a contributing factors to non-institutional deliveries. The same study also reported that household wealth were associated with the frequency and timing of ANC. One study (Waiswa et al., 2008) showed that women in rural Uganda preferred to deliver in health facilities, but most will not do so because they lack the money for drugs and supplies demanded. Two studies (Hong et al., 2011, Joharifard et al., 2012) showed that women with health insurance are more likely to deliver at health facilities. Uninsured women are significantly more likely to deliver their babies at a non-institutionalized setting and by unskilled birth attendant or unassisted.

5.2 Strategies for a better antenatal care coverage in Rwanda

Strategies for more pregnant women to attend ANC and give birth at health facilities will be presented in this section. All strategies are based on findings in the selected articles used in this study. The aim of this section is to answer the second research question in this paper:

What strategies are suggested in the research that the government of Rwanda implement to create a better ANC coverage among pregnant women in Rwanda?

To make the reading more convenient, also this section has been divided into four main categories that were identified in the selected studies. The four strategies identified were: *Better access to ANC clinics, more education about the importance of ANC, increased male involvement during pregnancy* and *better insurance coverage.*

5.2.1 Better access to antenatal care clinics

One important factor that is presented in four studies (Anyait et al., 2012, Kitui et al., 2013, Mubyazi et al., 2010, Pfeiffer and Mwaipopo, 2013) is that pregnant women need to have easy access to ANC clinics and health facilities. By bringing services closer to the users, as suggested by Mubyazi et al. (2010) in a study made in Tanzania, more women will attend ANC clinics and that can increase the equity in health among pregnant women. Strategies such as promoting community-directed control of selected public health services can be one way of bringing services closer to the users. One other way of ensuring that pregnant women can get access to ANC is by ensuring appropriate transport to and from the clinics for pregnant women as many will not attend because the lack of transport to and from the health facilities (Anyait et al., 2012, Kitui et al., 2013). One study (Pfeiffer and Mwaipopo, 2013) suggested that by bridging the gaps between communities and the formal health sector through community-based counselling and health education more women would likely attend ANC services. This community based counselling and health education should be provided by well-trained and supervised village health workers who inform villagers about preventive health services, including maternal health.

Hagey et al. (2014) suggests that the government of Rwanda need to make ANC more accessible for all women in Rwanda in order to increase the number of women attending ANC and giving birth at health facilities.

5.2.2 More education about the importance of antenatal care

Four studies (Babalola, 2014, Fotso et al., 2008, Hagey et al., 2014, Kitui et al., 2013) presented the need for education as an important factor for promoting ANC. Kitui et al. (2013) argues that health education among women may increase the uptake of health facility deliveries, as their research found that women in Kenya with secondary education were 11 times more likely to deliver at a health facility than women with no education. The results of a study by Babalola (2014) showed that less educated women were the ones most in need of quality preventive maternal health services and therefore suggested the need of an increase in the empowerment of less educated women about the benefits of attending ANC services. Two other studies (Fotso et al., 2008, Hagey et al., 2014) suggested that education and sensitization among pregnant women would increase the numbers of visits to ANC clinics and increase the amount of women delivering at health facilities. Fotso et al. (2008) further called for urgent attention by the Ministry of Health in Kenya and other local authorities to provide focused and sustained health education to poor urban communities to promote a better antenatal health coverage among pregnant women in poor urban residents in Kenya. Findings from Hagey et al. (2014) study in Rwanda suggested that health facility professionals need to educate and sensitize more women in order for them to understand the importance of ANC. Community involvement and health facility professional home visits were two different strategies presented in the study as possible to increase awareness of the importance of ANC in Rwanda.

5.2.3 Increased male involvement during pregnancy

An increase of male involvement in pregnancy related issues as a strategy for a better ANC coverage were suggested in three studies (Anyait et al., 2012, Kwambai et al., 2013, Waiswa et al., 2008). One study (Anyait et al., 2012) suggested that pregnant women often rely on other people to help out during the pregnancy. This can involve help with organizing transport, accompanying women to place of health visits, attending to physical, financial and emotional needs etc. Involvement of the spouse of the women can therefore be a strategy in increasing the number of women attending ANC and giving birth at a health facility. To involve more men during childbirth, Waiswa et al. (2008), suggested that an increase of waiting shelters at selected health units were men could stay should be considered in order to increase access to supervised deliveries. One study (Kwambai et al., 2013) also gave three recommendations to improve the involvement of men. One is by implementing awareness campaigns about pregnancy that is targeting men. The second recommendation is to the promotion of joint HIV testing and counselling, as the study suggests that some men felt it encouraged disclosure between couples. The last recommendation made was to train staff at health facilities towards a more positive attitude towards men´s participation and design more couple-friendly antenatal and delivery units.

Only studies from the nearby countries were used to find strategies of how to increase male involvement during pregnancy, as no information about this topic were found in studies from Rwanda.

5.2.4 Better insurance coverage

Two studies from Rwanda (Hong et al., 2011, Joharifard et al., 2012) suggested that an increase of insured population would increase the number of mothers deliver their babies at health facilities and also increase the use of ANC. Findings from Hong et al. (2011) suggested that being insured may lift financial barriers and encourage women to deliver in a health facility by a skilled birth attendant. The same study also suggested that inequalities in maternal health should decline when the insured population increased, as more women would attend healthcare when insured. Joharifard et al. (2012) suggested that the rapid scale-up of community-financed health insurance in Rwanda played an important role in the great improvement in the health facility delivery rate that was observed in their study.

6. Discussion

6.1 Result discussion

The purpose of this paper is to identify barriers for pregnant women to attend ANC and analyse it in the Rwandan context. Hence I will now discuss the finding in this paper in relation to the situation in Rwanda.

As presented earlier in this paper Whitehead and Dahlgren (1991) presented a model of three different layers that contribute to the understanding of the individuals health status. *Individual factors, community factors* and *structural factors* are all important factors for individuals to achieve a good health. This section will be presented according to the different layers of individual, community and structural factors.

6.1.1 Strategies on a individual level for a better antenatal care coverage

An increased health education and a better health status are recognized by Vision 2020 as important factors in ensuring an efficient and productive workforce in Rwanda. The health paragraph of the Vision 2020 includes the vision of reducing the MMR from 1070 in year 2000 to 200 in year 2020. This vision may play an important role when trying to create a better health status for pregnant women and mothers in Rwanda. By increasing the health education of the people in Rwanda, more women are likely to attend ANC and deliver at health facilities (Babalola, 2014, Fotso et al., 2008). Increased health education can also be a good opportunity for males to get a better understanding about the importance of pregnant women attending ANC and deliver at health clinics. As suggested by Anyait et al. (2012), women who had support from other people (e.g. spouse) in making decisions related to the pregnancy and childbirth, had a greater chance of delivering at a health facility. Health education and awareness campaigns targeting men can therefore be a good opportunity in involving men during pregnancy.

As pregnancy is a crucial time to promote healthy behaviour and parenting skills, it should therefore be considered as an important factor in creating a better health seeking behaviour among women in Rwanda. By increasing the ANC attendance among women, the health seeking behaviour might spread and also increase this behaviour among people in close relations to the women, such as children and spouses. By attracting more pregnant women to ANC clinics there may be a better chance of educating these women in general health related issues, such as HIV and malaria prevention. The providing of education, counselling, screening, treatment and the promotion of the health of the mother and child are all interventions that can be made at an ANC clinic. It can also be seen as a good opportunity to involve more men during ANC visits in Rwanda, as they might be missing important information or feeling left out as suggested by Kwambai et al. (2013).

6.1.2 Strategies on a community level for a better antenatal care coverage

It is important to consider the existing cultural beliefs of ANC and try to promote ANC as an important factor towards a healthier pregnancy among women. It might be presented not only as a curative practice but as a good way of promoting healthier behaviour as the belief in alternative medicine can be string and can be commonly used for different purposes during pregnancy and labour, which might exclude the use of treatment at a health facility if it only is considered as a curative practice, as Byaruhanga et al. (2011) suggests. By having a better understanding about the alternative medicine and cultural beliefs, ANC clinics might be able to attract more pregnant women whom struggle to make independent decisions during pregnancy. In 2011 family planning was made one of the top national priorities by the Rwandan government as it recognized family-planning as one of the key factors for social development, and a key factor in achieving some of the MDGs. The government of Rwanda´s goal is to reach a national 70 percent use of modern contraceptives. The Ministry of Health (MOH) in Rwanda has been implementing Community-Based Provision (CBP) of family planning services by the Community Health Workers, mainly in the villages. The CBP is seen as a key to increase the accessibility and uptake of family planning (Wessona et al., 2011).

The recognition of family planning as a key factor for social development and a key factor in achieving the MDGs made by the Rwandan government, can be seen as an opportunity to promote the importance of ANC for people who doubt its importance. By including more men and other community members in family planning promotions, the understanding of its

importance might be recognized more broadly. One important factor, when trying to implement different strategies in communities, is to explore the contextual situation in several geographic and cultural settings to obtain a deeper understanding of the community's choices. This must be made without compromising the need for women to attend ANC and health clinics during pregnancy (Byaruhanga et al., 2011). It can be a challenging task, but it can be crucial to get acceptance by cultural norms before implementing and promoting changes in communities where ANC practices are not considered important.

Many of the non-health system priorities made in the third HSSP can be seen as strategies to prevent cultural barriers and to create a better male involvement. Priority one is to integrate gender considerations into all strategies and planned activities in maternal and newborn health, and priority two is to strengthen participation and involvement of the family and community in defining their needs and expectations. Both these can be seen as ways to conquer cultural barriers towards a better ANC coverage. Other priorities such as increasing the power of decision-making for women, couples, and young people to enable them to freely decide when to have a child, family size, and spacing between births can all be good towards a better maternal health in Rwanda. To increase male involvement in reproductive health–related decisions and by giving information, education, and communication of reproductive health behaviour and create a male involvement in issues related to maternal health can be ways of a better involvement of males during pregnancy (Waiswa et al., 2008).

6.1.3 Strategies on a structural level for a better antenatal care coverage

The target to reach a higher number of trained health personnel by 2018 set up by MOH, can be a necessary way of creating a better access to health facilities for pregnant women in Rwanda. It will also be important, as suggested by Mubyazi et al. (2010), to bring services closer to the users. By creating a better access, especially for pregnant women in the rural parts of Rwanda, the use of traditional birth attendants also might decrease. Pregnant women seem more likely to attend traditional birth attendants if they are more local and more easily accessible, especially in the rainy season when roads can be impassable. (Kwambai et al., 2013). In order to get a better access to health clinics for the pregnant women in Rwanda, one of the five priorities made in the third HSSP, to *improve accessibility to health services,* is a necessity.

As Rwanda consists of 34 health posts, 442 health centres, 41 district hospitals and 4 national referral hospitals, it is important that qualified staff are available at all facilities to be able to reach all pregnant women with good quality care (UNICEF, 2012).

In 2009, on initiative of the MOH and the White Ribbon Alliance, a strategic plan for 2010-2013 was implemented in Rwanda (Nyirasafali, 2011). The program´s overall goal is to "…contribute to national efforts aimed at reducing maternal and newborn mortality and morbidity in Rwanda". One key area in this strategic plan was to increase incentives for all health workers, especially those in the rural districts. This can be seen as a good way of attracting and retaining good and qualified personnel in rural parts of the country. Another key area was the increase in availability of midwifes. A better public awareness on family planning and the services and rights of maternal health and improved analysis and use of maternal mortality was also made a focus area (White Ribbon Alliance, 2010). To achieve these results the program has implemented different strategies. One is the use of evidence based advocacy activities and the use of mass-media to increase the public awareness about the rights and services of quality family-planning and safe motherhood. Training of

community health workers (CHWs) to improve accuracy and use of maternal death data, and building better human resource capacity was implemented to increase the performance of the program. This strategic plan can be seen as a good way of creating knowledge and awareness among pregnant women, especially in the rural parts of the country. If qualified personnel are available in the communities, then there is a greater chance for women to get educated on the importance of ANC. This can relate to both the individual lifestyle factors for a better health and also the social and community influences which can promote support towards a healthier lifestyle. If women get education about pregnancy and the importance of ANC they are more likely to have a healthier lifestyle during pregnancy. A better public awareness on family planning and the rights of maternal health are also great ways of promoting positive social and community influences on health for pregnant women.

The Mutuelles de Santé, with an annual fee of around 6 USD per family member, had a coverage of 91 percent in 2010. This insurance can be a good way of creating a better ANC coverage and make more women deliver at health facilities. As both Hong et al. (2011) and Joharifard et al. (2012) suggested, that an increase of insured population would increase the number of mothers delivering their babies at health facilities, the Rwandan government should focus on getting the whole population insured as it might lead to a better health status for the pregnant women. The strategy for a better maternal health by an increased insurance coverage can be related to Rwanda's rapid scale-up of community-financed health insurance. Joharifard et al. (2012) suggests that this scale-up will likely contribute to the dramatic improvement in the health facility delivery rate.

In 2010 a pilot project called "rapid SMS" was tested in the Musanze district. The program was initiated by UNICEF to the Ministry of Health in Rwanda and aims to support maternal, neonatal and child health at community level. 422 community health workers and 22 supervisors were trained and equipped with mobile phones to be able to track pregnant women, monitor antenatal care, identify and refer women at risk, and improve communication with health facilities in the case of emergencies. This made it possible for 14000 expecting mothers to be tracked over a 12 month period. 583 births, 115 risks during pregnancy were reported during the project. A higher number of ANC attendance and delivery at health clinics were also reported (Nyirasafali, 2011). This project can be seen as another good way for the government of Rwanda to create a better knowledge and supervision of pregnancy in the rural parts of Rwanda. As suggested by several studies in this paper, access to healthcare is one of the main barriers for ANC visits (Anyait et al., 2012, Fotso et al., 2008, Joharifard et al., 2012, Kitui et al., 2013, Kwambai et al., 2013). By a simple SMS tracking system pregnant women can be tracked during their pregnancy in a easier way and will create a better health status among the pregnant women and their newborn.

6.1.4 Recommendations for a better antenatal care coverage in Rwanda

The top priorities made in the third HSSP, to *Achieve MDG 1, 4,5 and 6 by 2015, Improve accessibility to health services, Improve quality of health provision, reinforce institutional strengthening* and *improve quantity and quality of human resources for health* may all be linked to the five different barriers identified in this study. To achieve MDG 1,4,5 and 6 a better ANC coverage and a better health seeking behaviour can be seen as key factors. The accessibility to health services has been identified as an important strategy towards a better ANC coverage in the articles analysed in this paper. The improvement in quality of health provision and reinforcement of institutional strengthening, especially in the rural parts can also be seen as an important way of promoting a better ANC coverage, as many men tend not

to join the pregnant women at health clinics due to couple-unfriendly clinics and a negative attitude towards men at health clinics (Kwambai et al., 2013). The improvement of quantity and quality of human resources for health can also be considered as an important way of bringing services closer to the users as Mubyazi et al. (2010) recognizes as an important strategy for a better ANC coverage. If the Rwandan government does not provide proper healthcare, including access and qualified professionals, the pregnant women in Rwanda are more likely not to attend ANC and will stand greater risks of complications during pregnancy and childbirth.

As described earlier in this paper, the third HSSP recognize two critical challenges in reducing maternal mortality, these are described as; the health system factors and the non-health system factors. Both these challenges have been outlined in this paper as barriers to a better ANC coverage. Based on the results of this study, the Rwandan government have a good understanding of what is needed for a reduce in maternal mortality. Even though this is outlined as barriers, many obstacles still exist in executing good strategies and policies for this to happen. Based on the results of this study, four strategies are important in improving the number of pregnant women attending at least four ANC visits and giving birth at health facilities. These strategies are: a better access to health clinics, more education about the importance of ANC, increased male involvement during pregnancy and better insurance coverage for pregnant women.

The results of this study also suggest that more focus should be placed on improving the accessibility, knowledge, male involvement and financial barriers to reach a UHC for all women in Rwanda. These focus areas can also be seen as ways to improve the equity in health. Östlin et al. (2011) suggests that there still remain a great inequality in health between more and less privileged groups and the equity of access to health care in many countries widened. The suggestions presented in this study are ways in creating a better equality in health among the population in Rwanda. Pregnant women should all have the same opportunity to attend ANC and to give birth at a health facility. In creating a situation where all women will have this opportunity, focus shall be on all the different layers, individual, social and structural, that all contribute to the individuals health status.

Overall, Rwanda has made good progress in terms of reducing MMR and recognize the increase of maternal health as an important factor to social development as issued both in the third HSSP and Vision 2020. With a better ANC coverage, which includes a better access, better education, increased male involvement and a better insurance coverage, the health situation for pregnant women and mothers in Rwanda might have a wealthier and healthier future.

Women need to get educated in the importance of ANC early, as less educated women are less likely to attend ANC and to give birth at a health facility. The Rwandan government should aim to educate women in issues regarding pregnancy and childbirth in a early age to increase the ANC coverage.

6.2 Method discussion

Articles were selected based upon a few inclusion and exclusion criteria. The criteria used to find relevant articles for this study may have affected what studies I chose to use in this paper. It is possible that other inclusion and exclusion criteria could have made me use different or more relevant studies for this paper. Although, the criteria used in this paper seems to be relevant based on what I found in previous research.

The templates by Willman et al. (2006), used to review the quality of the selected articles was considered to be well structured with good content for both qualitative and quantitative studies. As the templates were modified to suit this study the results from these templates could have been tilted by the reviewer's opinion. One disadvantage of being able to change the templates is that the scientific value may have decreased. Although, the modification of the templates can be considered as positive as they were modified to suit this study.

The decision to make a geographical demarcation in this study, to only include research from Rwanda, Uganda, Tanzania or Kenya, may have had influence on the results. As the purpose of the demarcation was to limit the geographical spread of studies, research from other countries that might had been useful in this paper were excluded. As the aim was to be able to relate previous research to the Rwandan context, I believe that this geographical demarcation was necessary and useful. Even though only studies from nearby countries has been used, it is not certain that the results from research made in other countries may be applicable in the Rwandan context as there might be many factors to consider when trying to applicable research between two countries.

The keywords used for searching articles in this paper were selected due to the keywords on the subject, used in previous research. This could be considered to increase the validity of this paper. Section 4.2, 4.3 and 4.4, can be considered as a guideline for how this study has been implemented, which can be considered to increase the reliability of this study.

As four of the selected articles did not state if the study was approved by an ethical committee or if the study is conducted in accordance with ethical principles, these articles might be considered as inappropriate to include. I chose to include them as they were all published in journals that consider ethical issues.

7. Conclusion

The situation for pregnant women has improved significantly in Rwanda since the implementation of the MDGs in 2000. The health of pregnant women has been a priority in many of the development strategies made by the Rwandan government. Despite this progress many pregnant women in Rwanda still run unnecessary risks during pregnancy due to insufficient healthcare and lack in knowledge. The results in this study present five major barriers for women to attend ANC during pregnancy. These five barriers are: Limited access to healthcare, lack of male involvement, lack in knowledge, cultural barriers and financial barriers. In order to create a better ANC coverage among pregnant women in Rwanda these barriers need to be overcome. In order to overcome these barriers, this study suggests four different strategies. These strategies are; better access to ANC clinics, more education about the importance of ANC, increased male involvement during pregnancy and better insurance coverage. By implementing these strategies into national policies and programs more women can have a better chance of attending ANC and giving birth at a health facility in Rwanda.

As this paper only have focused on previous research it is recommended that more research is done on pregnant women and families in Rwanda to getter a better and broader understanding about the barriers that exist when attending ANC clinics.

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Appendix 1. Article Summary

Author, year and title.	Aim	Method	Results/Conclusion	Quality
Anyait et al. 2012. *Predictors for health facility delivery in Busia district of Uganda: a cross sectional study*	Identify the independent predictors of health facility delivery in Busia a rural district in Uganda.	A cross sectional survey. 500 women who had a delivery in the past two years were interviewed regarding different experiences of pregnancy	There is a need for reaching women of low social economic status and of higher parity with suitable interventions aimed at reducing barriers that make women less likely to deliver in health units such as ensuring availability of transport and involving spouses in the birth plan.	11/13 High
Babalola, S. 2014. *Women's education level, antenatal visits and the quality of skilled antenatal care: A study of three African Countries.*	Analyse the relationship of education level with the quality of antenatal care received and highlights how the number of antenatal visits mediates this relationship	Using Demographic and Health Survey (DHS) data from Kenya, Malawi and Nigeria. Using a bivariate analysis to look at the different between ANC and different social factors.	Efforts to improve pregnancy outcomes for under- privileged women should focus on removing structural barriers to access. Such efforts should also seek to empower underprivileged women to insist on quality antenatal care by explaining what to expect during an antenatal visit.	9/11 High

Byaruhanga et al. 2011. *Hurdles and opportunities for newborn care in rural Uganda*	Explore the acceptability and feasibility of the newborn care practices at household and family level in the rural communities in different regions of Uganda	A qualitative design using Six in-depth interviews targeting traditional birth attendants and nine focus group discussions composed of 10–15 participants among post childbirth mothers, elderly caregivers and partners or fathers of recently delivered mothers.	Behaviour change communication Messages need to address the community norms in the country. The involvement of other newborn caregivers than the mother at the household and the community early during pregnancy may influence change of behaviour related to the adoption of the recommended newborn care practices.	12/13 High
Fotso et al. 2008. *Provision and use of maternal health services among urban poor women in Kenya: what do we know and what can we do?*	To describe the provision of obstetric care in the Nairobi informal settlements.	A health facility survey. From the DSS database, all women who had a pregnancy outcome in 2004–2005 were selected and interviewed. The questionnaire, was administered to a total of 1,927 women and then analysed using chi-square test	Bivariate analyses show that household wealth, education, parity, and place of residence were closely associated with frequency and timing of ANC and with place of delivery. Finally, there is a strong linkage between use of antenatal care and place of delivery.	8/11 Medium

Hagey et al. 2014. *Barriers and solutions for timely initiation of antenatal care in Kigali, Rwanda: health facility professionals' perspective.*	To asses social and behavioural factors that affect timely initiation of antenatal care in Kigali, Rwanda from the perspective of health facility professionals.	Health facility professionals involved in antenatal care provision were interviewed on their perceptions about untimely initiation of antenatal care based on open-ended questions.	Results indicate that behavioural contextual interventions may help overcome antenatal care barriers. five themes as barriers to timely initiation of antenatal care	11/13 High
Hong et al. 2011. *Being insured improves safe delivery practices in Rwanda*	The paper examines the relationship between being insured and delivery at home and delivery by an unskilled attendant/unassisted.	Using data from the 2005 RDHS in Rwanda, the prevalence of delivery at home, delivery assisted by unskilled birth attendants/ unassisted and describes the distribution of all births by the characteristics of the child, mother, and household was analyzed.	This study finds evi- dence of significant differences in the utilization of health facilities and skilled providers during delivery, a compo- nent of access to care, between insured and uninsured.	10/11 High

Joharifard et al. 2012. *Prevalence and predictors of giving birth in health facilities in Bugesera District, Rwanda.*	To quantify secular trends in health facility delivery and to identify factors that affect the uptake of intrapartum healthcare services among women living in rural villages in Bugesera District, Eastern Province, Rwanda.	Using census data and probability proportional to size cluster sampling methodology, 30 villages were selected for community-based, cross-sectional surveys of women aged 18–50 who had given birth in the previous three years.	The strongest correlates of facility-based delivery in Bugesera District include previous delivery at a health facility, possession of health insurance, greater financial autonomy, more recent interactions with the health system, and proximity to a health center.	10/11 High
Kitui et al. 2013. *Factors influencing place of delivery for women in Kenya: An analysis of the Kenya demographic and health survey, 2008/2009*	To describe the factors that determine where women deliver in Kenya and to explore reasons given for home delivery.	The 2008/2009 Kenya Demographic and Health Survey data were used on place of delivery, reasons for home delivery, and a range of potential explanatory factors.	Physical access to health facilities through distance and/or lack of transport, and economic considerations are important barriers for women to delivering in a health facility in Kenya.	11/13 High

Kwambai et al. 2013. *Perspectives of men on antenatal and delivery care service utilisation in rural western Kenya: a qualitative study.*	This study conducted in rural Western Kenya, explored men's perceptions of antenatal and delivery care services and identified factors that facilitated or constrained their involvement.	Eight focus group discussions were conducted with 68 married men between 20-65 years of age in May 2011. A topic guide was used to guide the discussions and a thematic framework approach for data analysis.	Three main barriers relating to cultural norms identified were: 1) pregnancy support was considered a female role; and the male role that of provider; 2) negative health care worker attitudes towards men's participation, and 3) couple unfriendly antenatal and delivery unit infrastructure.	12/13 High
Medema-Wijnveen et al. 2012. *How Perceptions of HIV-Related Stigma Affect Decision-Making Regarding Childbirth in Rural Kenya.*	The study explored relationships between women's perceptions of HIV-related stigma and their attitudes and intentions regarding facility- based childbirth.	By using an 11-item scale measuring health facility birth attitudes (HFBA) from 1,777 interviews with pregnant women. The mean HFBA score was dichotomized at the median and analyses were conducted with this dichotomized HFBA score using mixed effects logit models.	Those who anticipated HIV-related stigma were less likely to have positive attitudes towards facility-based childbirth. Furthermore, negative attitudes about facility-based childbirth were associated with the intention to deliver outside a health facility.	9/11 High

Mrisho et al. 2009. *The use of antenatal and postnatal care: perspectives and experiences of women and health care providers in rural southern Tanzania.*	To describe the perspectives and experiences of women and health care providers on the use of antenatal and postnatal services.	In-depth interviews with health care providers and village based informants in 8 villages were conducted. Eight focus group discussions were also conducted with women who had babies younger than one year and pregnant women.	Among common reasons mentioned for late initiation of antenatal care was to avoid having to make several visits to the clinic. Other concerns included fear of encountering wild animals on the way to the clinic as well as lack of money.	11/13 High
Mubyazi et al. 2010. *Women's experiences and views about costs of seeking malaria chemoprevention and other antenatal services: a qualitative study from two districts in rural Tanzania.*	To describe the experience and perceptions of pregnant women about costs and cost barriers for accessing ANC services with emphasis on IPTp in rural Tanzania.	Qualitative data were collected. through 1) focus group discussions with pregnant women and mothers to infants and 2) exit-interviews with pregnant women identified at ANC clinics. Data were analyzed manually using qualitative content analysis methodology.	Respondents identified the following key limiting factors for women's use of ANC services: 1) costs in terms of money and time associated with accessing ANC clinics, 2) the presence of more or less official user-fees for some services within the ANC package, and 3) service providers' application of fines, penalties and blame when failing to adhere to service schedules.	12/13 High

Parkhurst and Ssengooba. 2009. *Assessing access barriers to maternal health care: measuring bypassing to identify health centre needs in rural Uganda*	This study assessed the relative importance of different barriers to maternal health facility use in rural Uganda.	Data from public health facilities performing deliveries in a rural district were used along with census information to construct a set of indicators useful for diagnosing barriers to delivery service use.	Numbers of deliveries varied greatly between facilities of the same level. A few very low use facilities saw over 75% of women come from the local area, while other facilities services attracted a large majority of women from other areas. The phenomenon of bypassing provides additional insight into the relative importance of distance or transport as opposed to internal facility factors preventing use.	7/11 Medium
Pfeiffer and Mwaipopo. 2013 *Delivering at home or in a health facility? health-seeking behaviour of women and the role of traditional birth attendants in Tanzania*	The objectives of this research were to describe (1) women's health-seeking behaviour and experiences regarding their use of antenatal and postnatal care; (2) their rationale behind the choice of place and delivery; and to learn (3) about the use of traditional practices and resources applied by traditional birth attendants and how they can be linked to the bio- medical health system.	Qualitative and quantitative interviews were conducted with over 270 individuals in Masasi District, Mtwara Region and Ilala Municipality, Dar es Salaam, Tanzania.	More attention should be paid towards (1) improving access to as well as strengthening the health system to guarantee delivery by skilled health personnel; and (2) bridging the gaps between communities and the formal health sector through community- based counselling and health education, which is provided by well-trained and supervised village health workers.	8/11 10/13 Medium

Waiswa et al. 2008. *Acceptability of evidence-based neonatal care practices in rural Uganda - implications for programming*	A key concern is whether these internationally recommended practices are acceptable and will be demanded by the target community. We explored if the internationally recommended practices are acceptable and will be demanded by the target community in two rural districts of Uganda	10 focus group discussions were conducted consisting of mothers, fathers, grand parents and child minders.(We Ten key informant interviews with health workers and traditional birth attendants were also made.	Most maternal and newborn recommended practices are acceptable to both the community and to health service providers.	10/13 Medium