

**FACTORS INFLUENCING WOMEN'S ACCESS TO AND  
UTILIZATION OF SKILLED BIRTH ATTENDANCE IN  
SOUTH SUDAN**

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**52<sup>ND</sup> Master of Public Health/International Course in Health Development  
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# **FACTORS INFLUENCING WOMEN'S ACCESS TO AND UTILIZATION OF SKILLED BIRTH ATTENDANCE IN SOUTH SUDAN**

A thesis submitted in partial fulfilment of the requirement for the degree of Master of Public Health

By

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Republic of South Sudan

Declaration:

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Signature:



52<sup>nd</sup> Master of Public Health/International Course in Health Development (MPH/ICHD)

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## Glossary

**Maternal Mortality** is defined as the death of a women while pregnant or within 42 days of termination of pregnancy, regardless of gestational age or site of pregnancy as a result of any cause related to or aggravated by pregnancy; and it has no relation to accident nor incidence (WHO 2014)

**Skilled Birth Attendant:** a skilled birth attendant is an accredited health professional — such as a midwife, doctor or nurse — who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns (World Health Organization 2004)

**Traditional Birth Attendant:** strictly, the term TBA refers only to traditional, independent (of the health system), non-formally trained and community-based providers of care during pregnancy, childbirth and the postnatal period (World Health Organization 2004)

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## **ABSTRACT**

Background: South Sudan is the world newest country in world and gained its independence from Sudan in 2011, after more than 2 decades of devastating civil war. It has one of the world highest Maternal Mortality Ratio of 2054/100,000 live births; and the skilled birth attendant (SBA) is only 10% of the institutional deliveries. The aim of the study is to find out factors influencing access and use of SBA.

**Study Objective:** To explore socio-cultural, socio-economic and health system, policy? related factors that influence access to SBA in South Sudan and other countries with similar context to South Sudan. And to recommend evidence-based best practices in order to improve access to SBA in South Sudan.

**Methodology:** Literature review through electronic search of PubMed, Google Scholar, VU e-library and the websites of WHO, UNFPA and South Sudan's government. The three delay model of Maine 1994 was used as the conceptual framework to guide the study.

**Findings:** Insufficient financing of health services; long distances to the health facilities, geographical and physical accessibility, especially in the rural areas. Inadequate supply of essential life saving equipment. Other findings were poor and dilapidated health infrastructure; inadequate and unfairly distributed number of SBAs. Bad behaviours of unmotivated health workers. Household poverty and low level of education, especially of the rural women, are also barriers. Other findings were cultural and traditional beliefs and community perception of pregnancy and birth. Evidence-based practices that improve access to SBA are provision of maternal health services near to the community, increasing health financing and providing especial subsidies/loans for safe motherhood services of the poorer households. Other evidences are training of more SBAs; women's education and community empowerment and mobilization

**Recommendations:** Increase budget allocation of health services and subsidize safe motherhood services. Reduce geographical and physical access to the health facility by taking delivery centres to the communities, training of more SBAs, motivate and retain them. Improve quality of health services and referral system; and empower women and the communities.

**Key words:** Skilled Birth Attendant, Maternal Mortality Rate, South Sudan, cultural, socio-economic, midwifery, evidence based practice.

**Word count: 12013**



## **LIST OF ABBREVIATIONS**

ANC	ANTENATAL CARE
BCC	BEHAVIOR CHANGE COMMUNICATION
BmOC	BASIC EMERGENCY CARE
CAR	CENTRAL AFRICAN REPUBLIC
DAH	DEVELOPMENT ASSISTANCE FOR HEALTH
DRC	DEMOCRATIC REPUBLIC OF CONGO
DHIS	DISTRICT HEALTH INFORMATION SYSTEM
CHD	COUNTY HEALTH DEPARTMENT
CO	CLINICAL OFFICER
CPA	COMPREHENSIVE PEACE AGREEMENT
EmOC	EMERGENCY OBSTETRIC CARE
GOS	GOVERNMENT OF SUDAN
GOSS	GOVERNMENT OF SOUTHERN SUDAN
HF <sub>s</sub>	HEALTH FACILITIES
HMIS	HEALTH MANAGEMENT INFORMATION SYSTEM
IMA	INTER-CHURCH MEDICAL ASSISTANCE
KIT	ROYAL TROPICAL INSTITUTE
MCH	MATERNAL AND CHILD HEALTH
MDG	MILLENNIUM DEVELOPMENT GOAL
MO	MEDICAL OFFICER
MMR	MATERNAL MORTALITY RATE
MOH	MINISTRY OF HEATH
PBC	PERFORMANCE BASED CONTRACTING
PBF	PERFORMANCE BASED FINANCING
RSS	REPUBLIC OF SOUTH SUDAN
SBA	SKILLED BIRTH ATTENDANCE
SDG	SUSTAINABLE DEVELOPMENT GOAL

SMOH & E	STATE MINISTRY OF HEALTH & ENVIRONMENT
SPLM/A	SUDAN PEOPLE’S LIBERATION MOVEMENT/ARMY
SSDP	SOUTH SUDAN DEVELOPMENT PLAN
SSNBS	SOUTH SUDAN NATIONAL BUREAU OF STATISTICS
TBA <sub>s</sub>	TRADITIONAL BIRTH ATTENDANTS
THE	TOTAL HEALTH EXPENDITURE
UNHCR	UNITED NATION HIGH COMMISSION FOR REFUGEE
USAID	UNITED STATE Agency for International Development
VMW	VILLAGE MIDWIFE
WHO	WORLD HEALTH ORGANIZATION

## **Introduction**

United Nations (UN) member states came together in the year 2000, and agreed to work on the Millennium Development Goals (MDGs). One of the MDGs was to reduce MMR (MDGA5) in three-quarters by 2015; which together with the (MDG5B): achieve universal access to reproductive health, formed the MDG5, which was to improve maternal health (WHO et al. 2015). One of the indicators which was used to measuring the progress of MDG 5 are the deliveries attended by skilled birth attendant (SBA), which is the percentage of live births attended during delivery by skilled health personnel, who could be a doctor, midwife, nurse or auxiliary midwife (WHO et al. 2015).

With a global target of 90% in 2013, the world achieved 73% of deliveries assisted by SBA. The SBA was 54% in Sub-Saharan Africa (World Health Organization 2015). In South Sudan, 12% of deliveries take place at the health facilities (HFs); of which only 10% are assisted by SBAs (MOH 2011); and 88% of the deliveries take place at home, of which 81% is attended a TBAs and 7% not attended or attended by a family member (South Sudan National Bureau of Statistics 2013). With regard to education: 53% of women with secondary or higher education are assisted by SBA during delivery, compared to only 14% of women with no education. Women of the richest households have 41% of deliveries assisted by SBA, compared to only 8% of the women from the poorest households who are assisted by SBA during deliveries. Only 1% of women between 15 – 49 years, with live birth, get assistance via Caesarean Delivery/Section (CS), very low if according to 15% in the guidelines of the World Health Organization (South Sudan National Bureau of Statistics 2013)

For the past 9 years I was working for Inter-Church Medical Assistant World Health (IMA World Health) in the Upper Nile and Jonglei States, respectively; supporting both SMOH to providing healthcare for both local and internally-displaced persons. During this time, my work in the 2 states was as Team Leader and State Support Manager. One of my jobs was to oversee and supervise all the activities related to maternal and child health. Most of the time, I used to travel to rural areas, including hard to reach locations, where I saw the difficulties pregnant women faced during pregnancy, delivery and post-partum periods. I personally observed how far pregnant women used to walk in order to reach health facilities; some health facilities were not well-equipped for deliveries and skilled birth attendants (SBAs). Some women were living near a well-equipped health facility with SBA and yet chose to deliver at home. So what I really observed during my work there was that, due to a variety of factors, women were not accessing quality health services nor utilizing the services adequately. Therefore, I wanted to explore those factors which influence women's access to and utilization of health services in South Sudan.

When I got the opportunity to further my public health skills through the MPH/International Course on Health Development at KIT in Amsterdam, it gave me

the chance to study the factors influencing women's access to and utilization of SBA. So, this thesis is a literature review to explore the factors influencing women's access to and utilization of SBA in South Sudan.

The thesis is divided in 5 chapters: Chapter One explains South Sudan's background; Chapter Two deals with Problem Statement, Justification, Objectives, Methodology and Conceptual Framework; Chapter Three explores factors influencing women's access to and utilization of SBA in other settings with similar conditions to South Sudan; Chapter Four presents evidence-based interventions to increase women's access to and utilization of SBA in South Sudan; Chapter Five presents discussion, conclusions and recommendations; and in the annex the references used for this study.

# 1. CHAPTER ONE: BACKGROUND INFORMATION

The section provides a brief description of geography and demography of South Sudan; a brief description of the cultural, socio-economic and socio-political situations is also provided in this section. The section ends with a brief description of health financing and the health situation in the country.

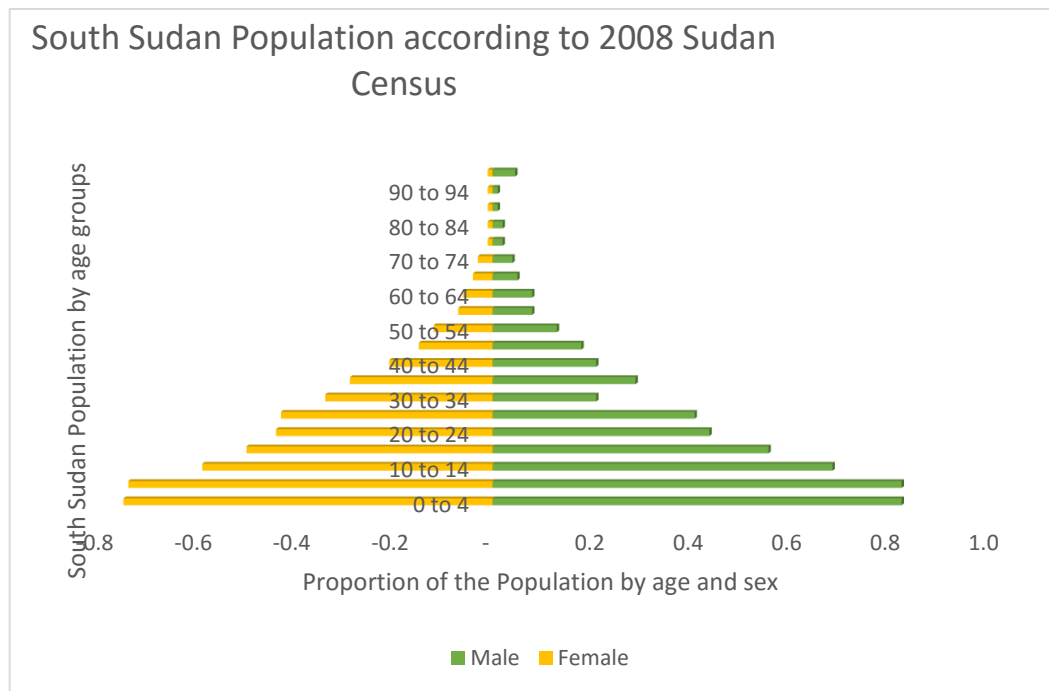
## 1.1. Geographic and Demographic Information

The Republic of South Sudan is a new eastern African country which got its independence from Sudan on the 9th of July 2011. The independence came as a result of a negotiated Comprehensive Peace Agreement (CPA), signed in 2005 between the Government of Sudan (GOS) and the Sudan People’s Liberation Movement/Army (SPLM/A). The CPA was an agreement to end more than 2 decades of a devastating civil war. The country has a surface area of 640,000 square Kilometres, and it is bordering Sudan in the north, Central African Republic (CAR) to the west, Democratic Republic of Congo (DRC) to the Southwest, Uganda to the south and Kenya to the southeast, and the Federal Republic of Ethiopia to the east (MOH 2011), see figure 1. It has an estimated population of 12.3 million; 6.17 million males and 6.16 million females (World Health Statistics 2016). Half of the population is young, see figure 2. The population growth rate is 3.2% per year, with total fertility rate of 7 children per woman. Ninety percent (90%) of the population lives in rural areas (MOH 2015).

Figure 1: Map of South Sudan (source: World Atlas)



Figure 1: South Sudan Population Pyramid



Source: South Sudan National Bureau of Statistics

It is obvious from the population pyramid that South Sudan is a young population, of which males 30 to 34 years old, are almost half the female population; this is probably due to the fact that most of this age/gender demographic participated in the war and most of them were killed during the fighting. The horizontal bars with no numbers on the them correspond to age groups not reflected in the pyramid (e.g. the bar between 0 – 4 and 10 – 14 correspond to age group 5 – 9 and so on)

## 1.2. Socio-cultural Information

The country is home to 64 different ethnic groups; and according to the Pew Research Centre in Washington DC, South Sudan has 60.5% of the population is Christian, followed by traditional beliefs of 32.9, Islam with 6.2 and a small percentage who don't practice any religion (U.S. Department of State 2012). The official language is English; Arabic and more than 60 other local languages; all considered national languages

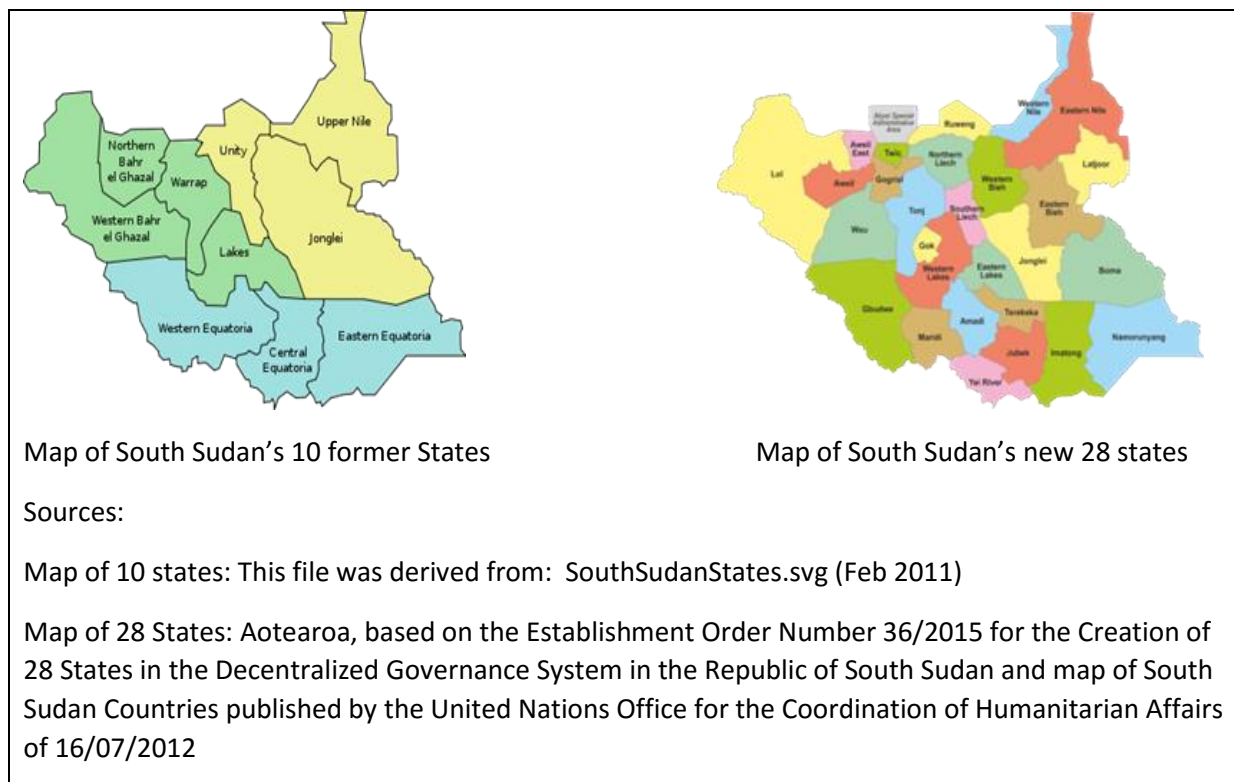
## 1.3. Socio-political System

The political system in the country is presidential with a democratically-elected President, a Parliament and a number of ministerial posts and independent commissions appointed by the President; the judiciary is an independent body.

The governance is decentralized and after the CPA until October 2015, the country was administratively divided into 10 states with 10 democratically elected Governors; Juba as its capital city and the seat of the Government of the Republic

of South Sudan (RSS). The 10 states are: Central Equatoria (Juba), Eastern Equatoria, Western Equatoria, Jonglei, Lakes, Warap, Western Bahar El Ghazal, Northern Bahar El Ghazal, Unity and Upper Nile (see figure 2). However, in October 2015, the President of the Republic, Salva Kiir Mayardit, made a presidential decree dividing the country in 28 more states, which are in the process of discussion and implementation (see figure 2)

**Figure 2: Map of South Sudan**



After the 3<sup>rd</sup> Anniversary of the country's independence on 9<sup>th</sup> July 2013, a political crisis erupted within the ruling party, the Sudan People's Liberation Movement (SPLM). This is the party which fought for more than 2 decades and signed the Comprehensive Peace Agreement (CPA) with the Government of Sudan, in January 2005, in Nairobi, Kenya.

The political crisis started between The President, Salva Kiir Mayardit and his former Vice President, Riek Machar Teny, which on 15<sup>th</sup> December 2013, led to the unprecedented fighting within the capital of Juba. During the fighting that day and the subsequent days, hundreds of innocent civilians lost their lives in the capital; and the fighting spilled to other towns, especially to the states of Jonglei, Upper Nile and Unity, where hundreds of innocent civilians lost their lives as well (Pinaud 2014).

This crisis lasted more than 2 years and caused the displacement of thousands of civilians (IDPs) from their homes and villages to the United Nations Protection of Civilians Sites (PoCs).

The social lives of the IDPs have deteriorated; there are health services provided by the UN agencies and other international health partners, but they are not adequate enough to cover all the needs of the IDPs. Also, another half a million of civilians sought refuge in the neighbouring countries of Uganda, Kenya, Ethiopia and Sudan. As reported by WHO, 7% of the health facilities were vandalised and destroyed during the crisis and 57% of the functioning HFs in the states affected by crisis got external support (Constan 2015), this led to many health workers moving to other areas to look for safety and better employment opportunities (Mugo et al. 2016).

Despite the fact that the peace agreement was signed in August 2015, to end the 2 years old conflict, the stability has not returned to the country and the health services are not yet being established; there is also a grave and serious lack of medicines and other medical supplies, as well as salaries for health workers. This is due to the economic crisis and debt; which the country is deeply in as a direct consequence of the civil war, the drop of oil prices in the global market, and the reduced tax revenue collection. Other reasons are the reduced level of donor funding because of the civil war, as well as the pulling out of many NGOs, which were providing health services in the remote-rural areas, because of the fighting; especially in Jonglei, Upper Nile and Unity States.

#### **1.4. Economy**

South Sudan is a low- income country with 50.6% of the population below South Sudan's government poverty line (South Sudan National Bureau of Statistics 2011). The country is one of the world's most underdeveloped despite of having many natural resources such as petroleum, iron ore, copper, chromium ore, zinc, tungsten, mica, silver, gold, diamonds, hardwoods, limestone and hydropower. In 2011, the Gross Domestic Product (GDP) per capita income amounted to US\$1,859; however, the Gross National Income (GNI) per capita is currently assumed to be US\$1,513 due to the large income outflows to oil companies and the transit fees paid to the government of Sudan. The country's economy mostly depends on oil revenues (98%), and as in many other developing countries, the rural areas heavily depend on small scale agriculture. Only 4% of the 75% of the country's fertile land has been used for farming by local farmers, because of lack of modern technology for modern agriculture to carry out a large scale farming for commercial purposes. The non-oil economy is extremely underdeveloped, which is a big contributing factor to poor living standards. The youth is unemployed and it is the fast growing age



group in the country and also the source of insecurity in the rural areas because of many intertribal conflicts and cattle raiding. The civil war which broke out in 2013, together with the unprecedented dropping prices of oil on the international market, have further and seriously affected the country's economy. This economic crisis has badly hindered provision of health services, especially in the rural areas. Staff salaries have been affected; drugs and other medical supplies have not been available for months and the maintenance of the health facilities has been affected as well.

## **1.5. Education and Gender**

Literacy rates among the adult population of South Sudan is only 27% (Government of the Republic of South Sudan 2011); primary school net enrolment for both males and females is 44.4%; this is 50.8% for male and 37.1% for female (South Sudan National Bureau of Statistics 2011). The male literacy rate is higher compared to female: 55% and 28%, respectively (South Sudan National Bureau of Statistics 2013b). Only 4% of young women of the poorest quintile is literate compared to 29% of young women of the richest quintile (South Sudan National Bureau of Statistics 2013). As per South Sudan general education demography, women in the urban areas have higher literacy rate compared to their rural counterparts: 24% and 9%, respectively; and the proportion of young women 15 – 19 years old is higher than the one of 20 – 24 years old: 16% and 11%, respectively. Illiteracy in the general population is 88% among women and 63% among men (MOH 2011).

## **1.6. Health System and Financing**

According to the Transitional Constitution of the Republic of South, health services are a basic human right, which include the promotion of public health and equitable access to free primary health care and emergency services by the people.

Right after the country obtained its independence from Sudan on the 9<sup>th</sup> July 2011, the Government of the RSS incorporated, as one of its priorities, the provision of health services in the 2011 – 2013 South Sudan Development Plan (SSDP). Health sector priorities were: the expansion of access to quality basic health services; develop and strengthen human resources for health; improvement of the availability and quality of pharmaceuticals and medical supplies; rehabilitation and construction of new health facilities and provision of equipment as major interventions for the sector (Government of the Republic of South Sudan 2011).

The government allocates only 4% of the national budget to health care services, representing only 40% of 2.2% of the Total Health Expenditure (THE). This is inadequate to cover the operations of the national and state ministries of health (MOH&SMOHs), as well as County Health Departments (CHDs) and Health Facilities (HFs). Development Assistance for Health (DAH) contributes 60% of the THE, which is channelled through Partners/NGOs, mainly for recurrent expenditure on PHC services and not for developing infrastructure and human resources for health (HRH) (MOH 2015). The current economic crisis in the country has affected procurement of essential drugs, because the government was not able to incorporate it in the budget of 2015/2016, due to other competing priorities in the country. So because

of that many health facilities have closed down and health workers have migrated to other places in search for better jobs opportunities.

### **1.7. Health Situation**

According to the Transitional Constitution of the Republic of South Sudan (RSS) 2011, health services are considered as basic human rights and therefore, articulates the promotion of public health and equitable access to free primary health care and emergency services by the people. The Health Policy for the Government of Southern Sudan, 2006 to 2011, provided guidance for implementation of the transitional constitutional provisions for the health sector (MOH 2015).

Life expectancy at birth is 55 years for both sexes, just below 56 years for Sub Saharan Africa (MOH 2015). Despite improvements in some health outcomes, the health indicators are still among the worst globally. Infant and child mortality rates, declined from 102 to 75 and 135 to 105 per 1000 live births, respectively, during the period of 2006 to 2010. There also has been some reduction, with under 5 mortality rates of 92.6/1000 live births and Neonatal Mortality Rate (NMR) of 39.3/1000 live births (World Health Statistics 2016). According to the Sudan 5<sup>th</sup> Housing and Population Census of 2008, Maternal mortality rate was at 2054 per 100,000 live births making South Sudan the riskiest place for child birth in the world (MOH 2015).

According to the South Sudan MOH, the great burden of disease is due to communicable diseases, which are the major cause of morbidity and mortality. Malaria (50%), Diarrhoea (17%) and Pneumonia (10%) contribute to 77% of Outpatients Department (OPD) diagnoses (MOH 2015). New HIV infections among 15 – 49 years old per 1000 uninfected population is 2.6 (World Health Statistics 2016)

The major factor which is affecting the South Sudan health care system has been the critical shortage of health workers (see Table 1). For effective provision of health services and reduce maternal and infant mortality, WHO recommend a critical threshold of 23 doctors, nurses and midwives per 10,000 people (World Health Organization 2010). In South Sudan, the estimated doctor–population ratio is 0.15 per 10,000 populations; midwife/nurse–population ratio is 0.2 per 10,000; implying most of the staff in post are unqualified. This health workforce – population ratio is far below the WHO’s recommended critical threshold. This is a great contributor to high MMR and infant mortality rates in the country and it is directly affecting the performance of the health system (Ministry of Health 2011).

Currently, the distribution of the most qualified health staff is skewed to urban centres, some states, and tertiary institutions. PHCUs and a large number of PHCCs are managed by community health workers, many with no formal training on birth attendance skills.

The other factor affecting effective and quality health service delivery in the country, as recognised by the government, is the lack of building requirements matched with level of care; lack of building designs and technical drawings; the equipment requirement by level of health care; transport specifications by level of care; appropriate clear water and sanitation and electricity (MOH 2015).

**Table 1. South Sudan Health Workforce**

South Sudan Health Workforce, Ministry of Health												
State	Doctor	Nurse	Midwife	CO	CHW	Pharma	Lab Tech	Dental	Theat Atten	EPI	Others	Total
Upper Nile	39	476	39	38	495	18	27	6	8	67	8	1221
Unity	3	130	8	18	1110	6	15	0	2	290	8	1590
Northern Bahar El Ghazal	10	66	6	25	351	17	12	3	1	41	4	536
Western Bahar El Ghazal	12	343	51	38	250	5	15	9	20	4	4	751
Lakes	17	111	13	39	503	2	13	1	4	92	3	798
Central Equatoria	97	557	154	75	850	23	95	12	2	38	21	1924
Eastern Equatoria	5	130	36	20	569	5	0	0	8	32	26	831
Western Equatoria	0	0	0	0	0	0	0	0	0	0	0	0
Jonnglei	0	0	0	0	0	0	0	0	0	0	0	0
Warrap	6	30	2	16	84	0	2	0	2	0	0	142
<b>Total</b>	<b>189</b>	<b>1843</b>	<b>309</b>	<b>269</b>	<b>4212</b>	<b>76</b>	<b>179</b>	<b>31</b>	<b>47</b>	<b>564</b>	<b>74</b>	<b>7793</b>

Source: Health Strategic Plan (2011 - 2015), Government of South Sudan, <http://www.bsf-southsudan.org/sites>

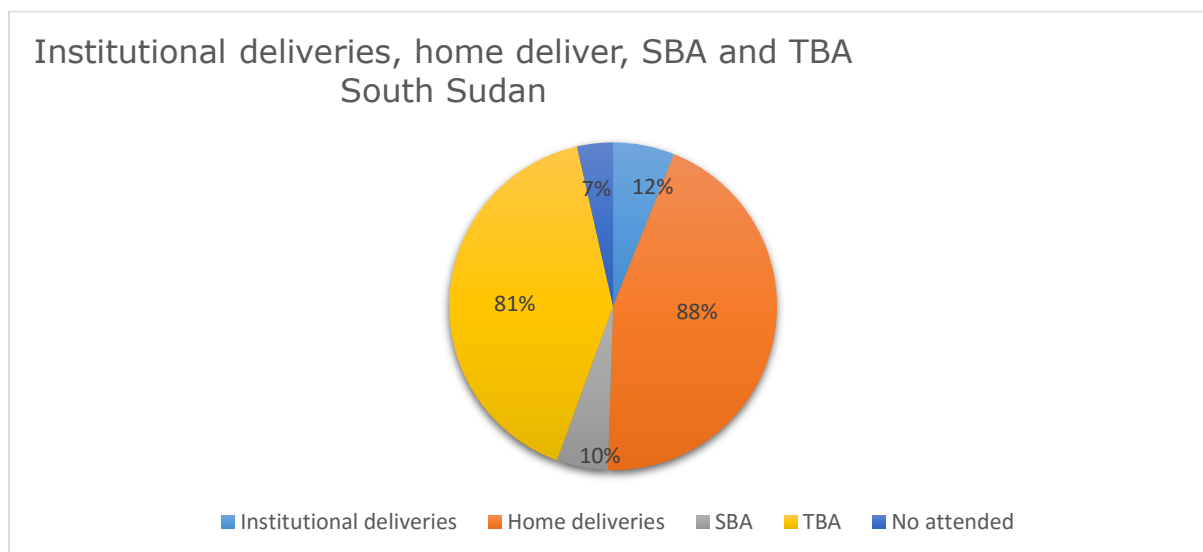
## **2. CHAPTER TWO: PROBLEM STATEMENT, JUSTIFICATION, OBJECTIVE AND METHODOLOGY**

### **2.1. Problem Statement**

There has been a great global effort to reduce maternal mortality ratio (MMR) by three quarters (75%) from 2000 - 2015, which was set in the year 2000, as the 5<sup>th</sup> Millennium Development Goal (MDG 5) by 189 countries (Rosenfield et al., 2006). From 1990 to 2013, a global reduction of 45% MMR (from 380 to 210 deaths/100,000 live births) was reported (Gitimu et al. 2015). In 2013, MMR in Sub-Saharan Africa was 510/100,000 live births, and a reduction of 44% from 1990 – 2015 (World Health Organization 2015). According to WHO, the approximate global lifetime risk of a maternal death fell considerably from 1 in 73 to 1 in 180 (WHO et al. 2015). One of the indicators which was used to measuring the progress of MDG 5 are the deliveries attended by skilled birth attendant (SBA), which is defined as the percentage of live births attended during delivery by skilled health personnel at the health facility, who could be a doctor, midwife, nurse or auxiliary midwife (WHO 2014). With a global target of 90% in 2013, the world achieved 73% of deliveries assisted by SBA, and it was 54% in Sub-Saharan Africa (World Health Organization 2015). Now, replacing the MDGs are the 2030 Agenda of the Sustainable Development Goals (SDGs), adopted by the United Nations General Assembly (UNGA) in September 2015 (World Health Organization 2015). One of the key SDGs is again the global MMR, which has to be reduced to less than 70/100,000 live births by 2030 (World Health Organization 2015).

In South Sudan, 12% of deliveries takes place at the health facilities (HFs); only 10% of them are assisted by SBAs (MOH 2011). 88% of the deliveries take place at home, with 81% of them attended by Traditional Birth Attendants (TBAs) and 7% of deliveries assisted by a relative or without any assistance at all (South Sudan National Bureau of Statistics 2013). See figure 3

**Figure 3: Institutional deliveries, home deliveries, SBA and TBA**



Source: South Sudan Household Survey II (2010)

These figures conceal wide demographic and socio-economic variations. With regard to education: 53% of women with secondary or higher education are assisted by SBA during delivery, compared to only 14% of the women with no education (SSNBS 2013). Women of the richest households have 41% of deliveries assisted by SBA, compared to only 8% of the women from the poorest households who are assisted by SBA during deliveries. Only 1% of the women from 15 – 49 years old with live birth get assisted by Caesarean Delivery/Section (CS), very low if it is compared to WHO guideline, which is 15%. According to 2008 Sudan census, South Sudan had MMR of 2054/100,000 live births (MOH 2015); but recent studies have shown considerable reduction down to 789/100,000 live births (World Health Statistics 2016) .

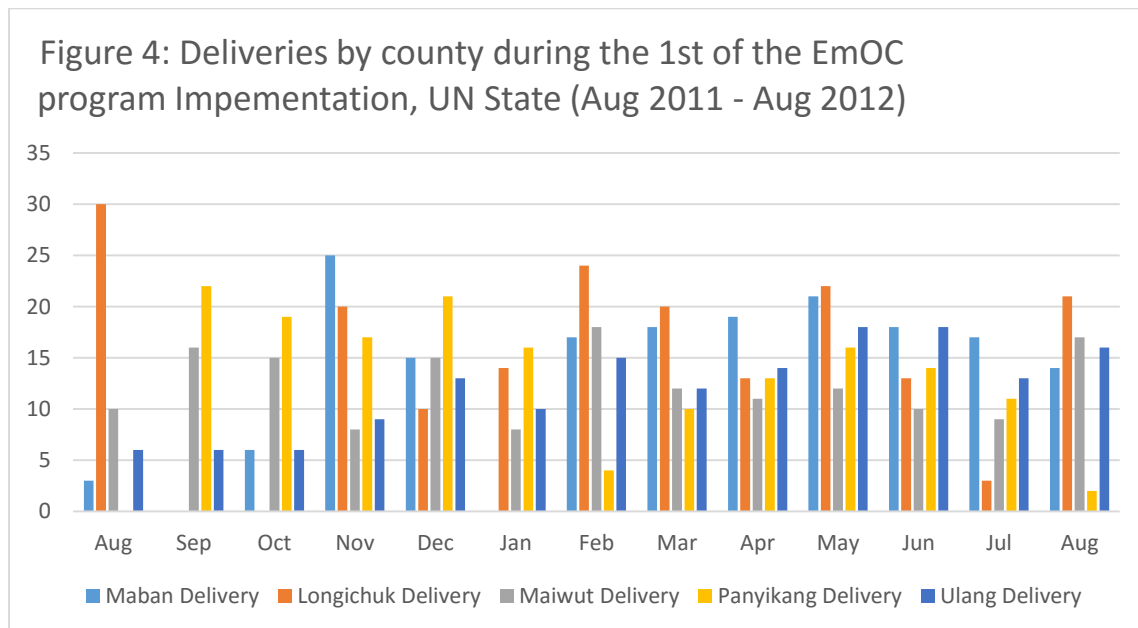
One important reason that could explain the drop on MMR was the relative peace in the country from 2005 – 2013, which led to some improvement in health service delivery (MOH 2011).

The lack of health workers with formal training on skilled birth across the country has a lot of influence on women’s access to and utilization of SBA. Uneven distribution of the available health workforce, favouring the urban setting more than the rural areas, is also another contributing factor. Though many INGOs are providing 80% of the basic package of health services (BPHS), including maternal and child health services, their capacity to cover many of rural areas with SBA is limited. Poor health, infrastructure and the lack of equipment and medical supplies are contributing factors influencing access to and utilization of SBA by the majority of women in the country (MOH 2011).

During the last 5 years the MOH has scaled up the training of SBAs by sending young medical officers (MOs) to the neighbouring countries to study obstetrics and gynaecology. Also clinical officers (COs) have been send for training on skilled birth procedures, as well as nurses have been send to be trained as nurse anaesthetists (MOH 2011). During my work with IMA World Health in Upper Nile in 2010 – 2011, with support from USAID, we sent 13 COs and nurses from the state to be trained on Emergency Obstetric Care (EmOC) in Kenya. It was 9 months training and while they were on training, 5 maternity units were built and equipped in 5 different hard to reach counties (see annex 1). That was one of the strategies used to increase the number of SBAs in the rural hard to reach areas of Upper Nile State, which tremendously increased access to SBA in those counties after 1 year of implementation (see figure 4).

I have also worked with colleagues from the country members of the East African Block, Intergovernmental Authority on Development (IGAD), through assistance program to South Sudan. They were deployed as doctors, midwives and nurses with skilled birth training to provide services and coach their South Sudanese counterparts on SBA.

Despite all these efforts over the last five years, access to and utilization of SBA is still very low, so it is important to study other reasons that could also be contributing to the low access and utilization.



Source of data: IMA World Health (2012)

## **2.2. Justification**

There has been a worldwide effort to fight the global burden of maternal, new-born and child mortality, with special attention to the Millennium Development Goals 5 & 4 (MDGs) for maternal and child health, respectively (Valadez et al. 2015). South Sudan occupies 5th position among the 15 Sub-Saharan Africa countries with the highest MMR worldwide (WHO 2014). For many known and some unknown reasons, unfortunately SBA services are not equitably accessed by all the pregnant women in South Sudan.

All these alarming maternal indicators, coupled with a very low SBA, raise a lot of questions about the contribution of the under-utilization or access to safe childbirth services to the high maternal mortality ratio (MMR), which need to be explored further. It is very important to study all the factors influencing women's access to and utilization of SBA, because all pregnant women are at risk of pregnancy-related complications during any time of their pregnancies, deliveries and postpartum periods. It is difficult to predict most of the obstetric complications, therefore, they must be prevented and treated by providing women with access to appropriate health care and SBA. Lack of access to emergency obstetric care (EmOC) and delay in emergency referral are contributing factors for high maternal mortality (MOH 2011).

Also, very little is known about the factors influencing women's access to and utilization of SBA services. In addition, there are few studies done in South Sudan to find out why SBA is low across the country; therefore, this study will search for SBA data from countries with similar socio-cultural, socio-economic political contexts to South Sudan. So this paper will explore the factors influencing women's access to and utilization SBA.



## **2.3. Objectives**

### **2.3.1. Overall Objective**

To explore factors that influence women's access to and utilization of Skilled Birth Attendance services at the health facilities in South Sudan, and identify evidence based interventions done in other setting with similar cultural and socio-economic context to South Sudan, and see how those interventions can be applied in South Sudan and formulate recommendations aimed at improving utilization of SBA services in the country.

### **2.3.2. Specific Objectives**

1. To explore socio-cultural factors that influence women's access to and utilization of SBAs in South Sudan and in other countries with similar cultural and socio-economic context to South Sudan
2. To explore geographical and socio-economic factors that influence women's access to and utilization of SBAs in South Sudan and in countries with similar cultural and socio-economic context to South Sudan
3. To identify health service-related factors that influence women's access to and utilization of SBAs in other countries with a similar cultural and socio-economic context to South Sudan
4. To analyse evidence - based practices implemented in other countries with similar cultural and socio-economic context to South Sudan.
5. To formulate recommendations based on the findings of the study that will help South Sudan Ministry of Health to plan practical strategies to increase deliveries assisted by SBAs in the country.

## **2.4. Methodology**

### **2.4.1. Research Strategy and Data**

Literature review is the methodology for this study and the data is found from both published and unpublished literature, obtained through researching different websites and search agents.

The data was found by reviewing articles from countries and regions with similar cultural and socio-economic contexts to South Sudan, which are: Sudan, Ethiopia, Central African Republic, DR Congo and Uganda. Other criteria used to search for

the articles are countries which have experienced conflicts with the displacement of the populations

Many websites and unpublished reports were found via Google: South Sudan MOH, SSNBS, WHO, World Bank, UNFPA, Maternity Worldwide. Google Scholar, VU e-Library, PubMed were also used to search for published articles and reviews. The found articles and publications were later screened by reading the abstract and establishing relevance. Those which then met the criteria of the study were used.

Articles which did not meet the criteria, or involved countries that weren't from similar cultural and socio-economic contexts to South Sudan were left out.

#### **2.4.2. Search Strategy**

The search words were South Sudan, Skilled Birth Attendant, health facilities, Maternal Mortality Rate, Sudan, Uganda, Central African Republic, Ethiopia, Afghanistan, post conflict, cultural, socio-economic, political context, education, religion, midwife, institutional deliveries, evidence-based practices. The words were used as single or combined for efficient search (table 2). The data searched was from 2000 – 2016, and the initial search turned up with 62 research papers were in English, using the set criteria; after carefully examining the abstract of the articles 34 articles were found not to be relevant to study because of not meeting the set criteria. After reading fully the remaining 28 papers, all found to meet the criteria and therefore, they were incorporated in the study.

The search did not find enough research papers on the evidence-based interventions in the neighbouring countries, so the search was widened and 2 articles were included from other countries which are not neighbouring South Sudan, but have political instability similar to that of South Sudan.

**Table 2: Search Table**

Source	Objectives and searching words as singles or combined			
	To explore socio-cultural factors that influence women's access to and utilization of SBAs in South Sudan and in other countries with similar cultural and socio-economic context to South Sudan	To explore geographical and socio-economic factors that influence women's access to and utilization of SBAs in South Sudan and in other countries with similar cultural and socio-economic context to South Sudan	To identify health service-related factors that influence women's access to and utilization of SBAs in South Sudan and in other countries with similar cultural and socio-economic context to South Sudan	To analyze evidence - based practices implemented in other countries with similar cultural and socio-economic context to South Sudan.
VU e-Library, PubMed, Google Scholar,	Culture, religion, Social, Factors, Attitudes, Family Influence, Community, Perception, Behavior, Beliefs, South Sudan, Sudan, North, West, East,	Economy, Status, Natural Resources Education level, Income, Employment, Transportation, Distance to Health Facility, Household, War, Conflict, Crisis, Displacement,	Maternal, Health Services, SBA, Deliveries, MMR, Health Facilities, Health Staff, Equipment, Drugs, Attitude, Relationships, Availability,	SBA interventions, best practices, improve women's access to and Utilization, Evidence-based interventions in conflict or unstable.
Websites of WHO, UNFPA,	SBA concept, MMR, MDGs, SDGs	South Sudan THE	South Sudan Health Statistics	
Websites of South Sudan Government	Demographic data, Health Surveys	Socio-economic situation, Health Financing,	Health situation (data, staffing, infrastructure, drug supplies)	

### **2.4.3. Study Limitations**

In South Sudan, a new nation with very poorly underdeveloped healthcare system, there is a very limited number of research done to study different factors that affect the delivery of health services across the country. It was in 2010, when the Ministry of Health developed data collection tools and established District Health Information System (DHIS) (MOH 2011), that an electronic data record was used to collect data from all the public health facilities and create a national Health Management Information System. There is still under-reporting from the health facilities due to multiple factors, such as: insecurity, access to electricity and limited access to internet at the County Health Department levels (CHD), inaccessibility of the health facilities to collect data by road during rainy season, frequent turnover of the staff in charge of data collection. So, because of the unavailability of studies done in the country regarding SBA, it made the study difficult as there is very limited data to access from within the country. Another limitation was the fact that DR Congo and Central African Republic have very limited number of articles published in English, because the official language of those countries is French. Even though CAR was included in the search criteria, there were no articles found in English regarding SBA.

The strategy used in the study to mitigate the issue of the limited data, was to search for studies done in different countries and regions with similar cultural and socio-economic contexts to South Sudan, such as: culture, religion, socio-economic situation, sharing borders, conflicts and natural resources. Multiple studies done in the neighbouring countries and other regions were analysed to obtain the best scientific evidence -based information related to factors which influence women's access to and utilization of SBA. Those studies published in peer reviewed journals were mostly used for this study. Those articles which met most of the criteria were also used for the study and those articles that did not meet the criteria were discarded.

#### **2.4.4. Conceptual Framework**

The Three Delays Model was chosen to study factors that influence women's access to and utilization of SBA in other countries with similar cultural and socio-economic contexts to South Sudan, because it clearly explains the factors which influence women's access to and utilization of SBA services across the country. Though there are other conceptual frameworks used to analyse factors that influence access to SBA, the "Three Delays Model" is a worldwide-known integrated framework used to understand challenges women face when they need to access or utilize safe childbirth services, especially SBA at the health facility levels (Maine 1994).

It is important to note that this framework does not explain maternal health services before pregnancy which is family planning (FP), before delivery antenatal care services((ANC)) and postpartum period. The model identifies three phases of factors that can impede women from timely accessing or utilizing childbirth services they need (See Fig. 3):

##### ***Phase 1: Delay in Decision to Seek Care***

This is due to women social status; to poor understanding of pregnancy related complications and risks and health seeking behaviour; factors related to previous poor health care experiences, factor related to acceptance of maternal death and factors related to financial conditions

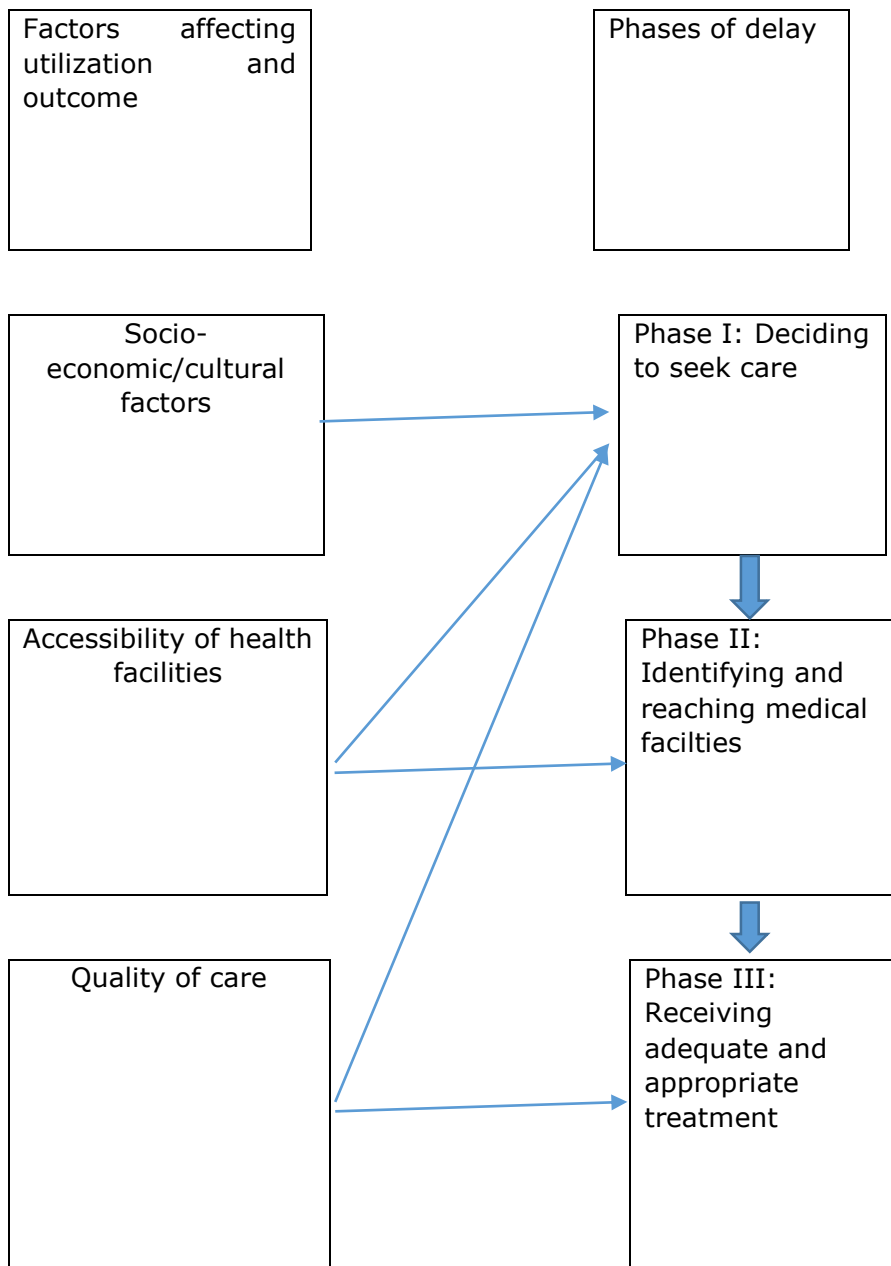
##### ***Phase 2: Delay in Reaching Health Care Services***

This is due to factors related to geography of the HFs (distance to health facilities) and the terrain; factors related to transportation cost and or whether there is an available mean of transportation to and from the health facilities, as well as the poor condition of the road and the infrastructure.

##### ***Phase 3: Delay in Receiving Adequate Care at the health facility***

due to the poor conditions of the health facilities and medical supplies; factors related to unmotivated and inadequate and not enough trained health workers and a poor referral system to the next level of care.

The three delays model (source: Maine, 1994)



### **3. CHAPTER THREE: FACTORS INFLUENCING WOMEN'S ACCESS TO AND UTILIZATION OF SBA**

#### **3.1. Phase 1 Delay: Delay in decision to seek care**

##### **3.1.1. cultural and religious factors**

This sections explores cultural and religious factors which influence women's access to and utilization of SBA in the contexts similar to South Sudan. For pregnant women to access and utilize safe motherhood health services requires input from many actors and it is influenced by a variety of socio-cultural factors, which in many occasions are similar in some contexts.

International Religious Report says that 60% of people in South Sudan practice Christianity, followed by Islam and deferent traditional religions (U.S. Department of State 2012). The same beliefs and religious practices are found among the communities along both sites of the borders between South Sudan and its neighboring countries. A study done on Community Midwifery in South Sudan, showed that some communities give high value to the women who give birth unattended at home (Fellow & Lema 2010); they say that it is a sign of being more women than those who deliver at the health facility attended by SBA. Others believe that those women who fail to progress during birth are unfaithful to their partners and the only cure for them is to confess their infidelity. If a woman dies during birth is her own responsibility because of being infidel to the partner (Fellow & Lema 2010). So it is important to highlight that despite the fact that only very few studies on safe motherhood are done in South Sudan, Cultural, traditional and religious beliefs are widely practiced in the Country.

According to a study done on eastern part of Sudan showed that traditionally people believe if the woman delivers in a public place such as hospital or health center, both the mother and the child could be bewitched. The study also showed that women's previous bad experience during birth at the health facility assisted by SBA, was a contributing factor for women to choose home delivery without SBA (Serizawa et al. 2014; Furuta & Mori 2008) Another study done in Uganda found out that many communities in the rural areas had common traditional beliefs about pregnancy and childbirth; they believe that the pregnancy is a uniquely natural event with inevitable burden for the woman, meant for the continuation of family and community lineage. The study also showed that women's previous bad experience during birth at the health facility assisted by SBA, was a contributing factor for women to choose home delivery without SBA (Kyomuhendo 2003; Chi et al. 2015). According to the traditions, those mothers who give birth at home and survive with

their newborn babies without seeking medical care are praised and given higher consideration in the family and in their communities as well, because they say that the women have endured the danger of giving birth, which they believe, it is beyond human control (Kyomuhendo 2003).

In D R Congo, study showed that the women don't have autonomy when it comes to deciding when and where to seek medical care during birth, because traditionally the power of decision-making in the community and in the households lies with men, mother, mother in-law or any other elderly person in the community; this means a lot of delay and subsequence suffering to the pregnant women, especially when the man is ignorant on issues related to pregnancy and complicating events around the birth process.

As pointed out by Main Thaddeus (Maine 1994) it is fair to conclude that all these socio-cultural and traditional beliefs are the first contributing factors to delaying (Phase 1 delay) pregnant women taking decision to seek medical care on time, especially safe motherhood services, including SBA.

### **3.1.2. Socio-economic factors: Education and household poverty**

Though there are few studies done in South Sudan on skilled birth attendance, a study done by Mugo and colleagues, showed that 70.4% of women with secondary or higher level of education were more likely to use SBA, among women who are able to read 58% of them deliver assisted by SBA, and only 37.3% among those who are not able to read are assisted by SBA (Mugo et al. 2016). Another study done on maternal child health which showed that women, especially uneducated women of the rural areas, are culturally voiceless when it comes to decision-making on issues around reproductive health, including SBA (Mugo et al. 2015). So woman's education is one of the important determinant factors on health seeking behaviour, especially when deciding between skilled birth attendant and delivering unattended at home as identified in the literature.

In a study done in Sudan, it was found out that educated women are well informed on issues related safe motherhood services; so they are empowered to take their own decision on when and where to go for delivery ; educated women are more likely to find job and therefore, their economic position is enhanced and that they are able to pay for the cost of institutional deliveries attended by skilled birth attendant (Ahmed & Mahran 2009). Another study found out that uneducated women and those from poor households who no choice than giving at home without being assisted by SBA, because they cannot afford to pay hospital bills (Serizawa et al. 2014).



According to done by Ntambue, showed that in D R Congo, almost 50% of the studied women's group that studied had secondary education; but nearly 60% of the them did not have jobs. The study recognized that unemployment among women created barrier for pregnant women's access to and utilization of safe motherhood services (Abel Ntambue et al. 2012; Aremu et al. 2012). In Uganda also a study showed how lack of education influence women's access to safe motherhood services because of their limited knowledge about pregnancy, birth and the complications associated with it; it showed that pregnant women and their relatives don't know the importance of seeking care timely in order to prevent unwanted complications during birth. The contribution of education to household was found to be a contributing factor influencing women's access to skilled birth attendance (Kyomuhendo 2003)

### **3.2. Phase 2 Delay: delay in reaching health care services**

#### **3.2.1. Geographical accessibility: distance to the health facility**

According to the MOH, Primary health services delivery at the County level is catered for by an infrastructure of 1377 Primary Health Care Units (PHCUs) and 270 Primary Health Care Centres (PHCCs). In the urban areas, 20% of the PHC facilities are not functioning and 40% of rural areas are not functioning due to shortage of HRH. Only 44% of the rural live within 5 km radius of the PHCUs (MOH 2011). In South Sudan, there is only a 240 km tarmac road from the capital to the border with Uganda; the states are connected to the capital through muddy roads which are inaccessible during rainy season; it is the same in the country side, where access to health facilities is difficult, especially when they are more than 10 km from the communities, with poor roads connections and lack of means of transport. According to Mugo, these are some of the physical barriers found to be influencing women's access to SBA in most part of the country (Mugo et al. 2016).

It is also important to highlight the fact that 90% of South Sudan population lives in rural areas, where 55.4% of the people live below poverty line (MOH 2015); this is a big burden on the rural pregnant women of households when they need to access safe motherhood services, especially skilled birth attendant, because they cannot afford transportation fairs when there one (Mugo et al. 2016). The last 2 ½ years civil war has created a massive displacement of the population and most of the health facilities are closed and health workers have moved to safe locations, leaving the communities without SBA; and the insecurity created by the war across the country is contributing negatively on women's access to SBA, because people are fearing for their lives to go to the next health facility where they can get assisted by a SBA (Mugo et al. 2016).

Though some parts of Sudan, especially big towns, are fairly accessible by road, studies found out that many rural pregnant women are not able to easily access health care services, forcing many pregnant women of poor households deliver at home without SBA; those poor households most of the times cannot afford to pay transportation, even when is available (Furuta & Mori 2008; Ahmed & Mahran 2009).

Study in rural Uganda found out that geographical accessibility of the health facilities and lack of transport are factors influencing women's access to SBA; also rough terrains and poor road networks was found to be affecting women's access to SBA (Wilunda et al. 2014); the same study found out that insecurity due intertribal conflicts, was a contributing factor influencing women's access to SBA, especially when women needed to go to deliver at the health centre located in the territory of the rival tribe (Wilunda et al. 2014).

In Democratic Republic of Congo, although the study found no direct negative link between geographical access to health facilities because most of them are within the walking distance, it has highlighted the fact that women's preference for the place of delivery far away from their place of residence, acts as negative factor which indirectly influenced women's access to SBA due to the distances and the lack of transportation and the cost involved when is available (Abel Ntambue et al. 2012).

### **3.3. Phase 3 Delay: delay in receiving adequate care at the health facility**

#### **3.3.1. Poor quality health services, poor infrastructure and inadequate drugs and other medical supplies**

South Sudan experienced a relative peace from 2005 to 2013, which helped the MOH and other stakeholders to start developing health care system and provide the basic package of health services (BPHS); however, health facilities were still suffering from inadequate and dilapidated infrastructure, with no equipment and lack of medical supplies. The referral system was not established; and there was very limited training of midwives and other medical professional on SBA (MOH 2011). The MOH together with its partners stated to build more health facilities with adequate equipment and medical supplies, but it was interrupted by the civil war that broke out in December 2013. According to Mugo and colleagues, the crisis led the country's health care system to the brink of collapsing (Mugo et al. 2016). Therefore, pregnant women chose to deliver at home attended by untrained TBAs, since there are no SBA, medicines and lifesaving equipment at the HFs.

According to Ahmed and Mahran, one of the factors influencing SBA in Sudan, is the poor quality of health services provided in public health facilities, which discourage pregnant women from going to deliver in the health facility with SBA; they also found out issues related to the general hygiene of the health facilities, including toilets which are contributing factors influencing women access to SBA (Ahmed & Mahran 2009).

In Northern Uganda, an area that was affected by conflict between LRA and Uganda government, which is bordering South Sudan, study found out that one of the factors influencing women's access to SBA was a poor policy of managing medical supplies and stock out of essential medicines at the health facilities (Chi et al. 2015). Other factors which influence women's access to SBA in Uganda, were poor infrastructure of the health facilities which lack lights for night deliveries, stock out of drugs make patients to be referred to private clinics to pay by themselves; also identified was lack of delivery beds, that sometimes women have to wait for delivery bed if it is only 1 on the delivery room. The identified lack of life saving equipment at the health facilities was identified as another contributing factor for the women to access SBA. According to Wilunda, all these factors, combined or separate, cause women to choose home delivery without SBA (Wilunda et al. 2014)

### **3.3.2. Factors related to availability and attitude of the health workers, their inadequate training on SBA and a poor referral system to the next level of care**

According to the MOH, PHC services in the rural areas are provided by lower cadres who have not gone through a formal training; they are not frequently supervised by the CHD and SMOH (MOH 2011). So according to my experience working in PHC setting and during supervision, I have seen some of the health workers misbehaving and asking official payments from the patient. This led pregnant women of poor households to deliver at home with no skilled birth.

In Sudan, the study found out that women chose to deliver at home attended by TBAs, because the VMW leave the women in labour alone at night and go back to their villages if the labour is prolonging into the night and the time of delivery is uncertain. The referral to the next higher level of care is very poor, because of limited skills of the VMWs to refer patients and the lack of ambulances to take the patients for referral. So the women in the villages prefer to deliver attended by the TBAs of their villages, to avoid being left alone (Serizawa et al. 2014)

In Uganda, a study also found out that unmotivated health workers were requesting unofficial payments for safe motherhood services from the patients, these were poor women so they chose to deliver at home because they couldn't afford to pay (Chi et al. 2015).

#### **4. CHAPTER FOUR: EVIDENCE-BASED INTERVENTIONS TO IMPROVE ACCESS TO AND UTILIZATION OF SBA**

It is important to note that there are factors influencing women's access to SBA which derive from the demand side, related to cultural, religious and socio-economic barriers; and factors deriving from the supply side. So this section is going to explore evidence-based practices which have been used to address factors influencing access to SBA, that are implemented in countries with similar context to South Sudan.

##### **4.1. Interventions to address socio-cultural barriers: Social Mobilization**

A study carried out in Liberia on Home Based Life Saving Skills (HBLSS) after the country came out from a long civil war, showed the success of a training program of TBAs and community members on first action to recognize, prevent and manage complications during and after birth. According to the study, HBLSS provided the communities with knowledge and skills to understand the rationale behind the first action to prevent bleeding during birth by rubbing the womb, emptying the bladder and to let the new-born babies breastfeed immediately. Those TBAs and family member that went through the training were able to management pregnant mother women better than those who were not trained. They were able to prevent and contained postpartum haemorrhage and removed retain placenta. This kind of skills led to BCC in the rural communities by mobilizing and empowering the TBAs and family members with skills to save lives of the mothers and the babies (Lori et al. 2012)

##### **4.2. Interventions to address socio-economic barriers to access SBA**

The Ugandan West Nile Districts have been hosting about 140 000 refugees who settled within the rural host community since 1990, with health services being provided by the United Nations High Commission for Refugee (UNHCR). Different INGOs and local organizations, provided the refugee with better health services than the host community; because the NGOs were regularly purchasing enough drugs and other medical supplies; established better referral system with transportation to the higher level of care. The organization recruited enough qualified SBAs that could provide quality services for the refugees, who had higher health per capital than the host communities: \$13.12 and \$4.85 USD, respectively. Since refugee health services were run in parallel with the host community health services, in 1999, the government of Uganda, together with the UNHCR, decided to integrate both host community and refugee health service together in the West Nile region (De Brouwere et al. 2010). The study indicates that from 2003 - 2004, after the

integration and during the implementation, the indication for life threatening obstetrics intervention increased to 0.85% in the host community, while it remained stable at 1.02% among the refugee. According to the study, this integration strategy was welcome by the Uganda government and other stakeholders who were involved in safe motherhood services (De Brouwere et al. 2010).

In Liberia, the establishment of community-supported maternity waiting homes (MWHs) with SBA within the rural communities improved access to BSA, reduced financial burden for poor family because the cost of transport is not a concern. According to the study, the MWH strategy also addressed the issue of traditional barriers that used to prevent pregnant women from going to HFs, because MWHs are within the communities so women do not need to hide. Another advantage found in the study was that SBAs and TBAs were working closely in collaboration and the burden of work was reduced as well; the TBAs learnt a lot from the SBA. And the TBAs were not delivering women at home any more. So according to the study, this strategy improved access to SBA and therefore, reduced maternal mortality (Lori et al. 2013)

### **4.3. Increasing the number of SBA**

In South Sudan, Nelson et al, carried out a study to evaluate training program that trained Frontline Health Workers (FHWs) which was implemented in 7 states in 2010. The training was for TBA at the community level and were given basic on Maternal and new born care and survival (MNCS) package designed for poor setting like South Sudan. They were also equipped with re-usable birth equipment and other clean birth materials. According to the study, the FHWs program helped the FHWs to save lives and appropriately refer complicated case to the high level of care. According to the study, the MOH and other stakeholders considered the program as successful and it just suggested to trained more FHWs to cover the rural areas where are no SBAs (Nelson et al. 2012)

In West Showa Zone of the Federal Republic of Ethiopia, maternal health services improved steadily from 1998 – 2001, after the regional government rolled out a training program on Basic Emergency Obstetric Care (BmOC) and Emergency Obstetric Care (EmOC) in order to increase the number SBA in the region. The training was design to focus on live saving medical and surgical procedure in Obstetric emergencies (caesarean deliveries, hysterectomies, ectopic pregnancies, incomplete abortion, post-abortion care (PAC) (Mekbib et al. 2003).

The training was designed to last from 3 – 18 (depending on the education level of the cadre) and mainly targeted 7 General Practitioners (GP), 5 Health Officers, 4 Midwives and 18 health assistants, all from the Ambo Hospital and 3 health centres of the region. After the program was implemented, maternal health services improved greatly in Ambo Hospital, with caesarean deliveries jumping from 3.7% in 1998 to 17.3% in 2001, the total number of normal deliveries and the number of the cases of admissions due birth complications also increased (Mekbib et al. 2003)

#### **4.4. Addressing quality of care of the SBA**

In order to improve quality of care at the public health facilities by motivating health workers and health institutions, the government of Rwanda introduced Performance Based Financing in the year 2000. This of financing strategy was established in order to achieve targeted outputs which included supervised SBA. The PBF was piloted from 2002 – 2005, in 3 districts of the country and the scaled up nationwide from 2005 onward. As mentioned in the literature, this financing system was set up with 4 categories of actors and functions: the 1st category was targeting those who deliver health services at the health centres; the 2nd category targeted consumer; the 3rd category was for NGO or district authority responsible of contracting with health centres, supervising the health centres and controlling the output and accountable to government as well; and the 4th category was the regulator, which was responsible for assuring quality and prioritize government's policy. The performances of the health centres were evaluated through a series of output indicators: number of ANC visits, number of SBA, and curative consultations. The literature reveals that great improvement of maternal health services was rapidly seen and the progress was impressive. This improvement on maternal health services was achieved through the PBF in combination with other health financing schemes, which address other financial barriers from the demand side, led by the government as part of its political commitment for improving the health of its people (De Brouwere et al. 2010)

## **5. CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

### **5.1. Discussion on framework**

This section will discuss all the issues found in the literature based on the conceptual framework of the Three Delay Model in countries with similar cultural, economic and socio-political context similar to South Sudan. This will help addresses the contributing factors influencing women's access to and utilization of SBA in South Sudan. The three delays will be discussed from Phase 1 to Phase (in this order), but it is important to point out that, despite the fact that all the delays are important to be addressed, this study gives emphasis to phase 2 and 3. Because the literature shows that these two phases of delays can greatly improve access to and utilization of SBA if prioritized and addressed.

#### **5.1.1. Phase 1 delay on decision making to seek care**

##### ***Discussion***

The findings in the literature regarding socio-cultural and religious factors related to phase 1 delay on seeking SBA are similar in all the countries in this study. The findings show that socio-cultural norms and beliefs play a very important role on when and where pregnant women should seek care or be assisted by SBA. It is noted that women don't have power in decision making because it is the husband, mothers, mothers in-law or any elder person of the community who decide whether the pregnant women should deliver at home with TBAs, or go to the health facility to be assisted by SBAs. This is far more worst in the rural areas where traditional beliefs are stronger, with the belief that pregnancy and giving birth are beyond the control of any person and therefore, it should be left to god to decide as the creator of people. Other traditional practices that praise women who do not seek care during delivery are also found to be contributing factors on access to SBA. The literature also showed that lack of education is an important influencing factor in the decision making, because the women are not empowered and therefore, their socio-economic status is low and they cannot get decent jobs that would alleviate their financial situation when it comes to issues related to transportation and other hospital charges, including SBA.

Though there are few studies done in the area of safe motherhood in South Sudan, according to my own experience based on the culture and traditional beliefs, the findings in the literature are similar to the context in the country; because all the

communities at both sides of the borders of the neighboring countries share the same cultural and traditional beliefs. Though 60% of population currently practice Christianity followed by traditional beliefs and Islam, socio-cultural practices still overrule on societal behaviors of South Sudanese; this was identified in the literature in cases where women are accused of being infidel if they have difficulties during deliveries. They can even be left to die if they don't confess their infidelity. It is important to note that these beliefs have nothing to do with religions; these are just societal belief. In addition, due to the current socio-economic situation in the country, the women in the rural areas of South Sudan, majority of them uneducated, have low socio-economic status and usually depend on the husband or other members of the family in terms of finances to pay transport to and from the health facility, as well as other charges for the SBA (Mugo et al. 2016). So if the husband is not present to decide on the finances, the woman has no other option than to deliver at home attended by TBA or family members, with less cost or no cost at all, if the delivery is done by a family member.

According to the literature, evidence-based practices implemented in countries with similar socio-cultural beliefs to South Sudan, have improved the way community's perception of pregnancy and birth. Social mobilization and community's involvement on the activities to promote safe motherhood has been successful. According to the literature, educating communities on health seeking behavior is very important.

### **5.1.2. Phase 2 Delay: delay in reaching health care services**

#### ***Discussion***

Inaccessibility to the health facility has been identified in the literature as a contributing factor to phase 2 delay to reach care. Geographical accessibility is a common issue among the countries in this study. The distance becomes a barrier to access to SBA especially in the villages where there are no health facilities and the pregnant women have to walk long distances to access SBA. According to the literature women usually chose to deliver at home without SBA. The literature identified the issue of rough roads, lack of road networks and bad terrains to be similar between South Sudan and its neighboring countries in the study.

Another identified delaying factor is the lack of transportation, especially in rural areas. The findings have shown similarities between South Sudan and the neighboring countries in terms of geographical accessibility and limited access to transportation means. In South Sudan, pregnant women decide to deliver at home when they are not able to find means of transportation when the health facilities are very far away from home. The findings also showed that the cost of the transportation is sometimes very high and the pregnant women, especially of the



rural setting, cannot afford to pay for it and therefore, they chose to deliver at home without SBA. The lack of HFs near to the communities also identified in the literature as a contributing factor to access to SBA. This barrier makes pregnant women to choose delivering at home to avoid walking for long distances in search of SBA. According to my own experience this is the reality South Sudanese's rural pregnant women go through every time they are going to give birth.

Ineffective referral system is another delaying factor identified in the literature. Lack of ambulances, especially in the rural setting, coupled with limited public transportation have been identified as barrier for the women to timely access SBA. This is similar to the context of South Sudan, in which there are no ambulances to transport patients to the higher level of care, where pregnant women can be assisted by SBAs.

Other factor related to physical inaccessibility to health facilities identified in the literature is insecurity, which is due to conflict between communities or civil unrest in some cases. According to the literature, pregnant women do not seek care in the health facilities located in the rival villages with which they have conflict. This is very similar to South Sudan's context because both conflict between communities and the civil unrest exist concurrently in the country. Because of this issue pregnant women fear to travel long distances to the health facilities in the areas where conflict exists, especially in the rural settings where some times the only way to get to the health facilities is by footing. It is also difficult for the pregnant women to seek care in the health facilities located in the rival villages as identified in the literature.

To address the factors related to phase 2 delay, evidence -based practices in the literature show that provision of health services near to communities reduces the distances that pregnant women have to walk in order to have skilled birth at the HFs. This also address the issue of insecurity due to inter communal conflicts, because women don't have to seek care in the HFs located at the rival villages. All these evidence-based practices improve access to and utilization of SBA, according to the literature. Other identified evidence-based practice is to provide financial assistance to pregnant women of poor households; this strategy helps them pay for the transportation to and from the HFs, as well as for other hospital 's bills. This also improves access to and utilization of SBA.

### **5.1.3. Phase 3 delay in receiving adequate care at the HFs**

#### ***Discussion***

The findings in the literature describe the lack of SBAs as one of barriers to access to and utilization of the SBA, when pregnant women reach the health facilities and they are not assisted. When pregnant women near to the health facilities know that there are no SBA to attend to them in the HFs, they choose to delivery at home. This is an another identical case to the context of South Sudan, where there are very few SBAs.

The literature also identified the attitude of the health workers towards pregnant women as another barrier influencing access to SBA. If the women experience bad treatment from the SBA one time, they may choose not to go back to the HFs and deliver at home instead, unless the women are in life threatening conditions to be taken to HFs. The literature also identified that the attitude of the health workers is related to the fact that they are not motivated and sometimes they unofficially ask payment from the patients, when the pregnant women know that the health services supposed to be given free of charge to them. Though there is no mention of this kind behavior in the few studies done in South Sudan regarding the SBA, this is an issue which I have seen during my work in South Sudan, especially in the rural areas.

During that time, I saw health workers charging patients for the services that the government has paid for. When the pregnant women were not able to pay, health workers start to show bad attitudes towards the patients. This kind of behavior of the health workers reach the surrounding communities to the HFs, and those pregnant women who are not able to pay for treatment will not go to seek SBA in the health facilities.

Another factor identified in the literature is the poor training of the of maternal health workers on skilled birth. Handling of pregnant women with professionalism, applying all the skills learnt on skilled birth creates good relationships between the SBAs and the patients. This helps pregnant women to have confidence and trust on their SBAs, prompting to more access and utilization of SBA services in the HFs. Once the pregnant women experienced mishandling from an incompetent health care provider, those women will not return to the health facility and they deliver at home instead; this also allow communities not go to the HFs once they are aware on how the women are treated by the SBAs.

Quality of care at the HFs was also identified in the literature as a factor influencing women's access to SBA. Bad quality of care is related to lack of essential medicines for safe motherhood and other medical supplies for safe and clean delivery at the HFs. Quality of care is also related to hygiene and sanitation in the HFs, because

when pregnant women see that the hygiene at the HFs is poor, they choose to delivery at home without SBA. This is a similar situation to South Sudan context, where CHWs without skilled birth training are the one providing maternal health services in the PHCUs and PHCCs. Based on my own experience in my work in South Sudan, TBAs are also employed by the government to deliver pregnant women and they are not trained as SBAs. Sometimes the TBAs encourage pregnant women to deliver at home so that they can charge them for the services they offer and the payment is usually low compared to what they could pay if the delivery takes place at the HFs level.

Motivated and well trained adequate number of SBAs as per WHO guidelines has been a successful evidence-based practice to improving access to SBA, if they distributed fairly, favoring the hard to reach communities, according to the literature. The literature shows that if the SBAs are well motivated the relationship between them and patients also improves, therefore, pregnant women have more confidence and trust on the SBA and access to SBA improves as well. According to the literature, the SBA do not longer ask for unofficial charges from the patients. Also regular provision of free of charge essential medicines and other medical supplies for safe motherhood in the HFs is identified in the literature as a successful evidence-based practice to improve access to SBA. Another evidence-based practice identified in the literature is the improvement of the referral system and the provision of ambulances to the HFs, especially those with maternal services. If the referral system to the high level of care is well established and coordinated, emergency cases are assisted on time and it is a motivating factor for SBA at the HFs.

## **5.2. Conclusion**

There is a global consensus to reduce maternal mortality by less than 70/100,000 live births by 2030, as one of the SDGs (World Health Organization 2015). To achieve this target there must be a scaling up of the SBAs, especially in the LMICs. It is important to note that increasing SBAs in LMICs has multiple challenges, which need a global and comprehensive approach, otherwise the set target of reducing MMR is not going to be possible to achieve.

With the independence in 2011, South Sudan inherited poor health infrastructure, weak health institutions, insufficient number of trained SBAs and limited funding for health services. It is important to also point out that South Sudan's 2-year-old civil war which erupted in December 2013, has disrupted the development of a sustainable health care system. Many of the health facilities are closed and the staff have moved to the safer and more job-secure places, leaving many the rural communities without health services, including SBAs. The regular provision medical

supplies and lifesaving essential medicines was disrupted. It has also caused massive displacement of citizens in search of safety, where they end up with poor health services, and no or limited access to safe motherhood services in the IDPs camps across the country.

Poor road network, bad terrains, lack of transportation, household poverty and poor referral system are contributing factors influencing women's access to SBA in South Sudan. Also lack of education among many South Sudanese women, as well as unemployment, especially among the rural women are contributing barrier to SBA.

The literature also has shown that providing free universal coverage of safe motherhood services has contributed greatly in improving access to and utilization of SBA. It is also important to note that the training of more SBAs and providing them with the lifesaving equipment and tool they need for carrying out their jobs, have impressively increased access to safe motherhood services in many of the LMICs. South Sudan has insufficient number of trained SBAs, and most of the available SBAs are concentrated in big urban settings, leaving rural health facilities without SBAs; those who remain in the rural areas have no SBA skills and they are not motivated at all so that they can provide quality health services to the patients.

The literature identified cultural and religious beliefs as contributing factors influence women's access to SBA, by causing unnecessary delays for seeking care on time and therefore, lead to unexpected complications during birth, including maternal or/and infant deaths. All these cultural factors are deeply rooted in many of the South Sudanese communities, which are most of the times, harmful to the health of the mothers and their new-born babies; therefore, they contribute to the high maternal mortality in the country.

Although the SBA findings and the evidence-based best practices identified in this study from other countries are similar to South Sudan Context, the study had limitations on finding enough literature from the neighbouring countries. Therefore, it will be vital to carry out more in-depth study inside the country of the factors influencing pregnant women to access and utilize SBA.

### **5.3. Recommendations**

The following recommendations are based on the study findings and the best evidence-based practices found on the literature about the socio-cultural, geographical and socio-economic factors that influence women's access to and utilization of SBA in other countries with similar socio-cultural, religious, geographical and socio-economic context to South Sudan.

#### **5.3.1. Safe and secure environment for health service delivery**

First, it is important to address the effects of the current political crisis on the provision of health services in South Sudan. Because for these recommendations to be implemented and make a difference on the SBA and reduce maternal mortality, depends on the government's ability to provide a conducive and safe environment. These recommendations cannot be implemented if there is no assurance for peace and stability across the country. Other recommendations depended on improving the economy and prioritizing a sustainable health services delivery, with emphasis on safe motherhood and child health services. Health workers need a secure and safe environment where they can operate and provide services to the population; the pregnant women also need a safe and secure environment in case they have to walk to the health facilities and be assisted by SBA.

All the INGOs and other health partners cannot to operate adequately and effectively if safe access and passage to the rural areas is not guaranteed. All the IDPs have to be repatriated to their respective homes so that they start to rebuild their lives and improve their living condition and regain their dignity at homes. Therefore, the first recommendation is the political commitment from all the stakeholders who are part of the Transitional Government of national Unity (TGNU) to solve the current crisis so that recovery and development of a sustainable health care resumes again.

#### **5.3.2. Role of the national MOH: Scientific research and training**

South Sudan MOH should prioritize health system research in the education programs, because health service provision must be provided through scientific evidence-based information. There is a lot of work to be done in the area of research, especially on the issues related to maternal and child health services. This will help on how the government can plan effective programs that will allow reduce MMR to less than 70/100,000 live births by 2030, as stipulated in the SDGs.

The MOH also has to develop clear guidelines on the training of SBA; increase pre-service training of health workers and work with the partners involved in safe

motherhood services, so that the trainings are carried out in a coordinated fashion using the same curricula.

It is very obvious that 4% of the national budget allocated to health sector is far below “Abuja Declaration”, which stated that each African country should commit 15% of its national budget to the health sector. So it is recommended that the MOH should work with the National Legislative Assembly and the Cabinet, to convince them that 2.2% of the THE will not reduce MMR by 2030; therefore, the parliament should increase by at least 60% or 70% the health allocation in the national budget.

### **5.3.3. Additional financing scheme to support SBA within the current PHC package: Health financing**

As poverty of the poor households is one of the barriers to accessing SBA, the MOH and partners should create a combine funding scheme that at least, should cover the cost of transportation for the poor pregnant women to and from the health facilities. This kind of scheme should have a strict eligibility criteria and must be contracted out to an entity which will make sure that the funding reaches the right beneficiaries. This will create incentives for the pregnant women to attend safe motherhood services without fear of transportation cost to her family and fees at the point of service.

### **5.3.4. Involvement of the state governments in supporting health services: Political commitment at the state level**

It is clear that only 4% of the national budget which is only 2.2% of the THE allocated to health sector is not enough; therefore, each state government should provide additional funding in order to support health service delivery at the state level, especially for maternal and child health services. There is a need to provide hardship allowances to the health personnel working in the remotest areas of the country.

The state governments should also support pre-service recruitment of health workers, so that they return to their respective states when the training ends and start working according to a predefined and signed agreement between the trainee and the government. The state government should also prioritize the support of those actors involved in safe motherhood services in the state.

### **5.3.5. Role of the SMOHs to increase the number of SBAs at all levels of care**

All the SMOHs should increase preservice recruitment of SBA, to scale up the training and support the task shitting programs that favour SBA services. The state governments should establish their own training institutions, which include training

for Basic Emergency Obstetric Care (BEmOC) and Emergency Obstetric and Neonatal Care (EmONC), for the mid cadre such as Clinical Officers (Cos), Medical Assistants (Mas), Midwives, Nurses and Community Midwives (CMWs), as well as for General Practitioners (GPs).

The SMOHs have to fairly distribute the SBAs so that all the rural health facilities get at least a SBA; and they have to be supported with necessary equipment and medical supplies, as well as hardship allowances and accommodation facilities in the rural settings. The SMOHs should make sure that all maternal health indicators are well monitored and the reports are as accurate as possible, so that the progress towards achieving the targets is reliable. The SMOHs should make sure that the quality and continuity of safe motherhood services is not interrupted; the referral system between different level of care is continuously improved, and that the communication and relationship between the communities and health care workers are smooth.

#### **5.3.6. Stakeholders involved in the provision of safe motherhood services**

All the NGO partners which are delivering safe motherhood services across the country should extend their support far more beyond their health facilities where they provide health services; they should work closely with the national MOH on a meaningful training of SBAs. They should increase their budget allocations and prioritize national and state training institutions so that more SBAs can be trained and distributed and fairly distributed, making sure that rural areas benefit more from SBA training.

The NGOs should also support rural public health facilities, which most of the times lack basic obstetric equipment and essential medicines for safe motherhood. Without community involvement the success of increasing access to SBA may become difficult; so the NGOs should also strengthen community based activities that are geared towards improving access to and utilization of safe motherhood services.

#### **5.3.7. County Health Departments (CHDs)**

The government, with its health partners should scale up the capacity building and strengthening of the CHDs, for effectively planning, supervision and monitoring of safe motherhood services. They should be able to collect and analyse maternal health data, and report to the state level on a timely manner and as complete as possible. They should also be able to make sure that maternal units are regularly stock with lifesaving drugs and clean delivery kits.

The CHDs, county health committee and all the stakeholders should hold monthly meetings to discuss about the progress and challenges faced by those who are involved in safe motherhood services. They have to make sure that issues related to transportation and referral of the pregnant women are discussed and the challenges are properly addressed. They should make sure that the relationship between SBAs and the communities works smoothly.

#### **5.3.8. Improve quality of care and the living conditions of the Health workers**

Quality of health services has proven to be very much related positively to health seeking behaviour, so it is important to make sure that all the health facilities should provide maternal health services of quality and that the pregnant women attend all the scheduled services, including deliveries attended by SBA. The services should also be culturally and religiously sensitive and accommodate the needs of the mothers and their families. The health care providers should be friendly and willing to assist the mothers, even when they are not on duty. They should provide health education to the mothers and their families, explaining the importance of attending all the scheduled safe motherhood related visits.

Maternal Health facilities have to be equipped with basic laboratory equipment, blood transfusion facilities and surgical instruments, as well as obstetric monitoring machines should be available. Obstetrical essentials - lifesaving drugs and other medical supplies have to be on stock all time. Enough delivery beds have to be provided for all the health centres that are conducting deliveries; provision of clean water and hygiene and sanitation of the health facility should be prioritized and monitored.

#### **5.3.9. Improve referral system to the next level of care for further management**

Clear referral system guidelines should be developed and distributed to all the health facilities and trained all the health workers on the correct use of the guidelines. SBA at the PHCCs and PHCUs should be the main link between the communities and the secondary or tertiary levels of health services, especially with those related to safe motherhood services.

The presence of an ambulance to provide emergency referral must be prioritized, so that pregnant women don't delay to get to the next level of care when they need it. Effective communication means between different levels of care have to be established.

#### **5.3.10. Community level**

The communities are very important elements of health service delivery everywhere; therefore, they should be fully involved on health planning and be empowered so that they help create awareness about all the issues related to sexual



and reproductive health services (SRHS), emphasizing on pregnancy and the complications around the birth process. The communities should participate in planning on when and how the pregnant women should go to the health facility to be attended by SBA.

All the stakeholders involved in providing safe motherhood services should work with communities on communication change behaviour, so that some of the cultural and religious beliefs that hinder access to and utilization of SBA are addressed properly. The communities have to be empowered properly to be able to take charge on how services are delivered in their areas and hold the health workers to account when they misbehave, as well creating smooth relationships around health service delivery. Boma and village Health committees (BHC/VHC) should also be strengthened so that they effectively participate and be involved in supervising health service delivery in the health facilities of their respective communities.

## 6. CHAPTER SIX: REFERENCES

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## Annex 1: EmOC Program in Upper Nile, South Sudan (2011-2012)



Cos and Nurses during EmOC training in Kisumu, Kenya

One of the 5 EmOC centers rehabilitated/built in Upper Nile



Before



After

EmOC Indicators after implementation of the program (August 2011 - August 2012)

S/N	County	PHCC	Indicator	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Total
1	Maban	Bouny	OPD Cases	258	232	360	390	101	477	996	639	1,529	1,139	426	783	612	7,942
			ANC 1	21	28	19	27	20	28	10	75	71	82	40	148	90	659
			Delivery	3	0	6	25	15	14	17	18	19	21	18	17	14	173
2	Longechuk	Mathiang	OPD Cases	1,518	1,155	967	1,148	1,298	897	1,173	1,596	1,426	1,803	1,100	1,280	1,422	16,783
			ANC 1	37	11	6	9	8	2	12	18	19	15	21	42	69	269
			Delivery	30	0	0	20	10	14	24	20	13	22	13	3	21	190
3	Maiwut	Maiwut	OPD Cases	632	680	634	1,116	1,053	1,427	704	1,083	1,136	1,169	999	947	967	12,547
			ANC 1	13	22	14	23	12	30	12	26	31	37	31	26	136	413
			Delivery	10	16	15	8	15	8	18	12	11	12	10	9	17	161
4	Panyikang	Tonga	OPD Cases	1,115	703	388	480	286	302	447	477	524	440	502	514	472	6,650
			ANC 1	55	42	38	14	15	21	10	20	26	14	25	31	39	350
			Delivery	0	22	19	17	21	16	4	10	13	16	14	11	2	165
5	Ulang	Ulang	OPD Cases	856	866	1,489	1,061	1,291	1,298	2,960	1,686	2,328	1,130	1,384	1,273	1,469	19,091
			ANC 1	44	28	49	27	47	70	112	70	71	41	76	52	57	744
			Delivery	6	6	6	9	13	10	15	12	14	18	18	13	16	156

Source: IMA World Health 2012: [www.imaworldhealth.org](http://www.imaworldhealth.org)