ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

AN ASSESSMENT OF FACTORS AFFECTING THE UTILIZATION OF MATERNAL HEALTH CARE SERVICE DELIVERY: THE PERSPECTIVE OF RURAL WOMEN IN THE CASE OF DUNA WOREDA, HADIYA ZONE

BY: ABAYCHEW ZELEKE

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A Thesis Submitted to the School of Graduate Studies, Addis Ababa University, College of Business and Economics, Department of Public Administration and Development Management in Partial Fulfillment of the Requirements for the Degree of Master's of Arts in Public Administration

BY: ABAYCHEW ZELEKE

ADVISOR: MULUGETA ABEBE (PhD)

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A Thesis Entitled:

An Assessment of Factors Affecting the Utilization of Maternal Health Care Service Delivery: The Perspective of Rural Women In The Case Of Duna Woreda, Hadiya Zone

By: Abaychew Zeleke

We here certify that this thesis submitted by the name confirms to acceptable standards and as such fully adequate in scope and quality.

It is therefore, approved as the fulfillment of the thesis requirement for Master of Art Degree in Public Administration with specialization on Development Management.

Approved by Board of Examiner:

Chair Person, Department Graduate Committee	Signature	Date
Advisor	Signature	Date
Internal Examiner	Signature	Date
External Examiner	Signature	Date

Dedication

This thesis work is dedicated to my lovely parents **Ato Zeleke Temuro/ Abuye/** and **W/ro Dinknesh Legese/Emuye/** who are the essence of love, source of inspiration, engine of courage, a cause for my passionate commitment for releasing my potential and secret for all of my achievements through all aspect of my life.

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I am very glad for getting an opportunity to express my unlimited respect, love and thank to my parents Zeleke Temuro and Dinkinesh Legesse for their love, inspiration, pray and financial support in every parts of my life. Furthermore, I acknowledge the encouragement and intellectual support of my fellow colleagues Daniel Amente, Motuma Mosisa, Wodajo Wami and other unlisted intimate classmates. I will also remember my brotherhood with Abrham Getachew and Assefa Bayisa for their understanding, integrity, thoughtfulness, and for all the humorous events we had together.

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Finally yet importantly, I am also grateful to Duna Woreda Administration Office for sponsoring me the fellowship.

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List of Acronyms

ANC..... Antenatal Care

ASE…….Attitudes - Social Influence –Efficacy

CSA ..... Central Statistical Agency

DWHO ..... Duna Woreda Health Office

EDHS..... Ethiopia Demographic and Health Survey

FAO ..... Food and Agriculture Organization

HMIS ..... Health Management and Information System

HZ..... Hadiya Zone

KTZ ..... Kenbata and Tinbaro Zone

MDG..... Millennium Development Goal

MH..... Maternal Health

MHCS ..... Maternal Health Care Service

MMR..... Maternal Mortality Rate

MOH..... Ministry of Health

MOHFM…….Ministry of Health and Family Welfare

MOHFW…….Ministry of Health and Family Welfare

PADC……. Professionally Assisted Delivery Care

PMTCT ..... Prevention Mother to Child Transmission

PNC ..... Postnatal Care

SBA ..... Skilled Birth Attendant

SMI ..... Safe Motherhood Initiative

SNNPR..... South Nations Nationalities and Peoples Region

SPSS ..... Statistical Package for Social Sciences

SSA..... Sub Saharan Africa

TBA ..... Traditional Birth Attendant

UNFPA ..... United Nations Population Fund

UNICEF..... United Nations International Fund for Children

WHO..... World Health Organization

Abstract

Maternal mortality is a global issue and WHO recommends the use of MHCS to improve the health of women during pregnancy, childbirth and postpartum period. Considering global and national interest in improving maternal health and the fact that Ethiopia is still battling with reducing maternal mortality, understanding the factors affecting the use of MHCS in rural areas is crucial as the women are seen as more vulnerable due to inequity issues. EDHS (2011) show that the utilization of MHCS is low particularly in rural areas. Therefore, the objective of this study was to assess factors influencing maternal health care services utilization among rural women in Duna Woreda, Hadiya zone, SNNPR. A descriptive cross sectional study was carried out in the selected four rural kebeles. The study adopted the quantitative and qualitative approach of data collection and analysis. Structured interview questionnaires and FGDs were administered in data collection. Three hundred forty one (341) study units were sampled for survey using random sampling technique particularly systematic sampling method were employed whereas non random technique were used for selecting 40 FGD discussants. Analysis was done using SPSS version 16. Findings revealed that the use of MHCS is inadequate in relation to the WHO standards. This was evident from findings of the study where ANC visit attendance was 43.2% and the first initiation of ANC visit occur at late stage of pregnancy for almost 86% of the respondents. In the same fashion, only 29.7% of women respondents were deliver their babies at health institutions whereas the use of PADC service has reached to 38% whereas the coverage of PNC service utilization is better than others which accounts to 53.3% in the studied area. The most important socio-economic and health institution related factors were significantly associated with all the maternal health outcomes. Similarly the areal and socio-cultural factors were significantly associated with all the maternal health outcomes as disabling factors. However, no significant association was established among exposure to mass media, privacy and confidentiality of the service, number of children of respondents and the maternal health outcomes. It is recommended that the Health sector engages in increasing the accessibility of health facility, strengthening the capacity of rural health facilities and inter-sectoral collaboration to address women equity issues. Effective integration of TBAs with professional Health personnel in promoting MHCS is needed to improve utilization of MHCS in rural area. Promoting information, education and communication in the community is also recommended to favorably affect the major predictors of MHC service utilization.

CHAPTER ONE

Introduction

1.1 Background of the Study

Maternal health is the health of women during pregnancy, childbirth, and the postpartum period. It encompasses the health care dimensions of family planning, preconception, prenatal, and postnatal care in order to reduce maternal morbidity[1] and mortality[2] (WHO, 2008). Maternal health (MH) is important to communities, families and the nation due to its profound effects on the health of women, immediate survival of the newborn and long term well-being of children, particularly girls and the well-being of families. The improvement of women's health status has become a long term effect on creating healthy generation. As women have a key role in the rearing of children and the management of family affairs their death and illness have cost implications for family and the community because of high direct and indirect costs, the adverse impact on productivity and the tremendous human tragedy that every maternal or child death represents (MoHFW, 2009).

Childbearing is a key part of women's lives and occurs mainly in the adolescent and adult years. Maternal health, therefore, becomes a crucial issue as this is also their most productive time when they strive to fulfill their social, economical and political need as individuals, mothers and family members, and also as citizens of a wider community. At the individual level, women's poor health causes loss of employment, leading to poor income. This contributes to women's persistent poverty and lack of empowerment. Poor maternal health can also have huge costs on families in emotional, health and economic terms (Hauwa, 2011). Maternal mortality and morbidity indicators reflect not only how

[1] **Maternal Morbidity:** Refers to serious disease, disability or physical damage such as fistula and uterine prolapse, caused by pregnancy-related complications (WHO, 2010).

[2] **Maternal Mortality**: is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (WHO, 2010).

well the health system is functioning, but also the degree of equity in public service delivery, utilization of services, and the social status of women (MoHFW, 2009).

Women are important contributors to the global economy. Moreover about 40% of the global labour force and more than 60% of workers in agriculture in sub-Saharan Africa are women (FAO, IFAD, and World Bank, 1997) Since they have a great role on the global economy, maternal death, of a woman in reproductive age, has a further impact by causing grave economic and social hardship for her family and community as well.

Poor maternal health can adversely affect the economic prospects of the next generation. The most tremendous impacts occur when a woman or her baby dies in childbirth, but maternal ill-health can also affect her children's well-being and schooling. Many studies have investigated how the loss of a parent impacts human capital investments in children, and studies in low-income countries have generally found that orphans have worse health and less schooling than other children (Evans and Miguel, 2007). Particularly, the studies also find that the death of a mother tends to affect children more adversely than the death of a father (Case and Ardington, 2006).

More importantly evidence suggests that children, even in wealthier countries, benefit greatly later in life if their mothers are well fed and receive adequate health care during pregnancy: benefits include their subsequent health and schooling (Koren and Jeni, 2012). Direct medical costs, loss of income and other economic contributions also potentially put the family in economic distress. So this implies that maternal morbidities and mortalities directly affect the survival and well-being of children.

Globally, dozens of women have been dying each year due to complications during pregnancy and birth. The vast majority of these deaths are preventable. To counter this world wide problem, the international community adopted several initiatives, programs, strategies which are used in different period of time as a mechanism to reduce this tragedy. The two interventions which are the Save Motherhood Initiatives (SMI) and Millennium Development Goals (MDGs) are widely known. The global Safe Motherhood Initiative was launched at an international conference held in Nairobi, Kenya in 1987 which had been marked as the beginning of concerted international efforts to

reduce maternal mortality. Since the mid-1980s, SMI has achieved greater prominence on the international agenda, gaining substantially increased visibility, resources, and attention. Progress has been achieved on a number of key indicators, including the proportion of pregnant women receiving antenatal care and the proportion of births attended by a skilled birth attendant[3]. Due to the dynamic nature of the world, the international community particularly the United Nation (UN) member States understood that treating global social and economical impediments with different initiatives by individual states effort couldn't bring the intended result (UN, 200O).

So the UN drew up a number of different key global development goals and targets to focus, equalize and harmonize the needs and status of the people all over the world. These goals and targets were known as Millennium Development Goals (MDGs). In 2000, the representatives of 189 nations, including 147 heads of state and Government adopted the Millennium Declaration during the Millennium Development Summit (September 6-8, 2000) of the United Nations.

The Millennium Declaration focused on peace, security and development concerns comprising environment, human rights and good governance. In this connection, the Declaration tried to mainstream a set of interconnected and mutually reinforcing development goals into a global agenda. The international development targets and the development goals were merged together and renamed as the (MDGs) which are eight in numbers.

The eight Millennium Development Goals (MDGs) provide a framework to plan and implement development, and include time-bound targets and indicators by which progress can be measured over the period from 1990 until 2015 when the targets are expected to be met. Each year, the United Nations Secretary-General presents a report to the United Nations General Assembly on progress achieved towards implementing the Declaration, based on the 60 selected indicators and 21 targets aggregated at global and regional levels (UN, 2005).

[3] **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 (WHO, 2005).

Improving MH is one of the health related MDG which was stated as Goal 5. This Goal is a promise to improve maternal health; the reduction of maternal mortality is an outcome chosen to assess progress in this regard. Since then, some remarkable achievements have been registered towards improving maternal health. But the recent global maternal mortality rate reports shows that still needs more effort to achieve by the 2015 particularly in Sub-Saharan Africa (56%) and Southern Asia (29%) since accounted for 85% of the global burden (245,000 maternal deaths) in 2010 (WHO, 2012).

The recent MDG's report indicates that maternal mortality has declined by nearly half since 1990. While progress falls short of achieving MDG 5 by the 2015 deadline, all regions have made significant gains. Despite the ratio declined from 400 maternal deaths per 100,000 live births in 1990 to 210 in 2010, the number of maternal death estimated is 287, 000 in 2010 globally. In developing regions, the proportion of deliveries attended by skilled personnel raised from 55% in 1990 to 66% in 2011. Still, in about 46 million of the 135 million live births in 2011, women delivered alone or with inadequate care. Wide disparities are found among regions in the level of skilled attendance at birth ranging from nearly universal in Eastern Asia and the Caucasus and Central Asia (100% and 97%, respectively) to a low of about 50% in Southern Asia and sub-Saharan Africa, the regions with the highest levels of maternal mortality (UN,2013).

Women who give birth in rural areas are still at a disadvantage in terms of the care they receive. In 1990, 44 per cent of deliveries in rural areas of the developing world were attended by skilled personnel, versus 75 per cent in urban areas. By 2011, coverage by skilled birth attendants increased overall, but the urban-rural gap persisted. More than half (53 per cent) of women in rural areas received skilled attendance at delivery, versus 84 per cent in urban areas. In sub-Saharan Africa and Southern Asia, the gaps were even larger (ibid). This implies that meeting the MDG target of reducing maternal mortality by three-quarters will require accelerated efforts and stronger political support for women.

The case of Ethiopia has not significant difference with most Sub- Saharan African countries. Despite encouraging efforts have been made in minimizing maternal mortality rate, still Ethiopia has registering high burden of maternal mortality rate. In Ethiopia,

maternal mortality rate is among the highest in the world. The maternal mortality ratio was 676 deaths per 100,000 live births in 2011. In other words, for every 1,000 live births, about seven women (6.76) died during pregnancy, during childbirth, or within two months of childbirth. The lifetime risk of maternal death (0.036) indicates that about 4 percent of women died during pregnancy, during childbirth, or within two months of childbirth (ECSA and ICF International, 2012). As a matter of fact, the recent 2012 reports of global organizations (WHO, UNICEF, UNFPA and World Bank) shows that maternal mortality rate reaches to 350 death per 100,000 live birth which is actually still far from the intended target (WHO, 2012).

It is widely accepted that the utilization of maternal health care service delivery is crucial to reduce the maternal mortality and morbidity in particular in places where the general health status of women is low which is more confined with rural Ethiopia (Birmeta et al., 2013). High-quality accessible health care has made maternal death a rare event in developed countries, where only 1% of maternal deaths occur; these complications are often fatal in developing world (WHO, 2012). According to the Ethiopian Demographic and Health Survey (EDHS) report of the 2011indicate that urban women are twice more likely to have received Antenatal care/ANC/ from a health professionals than rural women (76 % vs. 26 %) and also 51% of births to urban mothers were attended by a Skilled Birth Attendant (SBA) and 50 % delivered in a health facility, compared with 5 % and 4 %, respectively, of births to rural women. Moreover this report indicates that 32 % of women only in urban areas received a Postnatal Care (PNC) checkup from a health professional compared with 2 % of rural women (ECSA and ICF International, 2012). This implies the existence of a huge gap in maternal health care services utilization between rural and urban Ethiopia.

The study area of the region (SNNPR) is one of the most backward regions on the utilization of MHCS. According to Ethiopian demographic and health survey (EDHS) report of the 2011indicates that the ANC, SBA, Health facility delivery and PNC utilization was 27.3% ,6.1%, 6.2% and 5.5% respectively (ECSA and ICF International, 2012). These numbers reveal that the study area of the region is highly far from national

and international figures of MHCS progress. Since the study area found at this region, the above facts also express the low utilization of the Duna Woreda MHCS.

Hence considering global and national interests in the maternal health and Ethiopia's high level of maternal mortality in rural area, it is essential to understand the factors that determine maternal health care service utilization in order to find possible solutions for improving maternal health service in rural areas. Therefore, this research assessed the factor that affect the usage of maternal health care service delivery which is provided at local levels of public facilities in rural areas of Duna woreda, Hadiya Zone.

1.2 Statement of the Problem

In sub-Saharan Africa, most people live in rural areas without basic social infrastructure and services. The case of Ethiopia is not far away from this truth. In Ethiopia about 84% of the population lives in rural area, from this section of the society about half of them are women (CSA, 2007). Even though significant numbers of women live in rural area, they didn't get enough consideration for their social wellbeing for several decades particularly in rural places. One of the major impediments in rural area is the minimal availability and accessibility of health facility. Accordingly the rural women are highly vulnerable for different deadly health problems.

Several studies in different parts of the world discovered that the low utilization of MHCS is one of the major causes of maternal death and morbidity in developing countries (Yared and Asnaketch, 2002; Overbosch, 2002; UNFPA, 2005). Prior researches and statistics indicate that the main reason for poor health outcomes among rural women is the non-use of modern maternal health care service by a sizable proportion of women in Ethiopia (Yared and Asnaketch, 2002; Birmeta et al, 2013). Due to this, the Ethiopian maternal mortality ratio is still the highest in the world which was estimated at 350 deaths per 100,000 live births in 2012 (WHO, 2012).

MHCS comprises the ANC, child birth and PNC services in order to prevent and reduce the incidence of maternal morbidity and mortality. ANC is the care given to pregnant women so that they have safe pregnancy and healthy baby. But unfortunately the usage of

ANC in rural areas is very low even when compared to urban areas of Ethiopia. In 2012, analysis of the 2011 EDHS data showed that the use of antenatal care for the most recent birth in the five years preceding the survey was 33.5%. Moreover, there was significant variation of use of ANC service by residence. Women from Addis Ababa tended to exhibit the highest use of ANC (93.6%), followed by women from other urban (76 %) and rural areas (26.4%) (ECSA and ICF International, 2012).

Similarly, this survey showed that the proportion of women who received ANC for their most recent birth in the five years preceding the survey at SNNP regional state was 27.3%. Women living in rural areas were less likely to receive ANC than those women in urban areas (ibid).

Another indicator of the status of MHCS delivery is the place of birth and the proportion of births attended by skilled birth attendants. Recent data shows that 10% of births in Ethiopia are delivered at a health facility of which 9% in a public facility and only 1% in a private facility. The urban births are notably more likely than rural births to be delivered in a health facility which is 50 % to urban and 4 % to rural. The percentage of births delivered in health facility ranges from less than 10 % in SNNP, Afar, Oromiya, Somalia, and Benishangul-Gumuz Regions to 82 % in Addis Ababa. Similarly 10% of births were assisted by a skilled provide and the proportion of births assisted by a skilled birth attendant is 51% of births in urban areas and 4 % of births in rural areas. Conversely, in rural areas the most common birth attendant was relatives or other persons who belong in the village. Regional differences in delivery assistance are large. The proportion of births assisted by a skilled provider ranged from 6% in the SNNP region to 84% in Addis Ababa (ECSA and ICF International, 2012).

The level of PNC coverage in Ethiopia is extremely low. The 2011 EDHS finds that the great majority of women (92 %) with a live birth in the preceding five years did not receive a postnatal checkup. Here the SNNPR utilization of PNC is limited to 5.5% only. Similarly the urban –rural proportion of PNC is 32% and 2% of women checked up from a health professional in urban and rural areas respectively (ibid).

Even if the ratio differences have been considered, there is similar situation with regard to utilization of MHCS delivery since Duna Woreda is one of Ethiopian rural area. As the matter of fact, the study area is also one of the parts of the country to share maternal mortality rate which exist over the country. In Duna woreda MHCS delivery which mainly consists of ANC, Professionally Assisted Delivery Care/PADC/ and PNC services are available from public health centers and public health posts. Low level of maternal health care services utilization in Duna woreda has persisted despite several interventions by the Woreda health office aimed at improving maternal health. The Health service coverage still remains low (69%) which is comparatively under rated based on the MOH standards. This implies that the overall access to maternal health services appears to be somewhat limited, particularly for women with difficult topography and a long distance to health institution. In addition to that the road infrastructure is very poor with most kebeles having lack of vehicle transportation access. On the other hand, the available health institutions lack sufficient skilled birth attendants. The data of woreda health office has also affirmed the presence this problem. It has indicated the severity of problems by indicating the presence of only five midwives nurse at woreda level.

Previous studies have described the socio-demographic factors affecting the use of maternal health services at national level but little is found on how socio-economic, areal, institutional, socio-cultural and psychological factors determine the use of maternal health service among rural women at restricted local area (Habtamu, 2008; Shemsedin, 2009). The use of national statistics data by most researches also limits its applicability to some rural areas with specific characteristics (Kassu, 2012; Mekonnen and Asnaketch, 2002). Because of dynamic nature of women mortality rate, a little is known about the current magnitude of utilization and factors influencing the utilization of these services in the studied area. Generally, little research has been done in the area of MH service utilization with particular emphasis among rural women in the studied area. Therefore, this study was conducted which of socio-economic, areal, institutional, socio-cultural and psychological factors dominantly influence the use of maternal health services among women in Duna woreda.

1.3 Objective of the Study

1.3.1 General Objective

The general objective of the study is to assess the dominant factors affecting the utilization of maternal health care service in rural areas of Duna Woreda.

1.3.2 Specific Objectives

In accordance with the stated general objective, the study has addressed the following specific objectives:

1. To determine the magnitude of antenatal care, professionally assisted delivery care and postnatal care services utilization in the study area.
2. To identify the sources and places of antenatal care, professionally assisted delivery care and postnatal care services available in the study area.
3. To determine the effect of antenatal care and professionally assisted delivery care utilization on using safe delivery and postnatal care services respectively.
4. To identify the dominant socio-economic, areal, institutional, socio-cultural and psychological factors which affect the utilization of antenatal care, professionally assisted delivery care and postnatal care services in the study area through a quantitative survey.
5. To explore experiences and attitudes of the communities on determinants of antenatal care, professionally assisted delivery care and postnatal care services utilization through a qualitative study.

1.4 Basic Research Questions

The study has addressed the following basic research questions.

1. What is the magnitude of antenatal care, professionally assisted delivery care and postnatal care services utilization in the study area?
2. Where the sources and places of antenatal care, professionally assisted delivery care and postnatal care services are available in the study area?

3. What is the effect of antenatal care and professionally assisted delivery care utilization on using safe delivery and postnatal care services respectively?
4. What are the dominant socio-economic, areal, institutional, socio-cultural and psychological factors which affect the utilization of antenatal care, professionally assisted delivery care and postnatal care services in the study area?
5. What are the experiences and attitudes of the communities on determinants of antenatal care, professionally assisted delivery care and postnatal care services utilization through a qualitative study?

1.5 Significance of the Study

Understanding factors that hinders the utilization of MHCS in health facilities are important in order to encourage women to utilize the services; plan for future efficient services that can help to reduce maternal deaths, improve the health and lives of all women before, during and after pregnancy in rural areas; develop appropriate community interventions to improve utilization of maternal care services; and design of maternal health campaign services in the studied area.

As far as this study assessed the factors affecting utilization of rural MHCS utilization, it contributes to better understanding of the factors that make women less attendance in ANC, PADC and PNC services. Similarly the study bought up information on the coverage of MHCS in the study area. The generated information will be used as input in decision-making and actions that will lead to controlling the determinant in utilization of MHCS. Controlled determinant in utilization of MHCS will subsequently, lead to increased utilization of MHCS by the pregnant women and mothers. This will contribute its part on reduction of maternal mortality in Duna woreda. Also at higher level, this study is instrumental in informing policymakers on providing specific local pictures as an important tool for any advanced and appropriate intervention aimed at improving the utilization of MHCS at rural areas.

Findings of the research can also stimulate the interest of other researchers to further investigate the various aspects of the problems which are not fully addressed by this

particular study. Accordingly the study is expected to be a bench mark for the upcoming research investigations.

1.6 Scope of the Study

The scope of the research is restricted to assessing factors that affect the utilization of MHCS delivery with particular perspective to rural women of Duna Woreda, Hadiya Zone in Southern Ethiopia by taking 4 kebeles of the study woreda since it is difficult to assess every kebeles due to the presence of different constraints. Obstetric and emergency related factors are not included in order to manage the study. But socio-economic, areal, institutional, socio-cultural and psychological factors have got particular emphasis in the assessment. The study covered women (reproductive age of 15-49 years) who gave birth at least once in the last three years preceding the survey irrespective of the outcome of delivery in Duna woreda. Also it is not covered other MHCS components such as Family Planning, Prevention of Mother-to-Child Transmission (PMTCT) during child birth and Legal Abortion care services.

1.7 Limitations and Challenges of the Study

As the study included three year retrospective cross-sectional, there is a possibility of recall bias and misreporting of events was likely. So attendance cards were used to get the real information, but in the absence of health documents the data collectors were trying to provide sufficient time in order to recall the events.

For FGDs the researcher had plan to include woreda health office administrators as informants to assess the provider's point of view but they were not included because of their absence due to general meeting of the district. This could have provided relevant information from their experience and strengthened the findings of the study.

While caring out this research, the researcher faced mainly constraints of budget during data collection process. Due to large number of respondents, it needs a large amount of money to duplicate survey questionnaires. Similarly, during the data collection the researcher and enumerators are challenged by difficult nature of landscape and long distant travel.

1.8 Organization of the Study

This study is organized into five chapters. The first chapter presents the introductory part of the study, which consists of background, the statement of the problem, objectives, research questions, significance, scope, limitation of the study, and organization of the thesis. The second Chapter elicits an overview of the state of the art analysis of the existing literature. The third chapter discusses the methodological aspects of the paper. The fourth one presents the research findings obtained through the study methodology by showing how each of the research questions has been answered and how these findings together contribute to the main purpose of the study. The final chapter ends the study with summary of findings, conclusions and a set of suggestions derived from the research findings.

Moreover, references and appendices are included which contain the questionnaires of the survey formats that used to collect primary data for this work and other supplementary documents of the study.

CHAPTER TWO

Review of Related Literature

This part of the study presents the theoretical and empirical findings that are relevant to the research topic and for drawing conceptual frameworks. Relevant studies in both developing and developed countries are reviewed.

Before discussing the factors influencing MHCS, this chapter describes: the concepts, components and importance of MHCS. On the middle of the discussion, the researcher discussed about international community intervention to improve the MHCS; on that Save Motherhood Initiative and health related Millennium Development Goal's are discussed. Review of the models from existed research is then depicted, followed by construction of the framework that will be used in explaining the factors of MHCS utilization. The framework covers all possible factors influencing MHCS utilization. Socio-economic variables, such as age, birth order, education, occupation, women's status and women's exposure to media are considered. Health institution related variables like personnel skill, resource, attitude of personnel and client satisfaction on the quality of the service are similarly addressed on the discussion. Aspects relating to area related variables, such as nature of road, access to vehicles, and cost of transportation are then discussed. Finally, since this research particularly emphasizes in rural area, it should inculcate the socio-cultural and psychological relating factors which are women and husband attitude on the service, religious assumptions and cultural beliefs.

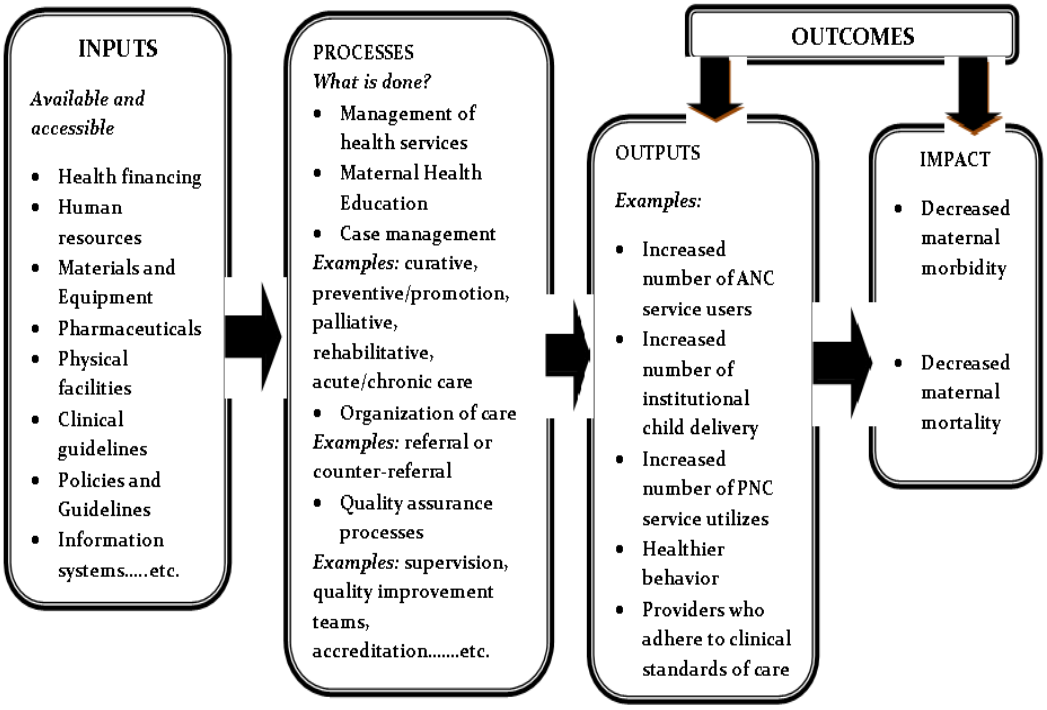
2.1 The Concept of Maternal Health Care and Its Service Delivery

In a more compressive way maternal health (MH) is a state of complete physical, mental and social well being of the mother; it is a resource for everyday life of the mother (Family Care International, 1997). WHO defines the MH as the health of women during pregnancy, childbirth, and the postpartum period. It encompasses the health care dimensions of family planning, preconception, prenatal, and postnatal care in order to reduce maternal morbidity and mortality. Preconception care can include education,

health promotion, screening and other interventions among women of reproductive age to reduce risk factors that might affect future pregnancies. The goal of prenatal care is to detect any potential complications of pregnancy early, to prevent them if possible, and to direct the woman to appropriate specialist medical services as appropriate. Postnatal care issues include recovery from childbirth, concerns about newborn care, nutrition, breastfeeding, and family planning (WHO, 2008).

On the other way, the MHCS delivery is the way inputs are combined to allow the delivery of a series of interventions or health actions [to improve the women health status which is provided in reproductive age groups] (WHO, 2001). So MHCS delivery can be represented in a system's perspective, with inputs, processes, outputs, and outcomes (see Figure 2.1). Some of the core inputs that are deemed necessary for health care delivery are financial resources, competent health care staff, adequate physical facilities and equipment, essential medicines and supplies, current clinical guidelines, and operational policies. Increased inputs lead in to desired health outcomes and enhanced access to services. Ensuring availability of health services that meet a minimum quality standard and securing access to them are key functions of a health system (Shenghelia, et al., 2003). Processes are the actions that used by the system to convert […] inputs from the environment into products or services that are usable by either the system itself or the environment. Examples include, thinking, physical examination of patients, diagnosing, planning, decision-making, writing prescription, taking vital signs, operating on a patient, constructing, sorting, making a speech, sharing information, meeting in groups, discussing, etc. On the other hand, output is the product or service which results from the system's throughput or processing of technical, social, financial & human input. Examples include health services, better [maternal] health, documents, decisions, laws, rules, money, assistance, cars, clothing, bills, etc (Yaseen, 2007).

Figure 2.1: Systemic View of Maternal Health Care Service Delivery

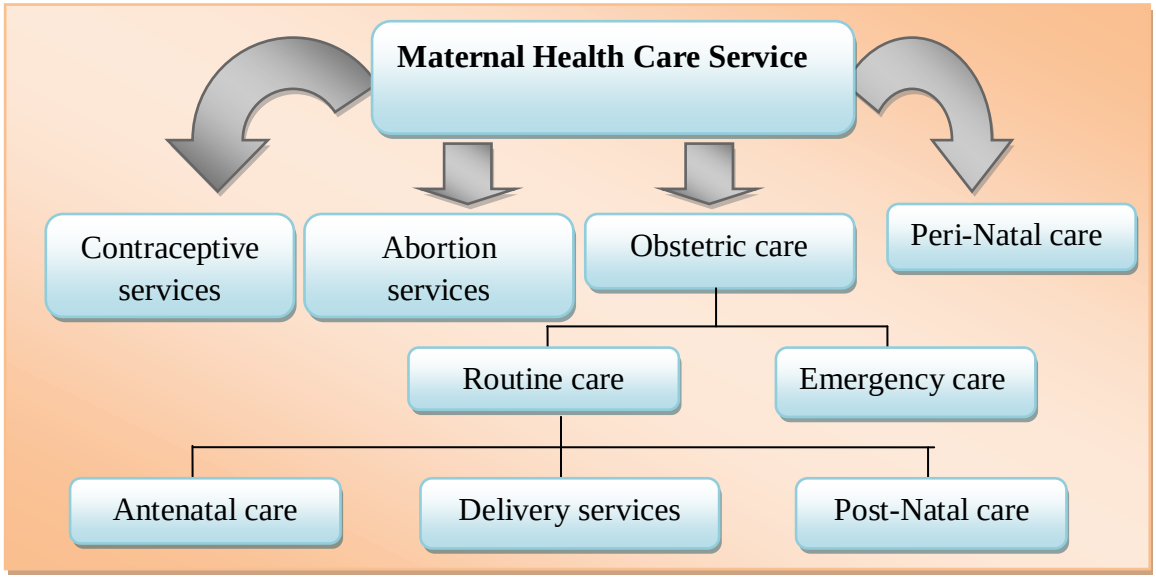


***Source**: Adapted from Massoud R., et al., (2001) and modified by researcher*

2.2 Components of Maternal Health Care Service

MHCS delivery comprise of a wide range of health services given to the mother before pregnancy, during pregnancy, labour and after delivery. MHCS include the following, preconception care, Antenatal (ANC), Prevention of Mother to Child Transmission of HIV (PMTCT), safe delivery (intra-partum care); post natal care (PNC) and emergency obstetric care/management of obstetric complications (Dyogo, 2011). These can be stated in a compressive and organized way as follows (see figure 2.2).

Figure 2.2 Components of Maternal Health Care Services



***Source**: Penn-Kekana & Blaauw, (2002)*

Abortion services, contraceptive service and emergency care are important determinants of maternal mortality and of the rights afforded to women; these components however, are not discussed in detail in this study as they fall outside the major focus of this study. Peri-natal outcomes also provide a true reflection of maternal healthcare services, but this study does not investigate peri-natal outcomes. Instead, this research mainly focuses on ANC, delivery service and PNC.

2.2.1 Antenatal Care

Antenatal care (ANC) is the health care of women throughout the course of pregnancy. It becomes considered as the primary health care's[4] that given to pregnant mothers in order to have safe pregnancy and healthy baby. Because all pregnant women are at risk of developing complications and because many of these complications are unpredictable, it is important to ensure that all pregnant women have access to preventive interventions,

[4] **Primary health care**: Essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-determination (Alma Ata international conference definition)

early diagnosis and treatment for problems, and emergency care when needed. It is now emphasized that ANC should focus on early detection and skilled and timely interventions for factors having proven impacts on maternal and infant outcomes. Good care during pregnancy is important for the health of the mother […]. Pregnancy is a crucial time to promote healthy behaviors and parenting skills. Good ANC links the woman and her family with the formal health system, increases the chance of using a skilled attendant at birth and contributes to good health through the life cycle. Inadequate care during this time breaks a critical link in the continuum of care, and affects both women and babies (WHO, 2002).

It is a basic instrument to protect the mother and child life during pregnancy (its effect may extend in to long life of them). It is important in minimizing complications of pregnancy, labor, the post partum and neonatal periods. Good prenatal care helps ensure the health of both the mother and the baby. Regular checkups and prenatal testing are important parts of prenatal care. It is part of the primary health care services for pregnant women and management of the fetus. The main purpose of ANC is to care for pregnant mothers and to have all births attended by trained health workers, and to identify pregnancies where risk is high and provide special care for the mother and the infant. There is a large body of evidence from routine statistics and special studies to suggest that women who have received prenatal care experience lower rates of maternal mortality (Mesfin, 2003).

Many women living in developing countries including Ethiopia are at risk of pregnancy-related complications including hemorrhage, obstructed labor, pre-eclampsia/eclampsia, and infection. Problems that may complicate pregnancy and delivery, such as anemia, hypertensive disorders, and multiple pregnancies, also need to be detected and managed. In many developing countries, the presence of malaria, HIV, or syphilis can also harm a pregnancy, as can experience of intimate partner violence. If detected and managed early and correctly through accessing high-quality ANC services, pregnancies can be made safe and result in healthy babies.

The strength of ANC, therefore, lies in its role for early identification of complications and also for providing information on danger signs and how to handle them (Yuster, 1995). Furthermore, other potential benefits of ANC are counseling on nutrition and healthy pregnancy/delivery behavior; provide tetanus immunization, malaria prophylaxis, iron and folic acid tablets and helping women to select a Skilled Birth Attendant (SBA) or institution to deliver their babies in. ANC also makes it possible to screen for sexually transmitted diseases such as HIV infection, which is known to have taken its fee in much of the developing world. Counseling and education of pregnant women about their own health and that of their children is also an opportunity that can be incorporated into ANC (Adamu, 2011). Additionally routine ANC visit may also raise awareness about the need for care at delivery or give women and their families a familiarity with the health facilities that enable them to seek help more efficiently during a crisis (Monica, Nyovani and Roberto, 2000).

The WHO recommends a minimum of four ANC visiting is needed to accomplish the essential level of ANC for every pregnant woman based on the time references of fetus development. Even if recent empirical evidence has shown that four visits suffice for uncomplicated pregnancies, more visits are only recommended in case of pregnancy complications (Dana, Noreen and German, 2003). Similarly, recent research indicates that a greater number of visits, though not beneficial for low risk pregnancies, are recommended for women with higher risks of obstetric complications (Adamu, 2011). However, the capability of ANC in improving MH outcomes is greatly reduced in the absence of a feasible health and referral system where women can receive emergency obstetric care when needed.

While research has demonstrated the benefits of ANC through improved health of mothers and babies, the exact components of ANC and what to do at what time have been matters of debate. In recent years, there has been a shift in thinking from the high risk approach to focused ANC. The high risk approach intended to classify pregnant women as “low risk” or “high risk” based on predetermined criteria and involved many ANC visits. This approach was hard to implement effectively since many women had at least one risk factor, and not all developed complications; at the same time, some low risk

women did develop complications, particularly during childbirth. Focused or goal oriented ANC services provide specific evidence-based interventions for all women, carried out at certain critical times in the pregnancy. Accordingly WHO defines a new model of ANC based on four goal-oriented visits. This model has been further defined by what is done in each visit, and is often called *focused antenatal care* (Ornella, et al, 2011). (See table 2.1)

Table 2.1: Focused Antenatal Care (ANC): The Four-Visit ANC Model Outlined In WHO Clinical Guidelines

Rage of weeks	Goals
First visit (8-12 weeks)	• Confirm pregnancy and estimated date of delivery; classify women for basic ANC (four visits) or more specialized care. • Screen, treat and give preventive measures. • Advice and counsel.
Second visit (24-26 weeks)	• Assess maternal and fetal well-being. • Exclude pregnancy induced hypertension; and anemia. • Advice and counsel.
Third visit (32 weeks)	• Assess maternal and fetal well-being. • Exclude pregnancy induced hypertension; and anemia, multiple pregnancies. • Give preventive measures. • Review and modify birth and emergency plan. • Advice and counsel.
Fourth visit (36-38 weeks)	• Assess maternal and fetal well-being. • Exclude pregnancy induced hypertension; and anemia, multiple pregnancy, malpresentation. • Give preventive measures. • Review and modify birth and emergency plan. Advice and counsel.

***Source**: Ornella, et al, 2011 and modified by researcher*

2.2.2 Professionally Assisted and Institutional Delivery

Professionally Assisted delivery care is a concept which encompasses the presence of health professionals during delivery and also an enabling environment where the equipment, drugs and other supplies required for effective and efficient management of obstetric complications are available (UNFPA, 2003). It 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. Traditional birth attendants[5] (TBA) trained or not, are excluded from the category of skilled attendant at delivery (WHO, 2004). Skilled birth attendants (SBA) are trained to recognize the signs of complications early enough to intervene and manage the situation or make quick referrals to higher levels of care.

There are two aspects of the delivery services that are considered in this analysis-whether the delivery was at home or at a health care facility and whether a trained person was present to assist in the delivery. Social norms in rural areas are such that home delivery is preferred than institutional deliveries. This isn't problem by itself, if hygienic and appropriate delivery practices are used either by traditional helpers or by a professionally trained person who makes home visits for helping with the delivery (kassu, 2012).

In developed countries and in many urban areas in developing countries, skilled care at delivery is usually provided in a health facility. However, births can take place in a range of appropriate places, from home to tertiary referral center, depending on availability of health professional. Home delivery may be appropriate for a normal delivery, provided that the person attending the delivery is suitably trained and equipped and that referral to a higher level of care is an option (Population Council, 2010). SBA are trained to recognize the signs of complications early enough to intervene and manage the situation or make quick referrals to higher levels of care. Because every delivery may have complications, the emphasis is to promote use of skilled and trained delivery care providers and to ensure that all women have access to lifesaving emergency interventions at the time of labor and delivery.

In many countries, deliveries occur at home attended by TBAs. Previously, there were extensive efforts and funds expended toward upgrading the skills of TBAs, but safe

[5] The WHO defines a TBA as a person who assists the mother at childbirth and who initially acquired her skills delivering babies by herself or by working with other birth attendants. Also TBAs are usually old and experienced women who see their assignments primarily as contributing their skill for the good of the community (WHO, 1992).

motherhood program initiatives have concluded that, in almost all cases, "The level of skill among 'SBA' is lower than is 'safe' for safe motherhood. In-service training cannot improve the skill level of trained providers to the level of competency desired in all skills (WHO, 1992). With this conclusion has come a shift in the definition of qualified delivery providers to "persons with midwifery skills who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose and manage or refer complicated cases" (Koblinsky, 2000). And similarly WHO recommends that good quality delivery care should be managed by a skilled attendant who should provide good quality care on an ongoing basis, with hygienic and safe care; recognize and manage complications, including life-saving measures for mother and baby; and refer promptly and safely when higher level care is needed (WHO, 1995). Generally TBA's, who are not formally trained, do not meet the definition of skilled birth attendants.

The presence of skilled birth attendances at all births is regarded as, probably, the single most critical intervention for reducing pregnancy-related deaths and disabilities (Bell, *et al*, 2003). This is illustrated by historical evidence from industrialized countries where maternal mortality was reduced by half following the introduction of professional midwifery care at birth, in the early 20th century. Improved access to hospitals after the Second World War further reduced maternal death rates, subsequently resulting in the impressive low levels currently recorded (Brouwere, et al, 1998). For this reason, the proportion of births attended by a skilled health professional is currently being used as one of the indicators for monitoring progress in the achievement of the MDG 5.

2.2.3 Postnatal Care

Postnatal Care (PNC) is health care that given to the mother and baby immediately after childbirth up to six weeks period. The postnatal period is critical to the health and survival of a mother and her newborn which most vulnerable time for both is during the hours and days after birth. Lack of care in this time period may result in death or disability as well as missed opportunities to promote healthy behaviors, affecting women, newborns, and children. Every year in Africa, at least 125,000 women and 870,000 newborns die in the first week after birth, yet this is when coverage and programmes are

at their lowest along the continuum of care (WHO, 2012). Evidence from Bangladesh indicates the majority of maternal deaths occur between the third trimester and the end of the first week after pregnancy. The time of highest risk of death is the same for mothers and for newborns on the day of delivery and over the next few days after delivery. These data offer compelling evidence that integrated maternal and newborn PNC during the first few days after delivery should be provided to all newborns and their mothers as a concerted strategy to improve survival of both (Save the Children, 2007).

The death of a mother exposes her newborn child to high risks of morbidity and mortality. Thus, receiving PNC can make the difference between life and death for both mother and child. In developing countries, the most common causes of maternal deaths during the postpartum period are haemorrhage, infections and hypertensive disorders (Gill, et al, 2007). It is particularly important to detect and immediately manage problems that may occur after delivery, such as hemorrhage, and Sepsis/infection which is responsible for about 34% and 10% of maternal deaths in Africa respectively, virtually all occurs during the postnatal period (WHO, 2008). Technically, all of these conditions are treatable. Through examination of the mother after childbirth, PNC can identify these conditions and any other life-threatening or devastating conditions that may require urgent medical attention.

A number of other significant services and information can be provided during PNC. These include family planning services where information about child spacing and techniques to avoid unwanted pregnancies can be given. Other services and information, such as maternal and child nutrition, immunization, hygiene and sanitation, prevention of infections including HIV and other Sexually Transmitted Infections can all be provided during PNC (USAID, 2009). Postpartum care can only be of good quality if it includes identification and management of problems in mother and newborn, counseling, information and services for family planning and health promotion for the newborn and mother, including immunization, advice on breastfeeding, and safe sex (WHO, 1995).

In general there is increasing emphasis placed on ensuring that women receive PNC within a few days of delivery for early diagnosis of postpartum complications. PNC also

provides an opportunity to counsel the new mother on family planning and on caring for herself and her newborn, as well as to assess the newborn for any problems.

2.3 Importance of Maternal Health Care Service

The MHCS that utilize by women during their pregnancy, delivery and after delivery is important for the survival and well being of both the mother and the child. Several empirical evidences indicate that MHCS is mandatory to reduce maternal mortality and morbidity directly through detection and treatment of pregnancy related illness or indirectly through detection of women increased risk complication of delivery and insuring that they delivered in a suitable equipped facility (Guilleremo, et al, 1992). MH is important to communities, families and the nation due to its profound effects on the health of women, immediate survival of the newborn and long term well-being of children, particularly girls and the well-being of families. As women have a key role in the rearing of children and the management of family affairs , their death and illness have cost implications for family and the community because of high direct and indirect costs, the adverse impact on productivity and the tremendous human tragedy that every maternal or child death represents (MoHFW, 2004).

Poor MH can adversely affect the economic prospects of the next generation. The most tremendous impacts occur when a woman or her baby dies in childbirth, but maternal ill-health can also affect her children's well-being and schooling. Many studies have investigated how the loss of a parent impacts human capital investments in children, and studies in low-income countries have generally found that orphans have worse health and less schooling than other children (Evans and Miguel, 2007). Particularly, the studies also find that the death of a mother tends to affect children more adversely than the death of a father (Case and Ardington, 2006).

Evidence suggests that children, even in wealthier countries, benefit greatly later in life if their mothers are well fed and receive adequate health care during pregnancy: benefits include their subsequent health and schooling (Koren and Jeni, 2012). Direct medical costs, loss of income and other economic contributions also potentially put the family in

economic distress. So this implies that maternal morbidities and mortalities directly affect the survival and well-being of children.

Several scholars stated that economic development can contribute to better health – wealth brings better nutrition, and wealthier countries have greater capability to invest in medical care and public health measures. However, there are reasons to believe the relationship also runs in the other direction, i.e. health improvements can contribute to economic development (Sachs, 2001). Health improvement enhances productivity, improve development outcomes for future generations, and make institutions function better (World Bank, 2012). Recent reporting from a major longitudinal study in Bangladesh shows that a combined family planning/maternal and child health programme contributed, not only to participant families having fewer children and better health outcomes, but also to higher incomes and increased assets (Joshi and Shultz, 2007). Meanwhile preliminary results from a series of ongoing international studies show family planning playing a role in increasing economic development (Josh, et al., 2009).

Most importantly studies indicate that women are important contributors to the global economy. Moreover about 40% of the global labor force and more than 60% of workers in agriculture in sub-Saharan Africa are women (FAO, IFAD, and World Bank, 1997). Since they have a great role on the global economy, maternal death, of a woman in reproductive age, has a further impact by causing grave economic and social hardship for her family and community as well.

So strengthening MHCS delivery is not an option, it is fundamental to create a better world to whole society. In line with this, it is crucial for achievement of the health-related MDGs, which include the delivery of interventions to reduce child mortality, maternal mortality and the burden of HIV/AIDS, tuberculosis and malaria since maternal health is base of all.

2.4 International Initiatives on the Improvement of Maternal Health Care Service

2.4.1 Global Safe Motherhood Initiative

The global Safe Motherhood Initiative (SMI) was launched at an international conference held in Nairobi, Kenya in 1987 which had been marked as the beginning of concerted international efforts to reduce maternal mortality. Since that time, reducing maternal mortality has continued to be the aim of many international health programs. Its aim was to draw attention to the dimensions and consequences of poor MH in developing countries, and to mobilize action to address high rates of death and disability caused by the complications of pregnancy and childbirth. The goal set out by the Initiative, and later adopted at several UN conferences, was to reduce maternal mortality by half by the year 2000. The Initiative is sponsored by a group of international agencies that includes the United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), the World Bank, the World Health Organization (WHO), International Planned Parenthood Federation (IPPF), and the Population Council. This group is called the Safe Motherhood Inter-Agency Group (IAG), and is currently chaired by Institute for Pre and Perinatal Education (IPPE) (Family International, 1997).

Safe Motherhood Strategies were developed based on pregnancy, antenatal, delivery and the postpartum periods. The specific activities include the provision of antenatal care, skilled assistance for normal deliveries, appropriate referral for women with obstetric complications, postnatal care, family planning and other reproductive health services. The four basic principles or pillars of the Safe Motherhood Strategy are:

1. Family planning: providing information and services.

2. Antenatal care: early detection and providing appropriate care and treatment.

3. Clean and safe delivery: providing trained skilled birth attendants and equipment.

4. Emergency obstetric care: providing basic and essential obstetric care.

In addition the above activities, training of TBAs, community health workers and provision of clean delivery kits to promote clean home deliveries and strengthening linkages between different levels of health facilities and the community are also considered key strategies to reduce maternal mortality (UNFPA,2005).

The SMI has accomplished a great deal in its [implementation]-though much remains to be done. "Safe motherhood" is universally defined as one of the central components of reproductive health, and countries around the world have initiated local or national efforts to improve and expand MHCS. Technically, a great deal has been learned about what strategies are (and are not) effective in reducing maternal mortality. With this initiative the growing need for more emphasis on MHCS was being addressed as it called for global initiatives to intensify policy intervention for maternal mortality (Hogan et all, 2010). The focus on maternal mortality became an important issue in international aid and health services research during this decade (Brouwere, et al, 1998). In the following years the focus was placed on the theme reproductive health as international commitment continued to contribute to the reduction of maternal mortality.

Although SMI has remained high on the political agenda, the scope of what constitutes "safer" motherhood has changed considerably. International conferences, such as the Cairo Programme of Action, were held, and the goal to reduce the MMR was set (AbouZahr and Wardlaw 2001). The approach to improving MH changed as well as during the International Conference on Population and Development in 1994 the focus on maternal health transferred from a demographically driven approach to a human rights approach (Potter, et. al, 2008). A major factor that has been recognized as achievement was the incorporation of a human rights approach into the definition of Safe Motherhood following the agenda set at the International Conference on Population and Development (ICPD). By defining maternal death as social injustice, programs for "Safer Motherhood" are able to invoke a much broader range of political, social, and economic initiatives than was previously possible (UNFPA, et al., 1997). Policies and strategies to achieve safe motherhood have also changed as knowledge and understanding about the determinants of maternal health have become clearer. In the Initiative's early years, the focus was on maternal death as a result of poor or inaccessible medical care. But then recognition was

given to the range of direct and indirect problems that contribute to poor maternal health: lack of education for girls; early marriage; lack of access to contraception; poor nutrition; and women's low social, economic, and legal status (Starrs, 2006).

Since the mid-1980s, SMI has achieved greater prominence on the international agenda, gaining substantially increased visibility, resources, and attention. Progress has been achieved on a number of key indicators, including the proportion of pregnant women receiving ANC and the proportion of births attended by a SBA. Since 1990, the proportion of women receiving antenatal care in developing countries has increased by 20%, and more than 50% of women received at least the four recommended antenatal visits. Between 1990 and 2003, the presence of a skilled attendant at delivery increased significantly, from 41% to 57 % in the developing world as a whole (UNFPA, 2005).

Despite the widespread global commitment to reduce maternal mortality, lack of progress in achieving the goals of the SMI is multifaceted and can be attributed to many factors ranging from misconceptions, lack of political commitment, health system's general failure, inadequate investment in effective strategies, lack of clear technical priorities, subsequent implementation of poorly-focused and ineffective interventions and insufficient information (UNFPA, 2005).

However, it was not until the development of the Millennium Declaration the reduction of maternal mortality became not only a focus point to the international community but a high priority, strengthening the international commitment. On the other hand, the cause of maternal mortality was not reduced only targeting on the improvement of maternal health. The international community latter on understood the need of holistic approaches for world developmental problems. Currently, positive trends in the improvement of maternal health due to the influence of the Millennium Declaration can be noticed (Hogan, et al, 2010).

2.4.2 Millennium Development Goals /MDGs/ as A Framework for Global Strategies to Improve Maternal Health

When the new century began, the international community took a fresh look at its development agenda. This reassessment has been undertaken from a comprehensive perspective and is framed by the agreements reached at the global conferences on social issues. In September 2000, 189 heads of state adopted the UN Millennium Declaration and endorsed a framework for development. The plan was for countries and development partners to work together to increase access to the resources needed to reduce poverty and hunger, and tackle ill health, gender inequality, lack of education, lack of access to clean water and environmental degradation (UN, 2008; WHO, 2009).

The Millennium Declaration is the political manifestation of that commitment. The Declaration serves as the cornerstone for a development agenda founded upon values that will serve as a deep source of inspiration for international relations in the twenty-first century: freedom, equality, solidarity, tolerance, respect for nature and common but differentiated responsibilities. In order to translate these shared values into action, the Declaration addresses numerous topics of collective interest. Each section sets out objectives that form the ethical and political framework for a partnership between developed and developing countries. The partners forming this alliance are striving to focus world attention on the need for equity in the light of the asymmetries existing among citizens and nations. The multilateral agendas thus returned to a comprehensive approach to development with a view to ensuring universal respect not only for civil and political rights, but also for economic, social and cultural rights based on the belief that all human beings have the same rights, regardless of sex, skin color, language, culture or economic and social power (UNDP, 2005).

The declaration established eight Millennium Development Goals (MDG), set targets for 2015. (See table 2.2) Quantitative, time-bound targets were set in order to establish a stable and standardized system for follow-up, although it was recognized that quantitative monitoring of progress would be easier for some targets than for others. To facilitate periodic monitoring, 1990 was taken as the baseline year, and the period set aside for

reaching those targets thus spans the decade in which so many United Nations conferences focusing on social issues took place and identified a number of indicators for monitoring progress, several of which relate directly to health (UNDP, 2005).

Table 2.2 Millennium Development Goals /MDGs/

Millennium development Goals		**Goal Targets for 2015 (from 1990 level)**
Goal 1	Eradicate extreme poverty and hunger	✓ Halve the fraction of those with income < $1/day ✓ Halve fraction of people who suffer from hunger
Goal 2	Achieve universal primary education	✓ Universal primary schooling completion
Goal 3	Promote gender equality and empower women	✓ Eliminate gender disparity in schooling (preferably by 2005)
Goal 4	Reduce child mortality	✓ Reduce the under-five mortality rate by 2/3
Goal 5	Improve maternal health	✓ Reduce the maternal mortality rate by ¾
Goal 6	Combat HIV/AIDS, malaria and other diseases	✓ Halt and begin to reverse spread of HIV/AIDS, malaria and other major diseases
Goal 7	Ensure environmental sustainability	✓ Halve the ratio of people without access to safe drinking water and basic sanitation
Goal 8	Develop a Global Partnership for Development	✓ Seven targets related to: trade, debt, youth, technology, drugs affordability, and special needs.

Source: *Center for Global Development, (2005)*

Health is at the heart of the MDGs. Goals 4, 5 and 6 specifically focus on health, but all the MDG have health-related aspects; achieving health goals will not be possible without progress on food security, gender equality, the empowerment of women, wider access to education and better stewardship of the environment (Haines, 2004; Wagstaff *et* al, 2006; WHO, 2009). These goals aim to encourage development by improving social and economic conditions in the world's poorest countries. Under the United Nations

International Development Goal 5 “Improve Maternal Health”, the reduction of maternal mortality was adopted by the International Monetary Fund (IMF), the World Bank (WB), Organization for Economic Cooperation and Development (OECD), and was supported by 149 heads of state at the Millennium Summit in 2000 (AbouZahr & Wardlaw, 2001).

This MDG for 2015 includes target 5.A: “Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio” and Target 5.B: Achieve, by 2015, universal access to reproductive health (UN, 2012). This development goal is strongly interlinked with other development goals namely, MDG1 “Eradicate extreme poverty and hunger”, MDG3 “Promote gender equality and empower women”, MDG4 “Reduce child mortality rates” and MDG6 “Combat HIV/Aids, malaria and other diseases”. Therefore the MDG’s can be somewhat seen as a holistic approach to improving women’s overall wellbeing. By decreasing the maternal mortality rate (MMR) the economic effects for poor people will be reduced as well as the gap between maternal deaths of women from high and low socio-economic groups (Filippi, et al., 2006). As low education levels and low statuses of women are often seen amongst those groups that have high maternal mortality rates, working on women’s empowerment is expected to have a positive influence on decreasing the MMR. Because intra-partum and early postpartum strategies will not only improve maternal survival but will also have a positive influence on the survival of young children, MDG 4 is also strongly interlinked with reducing maternal deaths. Lastly, improving maternal health will also help the treatment and will reduce the spread of infectious diseases as mothers and their baby will undergo medical check-ups that can address infections and possible transmissions of diseases.

Even though the MDGs are going on implementation, it has already come up to accomplishment after a year and international community has tried to substitute with post-2015 development framework. With the deadline for the MDGs on the horizon, progress can be reported in most areas, despite the impact of the global economic and financial crisis. Several important targets have or will be met by 2015, assuming continued commitment by national governments, the international community, civil society and the private sector. Progress towards achieving the MDGs is monitored with a framework of measurable targets for each MDG. Achieving the MDG 5 requires reducing

maternal mortality at a much faster rate in the future than it was reduced between 1990 and 2013. Globally, the maternal mortality ratio declined by 47 per cent over the past two decades, from 400 maternal deaths per 100,000 live births in 1990 to 210 in 2010. However, between 1990 and 2010, the global maternal mortality ratio (i.e. the number of maternal deaths per 100 000 live births) declined by only 3.1% per year. This is far from the annual decline of 5.5% required to achieve MDG5. While progress falls short of achieving MDG 5 by the 2015 deadline, all regions have made important gains. Still, meeting the MDG target of reducing maternal mortality by three-quarters will require accelerated efforts and stronger political backing for women and children (UN, 2013).

All regions have made progress, with the highest reductions in Eastern Asia (69%), Northern Africa (66%) and Southern Asia (64 %). Meeting the MDG target of reducing the ratio by three quarters will require accelerated interventions, including improved access to emergency obstetric care, assistance from SBA at delivery and the provision of antiretroviral therapy to all pregnant women who need it. The WHO has recommended a minimum of four ANC visits to ensure the well-being of mothers and newborns. These visits should include tetanus toxin vaccination, screening and treatment for infections, and the identification of warning signs during pregnancy. Pregnant women are also tested for HIV; if positive, they receive help and guidance in living with the virus and avoiding transmission to their babies. In countries where malaria is endemic, pregnant women should also receive intermittent treatment to prevent the disease, thereby averting adverse outcomes for mother and baby if infected during pregnancy. ANC can save lives. Yet in developing regions overall, only half of all pregnant women receive the minimum recommended number of antenatal visits (four). Regions such as Northern Africa and South- Eastern Asia showed substantial progress during the past two decades in improving coverage of antenatal care, while Southern Asia and sub-Saharan Africa lagged behind. In 2011, only 36 per cent of pregnant women in Southern Asia and 49 per cent in sub- Saharan Africa received at least four ANC visits during their latest pregnancy. Health Care can vary in terms of quality, a dimension that is hard to measure and is not reflected in the data. Monitoring is required to ensure high-quality antenatal care that actually contributes to improved pregnancy outcomes (UN, 2013).

Births attended by SBA have increased; however, disparities in progress within countries and populations groups persist. In developing regions, the proportion of deliveries attended by skilled personnel raised from 55 per cent in 1990 to 66 per cent in 2011. Still, in about 46 million of the 135 million live births in 2011, women delivered alone or with inadequate care. Wide disparities are found among regions in the level of skilled attendance at birth—ranging from nearly universal in Eastern Asia and the Caucasus and Central Asia (100% and 97%, respectively) to a low of about 50% in Southern Asia and sub-Saharan Africa, the regions with the highest levels of maternal mortality (ibid). Women who give birth in rural areas are still at a disadvantage in terms of the care they receive. In 1990, 44% of deliveries in rural areas of the developing world were attended by skilled personnel, versus 75% in urban areas. By 2011, coverage by skilled birth attendants increased overall, but the urban-rural gap persisted: More than half (53%) of women in rural areas received skilled attendance at delivery, versus 84% in urban areas. In sub Saharan Africa and Southern Asia, the gaps were even larger (UN, 2013).

African countries show wide disparities in maternal and reproductive health. Maternal mortality tends to be lower in countries where levels of contraceptive use and skilled attendance at birth are relatively high. With a contraceptive prevalence of only 25% and low levels of skilled attendance at birth, sub- Saharan Africa has the world's highest maternal mortality ratio. Education for girls is a key to reducing maternal mortality. The risk of maternal death is 2.7 times higher among women with no education and two times higher among women with one to six years of education than for women with more than 12 years of education (UN, 2013).

Ethiopia has one of the highest rates of maternal mortality in Africa. Progress on reducing maternal mortality has stalled since 2005 when the country managed to reduce maternal mortality rate (MMR) to 676 per 100,000 births in 2010/11 from 871 in 2000/01. This means that with the MDG target of 267 per 100,000 births by 2015, the country is clearly off-track on goal five. There are a number of factors behind this dismal performance, namely: delays in seeking skilled emergency obstetric care; delays in reaching the health facility, and delays in receiving a timely intervention after reaching the facility and large proportions of unmet family planning needs among girls in child-

bearing ages. For example, although the percentage of women (aged between 15 and 49) using modern contraception increased from 6.3% in 2000 to 18.7% in 2011 and contraceptive use prevalence rate for the same age group increased from 6% in 2000 to 29% 2010/2011 (EDHS, 2011); performance on these indicators is still very low compared to many African countries. In addition, the percentage of deliveries attended by skilled birth attendants was only 20.4% in 2011/12, much lower than skilled delivery of 74% and 44% respectively for urban and rural communities in the Southern and Eastern African region. The UN Country Team is working with the Government of Ethiopia to apply the MDGs Acceleration Framework (MAF) and develop an action plan for accelerating progress on maternal health (MDG Report, 2012).

Generally, it is unlikely that the MDG target on MH will be met unless special efforts are undertaken. More needs to be done to improve access and quality of MHCS. This will particularly require increasing the number of skilled attendants and providing emergency obstetric care. Furthermore, a broad set of factors such as increased awareness creation, demand for health care services and socio-economic issues (including household decision-making) should be addressed and effective community level actions implemented in order to accelerate progress on reducing maternal mortality in the remaining few years before 2015.

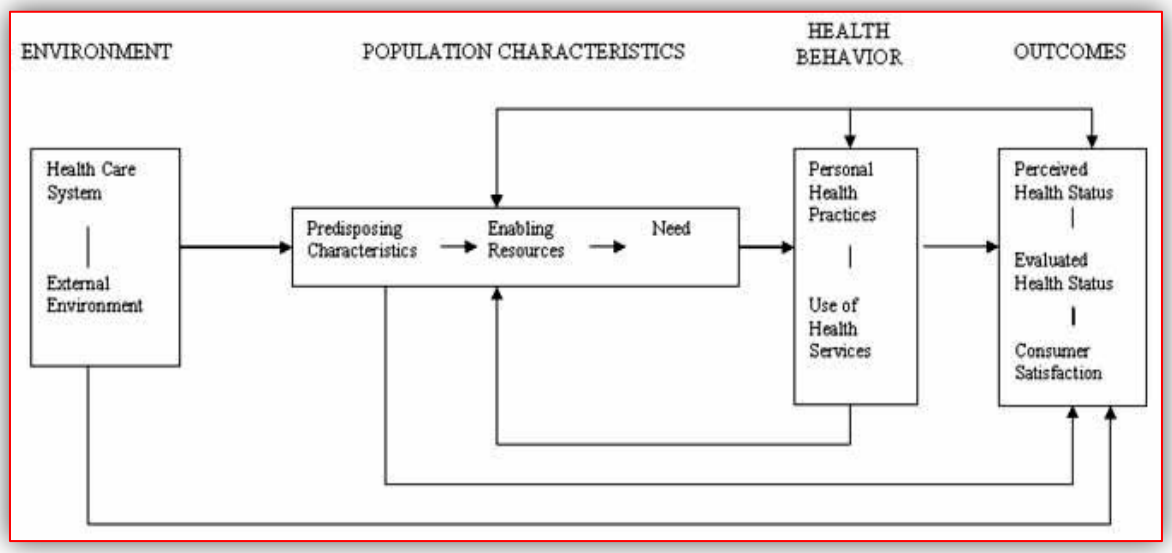
2.5 Different Models Related to Maternal Health Care Service Utilization

Various conceptual or analytical models have been developed by different scholars to examine the barriers that deter women from seeking maternal health care services. These models have significant contribution to draw conceptual frame work and methodological aspects of the study. Some of these models are more instrumental to investigate this study, so they discussed as follows:

The most known and classic model is Andersen's behavioural model of health service utilization which is developed in 1968 and latter on modified again to include some other factors. The modified model of Anderson's behavioural model of health service

utilization depict the multiple influences on health care services' use and, subsequently, on health status There are two important key elements described in this model, which can effect health care behaviour and finally influence the health outcomes, namely environment and population characteristics. Health care system and external environment are grouped as environment factors. Health care system refers to national health policy, resources and organization, while physical, political and economic components are part of the external environment. Both factors are important input for population characteristics (See Figure 2.4).

Figure 2.3: The Behavioural Model of Health Services Use



Source: Andersen, 1995

This model suggests that personal health practices and people's use of health services are functions of the following three categories:

a) **Predisposing characteristics**, factors that present preceding the ill health and need for care, such as demographic factors, social structures and health beliefs. Demographic factors such as age and gender represent biological urges the likelihood that people will need health services. Social structure is measured by a broad array of factors that determine the status a person in the community, his or

her ability to cope with and command the resources to deal with these problems, and how healthy and unhealthy the physical environment is likely to be (education, occupation, ethnicity, etc). Health beliefs are attitudes, values and knowledge that people have about health and health care services that might influence their subsequent perceptions of need and use of these services (Andersen, 1995).

b) **Enabling resources,** which provide patients with the means to make use of the services (Andersen 1995). These factors are seen as supporting resources which may be resources from an individual or those that exist at the community level. Such factors include income, having a health insurance, availability of health facilities and personnel and access to vehicles. For example, health personnel and facilities must be available and people must have the means and know how to get to those services and make use of them (Andersen 1995).

c) **Need**, which refers to health status, perceived by the individual or evaluated by the health providers (Andersen 1995). It is how people view their own general health and functional state, as well as how they experience the symptoms of illness, pain and worries about their health and whether or not they judge their problems to be of sufficient importance and magnitude to seek professional health care.

Personal health services such as diet, exercise and self care interacts with the use of formal health care services to influence health outcomes. The measures of health services' use in this model include those representing type, site, purpose and coordinated services received in an episode of illness. This model also consists of health status outcomes in order to extend the measures of access to include dimensions which are particularly important for health policy and health reform. It also depicts feedback loops showing that outcome, in turn, affects subsequent predisposing factors and perceived need for services as well as health behaviour (Andersen, 1995). Finally, Andersen (1995) noted that external factors, such as outcome feedback, patient satisfaction, and national local social networks also affect the decision to seek care.

The Anderson […] model has other significant advantages for analysis in the developing world. The concepts of need and demographic status as well as institutional factors that affect care behaviour have a more practical and pragmatic approach than models that simply look at perception and patterns of action based on that perception (Young, 2004). The behavioural health model incorporates individual preferences and institutional aspects of care and gives a broad unified culturally-specific picture of utilization.

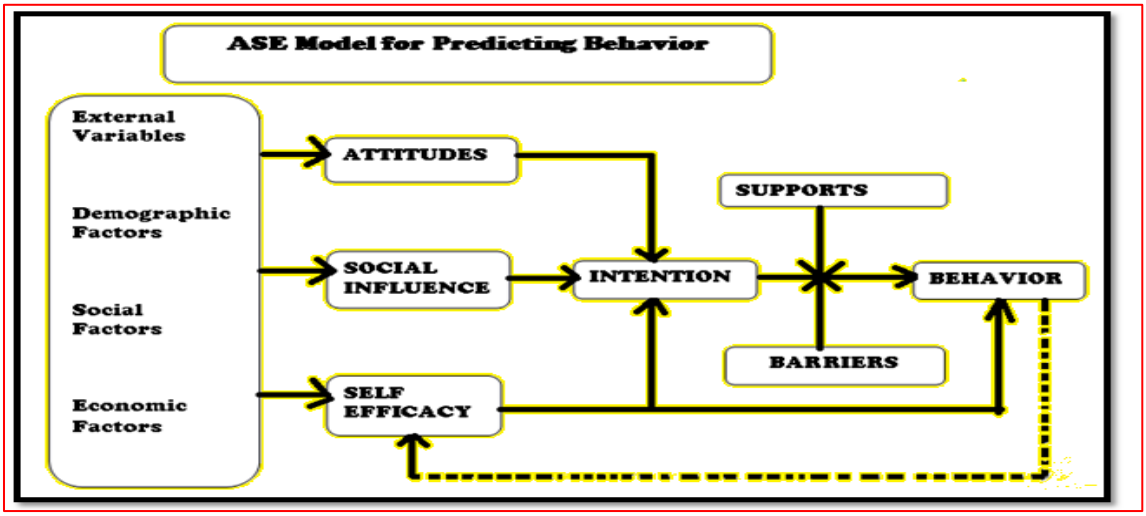
Another similar conceptual framework has been developed by Kroeger (1983). This framework is for answering the question about how people enter the sick role and make choices regarding the use or non-use of different kinds of health services. Based on an extensive review of the anthropological and socio-medical literature of health care, Kroeger (1983) proposed that determinants of utilization in developing countries could be grouped under three broad headings:

a) Characteristics of the subject (predisposing factors) including age, sex, marital status, household composition and size, ethnic group affiliation, occupation, assets and education.
b) characteristics of illness, expected benefits from treatment and beliefs about disease causation; and
c) Characteristics of the health care system, including accessibility, acceptability, cost and quality of care.

In addition, there is also a general model in the literature, which has been used in studies on determinants of utilization of health care services. It's usually called as "The Attitudes - Social influence - Self-efficacy (ASE)" model which designed to predict various health related behaviors (See Figure 2.5). There are three main psycho-social factors which have been identified that predict behavior intention: attitudes, social influences and self efficacy. A person's attitude towards a specific behavior is a result from performing the behaviour, for example a person's attitude in deciding whether to use family planning or traditional practices. Social influence is as a result of social norms: influence from other peoples whether to perform or refrain from the specific behavior, and whether other people in society perform or refrain from dong specific behavior. Self-efficacy

expectations can be seen as a person's belief whether she/he can perform the desired behaviour and manage the barriers that may prevent him/her from doing specific behaviour (Amooti and Nuwaha, 2000).

Figure 2.4: ASE Model for Predicting Behavior



Source: Amooti- Kaguna & Nuwaha, 2000

The implication of the model is that a person's health behavior can be changed by changing person's attitudes, person's perception of social norms and social support and her/his self efficacy expectations (Amooti and Nuwaha 2000). Moreover, External variables, such as social, demographic and economic factors, are expected to influence behavior through behavioral determinants and intention.

In addition the above models, Thaddeus and Maine (1990) also categorized determining factors affecting the use of maternal health care service in to three broad classifications which are systemic factor, personal characteristic, geographic actors.

- *Systemic factors are the first one which is related to health systems that include access, availability, cost of service, continuity/ interpretation of care, provider attitude/ integration etc.*
- *The second one is personal characteristics; it is more related with usage of health care service. These include the socio-demographic, social support, and attitudinal*

factors, knowledge and experience with event or system, perceived quality of care, etc.

- *The final one is geographic actors which are related with the proximity of health care service provider. These factors are Urban/rural distribution, access, transportation, etc.*

Factors affecting the utilization of maternal health care service are not the same throughout the world. Despite of the fact, some factors of some geographical region of the world may not the barriers of the others region. But generally the main factors that hinder women from utilization of maternal health care service are policies, availability and quality of service, cultural, psychological, demographic and socio-economic factors and most importantly the health seeking behavior of the women as several studies revealed.

2.6 Factors Influencing Use of Maternal Healthcare Services

Based on the discussed model of assumption, some of major determinants of MHCS utilization are discussed with their empirical findings. A particular emphasis is given for individual, areal, organizational, and socio-cultural factors in order to address the stated objective of the research.

Maternal mortality and morbidity, which is the result of low utilization of MHCS, are directly and indirectly related to societal, economical, institutional and cultural factors that impact women's health and their access to services. In India, a study of analysis of choice of delivery location showed that maternal and, paternal education, and scheduled caste status were the predisposing factors that determined the choice of private facilities, public and home deliveries (Thind, et al, 2008). In a similar way, a study from Pakistan showed that family size, parity, educational status, women autonomy and occupation of the head of the family were also associated with health seeking behavior in addition to age, gender and marital status (Babar, et al, 2004).

A study that conducted here in Ethiopia, women's autonomy, as measured by the extent of a women's freedom of movement, appears to be a major determinant of maternal

health care utilization among the poor to middle income women (Woldemicael and Tenkorang, 2010). The age of the individual is also supposed to affect health service utilization. Since older and younger women have different experience and influence, their behavior on seeking health care are also vary. Commonly, younger women are more likely to utilize modern health care facilities than older women, as they are likely to have greater exposure and knowledge to modern health care, also more access to education. This has been understood on study of Ethiopia, use of antenatal care is about 28% for women under the age of 35, while it is 21% for those over the age of 35 years. Furthermore, about twice as many women age 15-19 received delivery care from a health professional as women age 20 and above (Yared and Asnakechi, 2002).

Another factor is marital status, there is assumption that Single (unmarried) mother could feel stigmatized or discriminated against by health workers or other peoples at health setting. Therefore, they could choose not to have antenatal care and not to deliver at home to avoid embarrassing situations. However according to study done in Ethiopia, unmarried women are more than twice as likely as married women to receive delivery assistance from a health professional. In contrary married women are 40% more likely to receive antenatal care from a health professional than unmarried women (Yared and Asnakechi, 2002). With respect to birth order, several studies show a strong negative association between birth order and the use of health care services. One study in Turkey (Celik & Hotchkiss 2000) showed that women who delivered their first child were found to be significantly more likely to use prenatal care and trained assistance during the birth delivery than women in the higher order. Another study in urban areas Philippines appeared that the probability of choosing as most frequent either public or private modern care instead of traditional care decreases as the number of children aged zero to six years old increases (Wong, et al., 1987).

Amongst the individual maternal characteristics, education of women has been found to have the strongest association with the use of maternal health care services. According to study done in Turkey, both women with one to five Years of schooling and women with six or more years of schooling were substantially more likely to use MHCS than women without any schooling. Women with higher education attainment levels were found to be

significantly more likely to choose a health facility delivery than traditional home delivery and also a modern home delivery than traditional home delivery (Yusuf and David, 2000). Similarly, in Thailand, one analysis showed that maternal education exerts a significant influence on the use of maternal health care services; the odds of using prenatal care and formal delivery assistance is much greater for women with primary schooling, compared to women with zero years of schooling (Raghupathy,1996). Educated mothers are considered to have a greater awareness of the existence of maternal health care services and benefited in using such services. Educated mothers are likely to have better knowledge and information on modern medical treatment and have greater capacity to recognize specific illnesses. As education empowers women, they have greater confidence and capability to make decision to use modern health care services for themselves and for the children (Mojoyinola, 2011).

Moreover, several studies indicate that women's personal income and her partner income (house hold income) has a great impact on determining the utilization of MHCS. It is well known that increased income positively affects utilization of health care services (Elo, 1992). The costs of seeking healthcare may include costs for transportation, user fees (official and/or unofficial), medications and other supplies. Women from poor families or those with limited financial resources may have difficulty paying for such costs and are likely to be deterred from using MHCS (Gabrysh & Campbell, 2009). In a study on the determinants of MHCS in the rural India, it was found that, there is a correlation between household income and utilization of MHCS (Sharif and Singh, 2002). It was evident that as a result of lack of productive resources for women, income earned by women had negative impact on utilization of ANC and PNC.

Similarly, media has a great contribution on disseminating health related information; in line with this it plays great role on the improvement of health outcome. The study which has been done in India indicate that women with high degree of exposure to mass media were more likely to have utilized antenatal check-up and institutional delivery service than those who had less or no exposure in most states of southern India (Navaneetham and Dharmalingam, 2002). Moreover, a study by Obermeyer (1993) in Morocco and

Tunisia indicated that watching television weekly is associated with an increase in the likelihood of both prenatal care and hospital delivery.

Unreliable transport is also a barrier to access skilled delivery in rural areas, failure to plan in advance for transport cause higher number of women to deliver in their homes even if they had planned to deliver in health facilities (Mrisho et al, 2007; Magoma, 2010). Similar findings have been documented by study done at Nepal where by women who planned to deliver in health facilities 18% delivered in home due to lack of transport (Bolam et al, 1998). In a rural Tanzania for instance 84% of woman who give birth at homes are intended to deliver in health facility but due to transport problem and long distance to health facilities they end up delivering home (Bicego, et al 1995).

Inadequate knowledge and skills for health workers on management of obstetrics cases can be the barrier for delivery in health facilities, several study found that health workers tend to unnecessary refer pregnant mother to higher level because they don't know to use partogram[6] which monitor the progress of labour and the woman end up deliver normally. This woman will never come back to that facility due to unnecessary referral to other health facility (Shankwaya, 2008). A study from South India showed that assistance during delivery can reduce the risk of obstructed labour and it is highly associated with the place of delivery (Navaneetham, et al, 2002). Another study also presented the role of assisted SBAs in preventing direct and indirect cause of maternal deaths such as, infection, shock, blood loss, convulsions, and surgical procedures, such as caesarean delivery (AbouZahr, 2003).

Health provider behavior and attitudes are also determinant factor for a choice of place of delivery for pregnant mother, some of the health workers are very rude, using abusive language and refusing to assist the patients, these attitudes prevent the women to deliver in health facilities however positives attitudes of health workers attract women to deliver in health facilities (Mrisho et al, 2008). This encourages the women to deliver in health facilities. Improves skills and knowledge among health providers and increase access of

[6] Partogram is a composite graphical record of data (maternal and fatal) during labour entered against tine on a single sheet of paper .It is intended to provide an accurate record of progress in labour, so that any delay or deviation from normal may be detected quickly and treated accordingly (Shankwaya, 2008).

health services in rural areas will increase access to pregnant mother to deliver in health facility. Lack of privacy is also documented as a barrier for delivery in health facilities because some older women they don't want to be attended by younger mid wives at health facilities who they think there are like their daughter or younger women they fair to be attended by male health workers during delivery. In other health facilities there is no special room for delivery; women are just delivering in Out-Patient Department[7] /OPD/. This condition hinders women to deliver in health facilities (Mrisho et al, 2007; Shankwaya, 2008)

In summary, the above studies have identified that the main determinants for low utilization of MHCS include maternal education, gender of the household head, mother's education, mother's age at child birth, socio-economic status, birth order, decision making power accessibility and quality of health service, cultural belief and areal factors like nature of the road, access and cost of transportation.

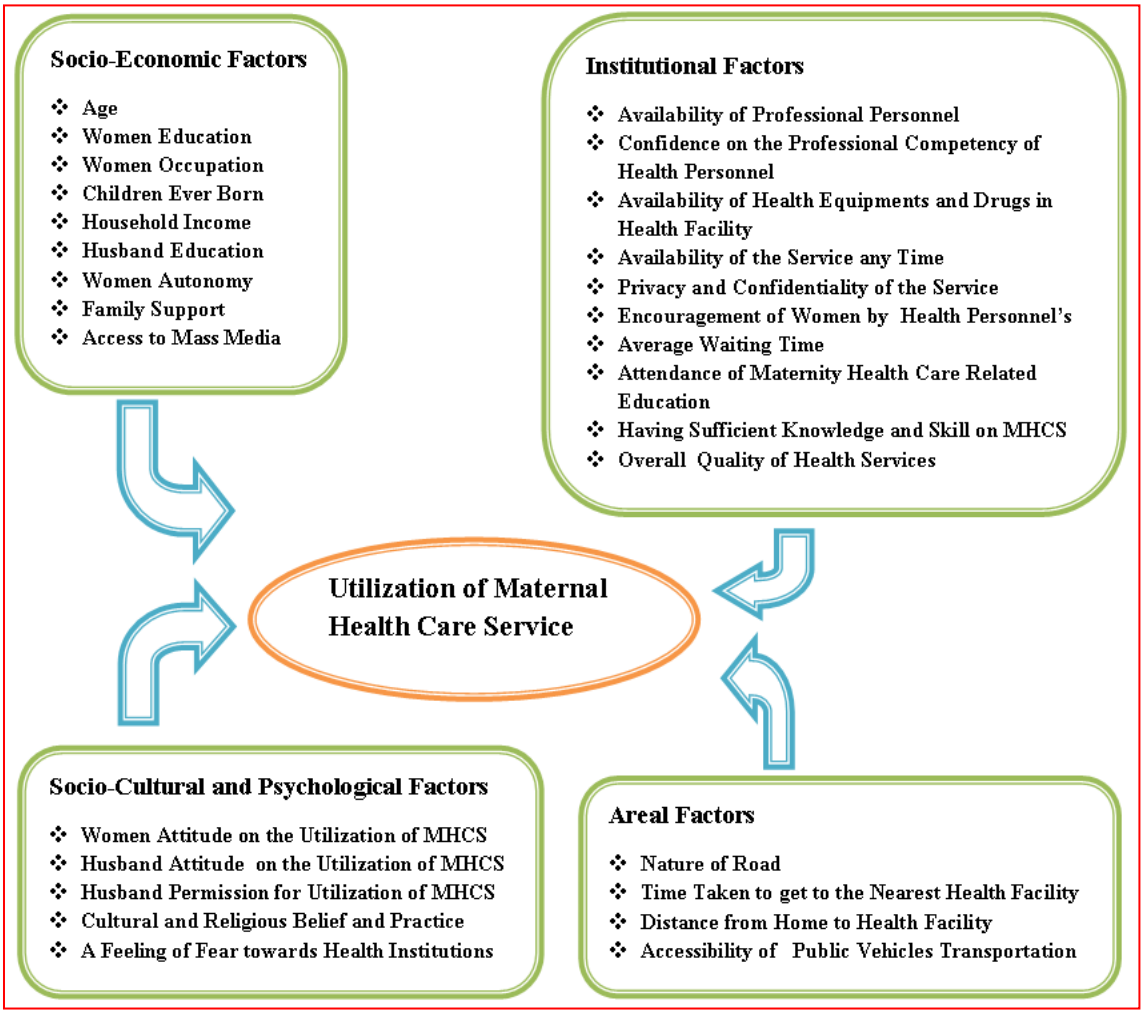
[7] OPD is stand for Out-Patient Department. It is one of health service department in which patients who are not hospitalized for 24 hours or more but who visits a hospital, clinic, or associated facility for diagnosis or treatment while they got ill. (Merriam-Webster online Dictionary)

2.7 Conceptual Framework for Factor Affecting Utilization of Maternal Health Care

The following conceptual frame work is adapted based on the above reviewed major models and empirical evidences of maternal health care utilization in this study. In addition to empirical evidences of several developing countries, health seeking behavior models adapted from Andersen (1995), Kroeger (1983), Thaddeus and Maine (1990) and Amooti-Kaguana and Nuwaha (2000) were used to develop the conceptual framework.

In this framework four major factors were adapted as the main factors that hinder the utilization of MHCS. These are: - Socio-economic, Institutional, Areal and socio-cultural and Psychological factors. All these factors are interrelated in a way and determine whether a woman could utilize the MHCS or not.

Figure 2.5: Conceptual Framework



CHAPTER THREE

Methodology of the Study

This chapter presents mainly about the research methodology and also the reasons for choosing the methodology and its suitability for this research. Additionally study population, method of data analysis and ethical consideration of the study are discussed.

3.1 Description of the Selected Study Area

The study carried out in Duna Woreda which is located in the South Nations, Nationalities, People's Region /SNNPR/ in the Southwest Central part of Ethiopia about a distance of 232 km from Addis Ababa in the South, 211 km from the Regional City, Hawassa, in the South West, and 42km from the Zonal Town, Hosanna, in the West. It is one of the eleven Woredas including Hosanna City Administrative, found in Hadiya Zone, SNNPR. It was established in 2002 and Ansho become the Centre of the Woreda. It comprises 31 rural kebeles and Ansho municipality city administration. It shares boundaries with Soro Woreda /Hadiya Zone/ in the North, Doyogena Woreda /Kembata and Tinbaro Zone/ in the South, Omosheleko Woreda /KTZ/ in the West, and Soro Woreda /HZ/ in the East.

The total area of the Woreda is approximately 43,104 hectare (222.5 square kilometers) with altitude ranging from 2001 to 3000 meters above sea level. 85% of the area of the Woreda is Dega, 10% Woina-dega, and 5% is Kola. The raining season is from April/May up to September/October with an average annual rain fall ranges from 1001mm to 1400mm with the economic activities largely dominated by subsistence traditional agriculture (Duna Woreda Statistical Abstract, 2011).

According to the Ethiopia census conducted in (2007), total population of the woreda is 122,087 out of which 60,866 (49.9%) are males and 61221(50.1%) are females. Out of the total population of the woreda 85.3% are rural residents and the rest 14.7% are urban residents. However, the 2013 statistical figure of Duna Woreda Health Office report

shows that, the total population in the woreda estimated to be 149,135 of which males and females constitute 74,363(49.86%) and 74,772(50.14%) respectively. Out of total population of the woreda 147.229(98.72%) are rural residents and the rest 1906(1.28%). The average family size of the households is five, and total households are 30,436 (DWHO, 2011/12). Above 86 % of the total population of the Woreda are affiliated to protestant religion. About 95% of the total population of the Woreda belongs to Hadiya ethnic group. The majority people of the Woreda are Hadiyisa language speakers.

The majority (85%) of the people in the woreda are mainly depends on mixed agriculture (both crop and livestock productions) with traditional farming system economy similar to the other rural areas of the country. Next to agriculture, petty trade is also a common income source for the people in the Woreda. In terms of social services, it has one paved road, which connects the woreda town of Ansho with the Zonal town of Hosanna. The woreda center has got hydro-electric power service and pure water supply.

Based on the information from the Woreda Health office, the health services coverage of the woreda is 69%. MHCS is delivered in 32 health posts /Tena Kelas/ and four health centers which all belong to the public health system. This woreda is known by its remoteness and characterized by its less developed health sector and difficult topography. Although the government effort made to improve the health facility of the woreda it is very yet to achieve the standard level which is stated by WHO and Ministry of Health (MOH). The following ratios are important to show the inadequate health service of the woreda.

Table 3.1: The Ratio of Health Professionals and Population

Types of Ratios	Ratio of Health professionals to Population	Standard Level of WHO and MOH
HEW	1: 2,571	1:2,500
Nurse–Population Ratio	1:1,887	1:5,000
Health Officer –Population Ratio	1:13,557	1:10,000

N.B: Medical doctors are not available in the woreda

Similarly the numbers of health institutions are not adequate that limit the health coverage of the woreda 69% only. This can be also described based on the ratio of health institution and population as well. In this woreda there is no hospital; when the people need hospital service, they will travel to zonal capital town of Hosanna which is 42 km far from the woreda.

Table 3.2: The Ratio of Health Institution and Population

Types of Ratio	Ratio Health professionals to Population	Standard Level of WHO and MOH
Health Center	1:37,283	1:25,000
Health Post	1:4,810	1:2,500

3.2 The Study Population

The study population comprised of women who have given birth at least once in the last three years preceding the survey, irrespective of delivery outcome and who are permanent residents of the study area. If women had more than one live birth in the past three years, only care received for the most recent birth is considered.

3.3 Research Method

This study adopted a descriptive cross sectional community based household survey. The study employed both quantitative and qualitative research approaches to assess factors influencing utilization of maternal health care services in rural kebeles of Duna Woreda. This study design is preferred because of the researcher aimed at obtaining better knowledge and information on perceived utilization of maternal health services in the Duna Woreda. A cross-sectional study was appropriate since it involved the measure of many different maternity aspects at different ages, collected over a short period of time. This design is relatively quick, cheap, and easy to carry out, and results are easy to analyze (Reaves, 1992; Kirkwood, 1988). Moreover Kothari (2004) supposed that the cross-sectional survey method is used to gather data from a relatively large number of cases at a particular time. Another reason for using a cross sectional study design is that cross-sectional studies are particularly suitable for studying conditions that are quantitatively measurable (Kleinbaum, Kupper & Morgenstern, 1982).

3.4 Sampling Techniques of the Study

In this study simple random sampling techniques particularly lottery method has been employed to select four rural kebeles out of thirty one rural kebeles in the woreda to assess factors that affect the utilization of MHCS since it is difficult to manage all rural kebeles at the same time for the researcher. This was done by writing the names of all rural kebeles of the woreda on pieces of paper, wrapping papers, putting them in a container and vigorously shaking the container after which one piece of paper was picked without replacement until four kebeles were selected. This technique was used since it has the ability of giving equal and known chances of belongingness into the sample and by so doing sampling bias is either minimized or eliminated. Accordingly, kankicho,Samen Wagebeta, Koja Gembera and Domba kebeles have been selected.

Then a preliminary census was conducted in the selected kebeles before the actual data collection period to identify households in which mothers who gave birth at least once in the last three years preceding the survey were living for the sampling frame. The

respondents size were selected proportionally based on number of eligible women in each selected kebeles. The number of respondents to pick from each kebeles was decided by dividing the number of women for each kebeles over the total number of women for the four kebeles multiplied by the sample size determined. Based on this, a sampling frame which enlists all eligible mothers was prepared and 341 women were selected by means of systematic probability sampling technique to be included in the study.

For the qualitative design of the study, non-probabilistic purposive sampling technique has been employed. Accordingly, 10 persons were selected from each selected kebeles who have adequate experience on the study issues and willingness to participate in the discussion. Recruitment of participants was assisted by the HEWs and chairpersons of the kebeles. A FGD were formed in a group of women, husbands, religious and local leaders including health extension workers at each selected Kebele.

3.5 Inclusion and Exclusion Criteria

The inclusion criterion will be:

- ✓ Women who gave birth at least once in the last three years preceding the survey period and willing to participate in the study
- ✓ Women who are permanent residents of the study area

The exclusion criteria will include:

- ✓ Mothers who may be too sick to be interviewed or to respond
- ✓ Mothers refused to participate in the study
- ✓ Mothers who cannot communicate with the data collectors by any means

3.6 Sample Size of the Study

The sample was determined by the proportion of women who utilize all components of MHC services; ANC, PADC and PNC. According to the Demographic health survey report, the prevalence of women utilization of MHC services in South Nation Nationality and People's Region/SNNPR/ is as follows; ANC 27.3%, PADC 6.1% and PNC 5.5 % (EDHS, 2011). From these proportions, to obtain the maximum sample size, the researcher has made an assumption that about 28% of the women utilize all components

of MHC services. The calculation was made using the formula for single proportions with 95% confidence level and the standard error was 5% (Kothari, 2004).

$$n = \frac{z^2.p.q}{e^2}$$

Where, n= maximum sample size required

Z= the value of the standard variate at a given confidence level and to be worked out from table showing area under Normal Curve;

p = an estimate of the prevalence rate of the population

q = (1- p)

e= margin of sampling error tolerated

Based on this model of sample size determination the following assumption will be drawn:

1. To obtain the maximum sample size, the prevalence of rate of the population was taken as 28%.
2. Margin of error (E) 5% is tolerated.
3. A confidence level of 95% is assumed.
4. For non-response rate; 10% of contingency added to the sample size.

$$n = \frac{z^2.p.q}{e^2} = \frac{(1.96)^2.0.28.(1-0.28)}{(0.05)^2} \cong 310 + 31 = \mathbf{341}$$

Accordingly, the total calculated sample size was **341** women.

3.7 Data Collection Process

3.7.1 Sources and Types of Data

For undertaking this research, the researcher has mostly relied on primary sources of data. Accordingly, all the necessary primary data has been collected from selected

eligible women and focus group discussants. With regard to types of data, quantitative data and qualitative data were collected through administering structured questionnaire and FGDs respectively.

3.7.2 Data Collection Methods

In this study, the researcher used two types of data collection techniques since the researcher intended to use qualitative and quantitative research approaches. Therefore, the researcher designed to use both quantitative and qualitative data collection techniques. Accordingly, to obtain sufficient information from the selected sources, data were collected through structured questionnaires and FGDs (See appendix 1& 2).

Since a large number of rural women are uneducated, a face-to-face interview was conducted from the target group or those women in reproductive age (15-49) who have given at least one birth in the last three years. The questionnaire is prepared in English and translated into Hadiyisa.

The study data were collected through door-to-door interviewing the eligible respondents by twelve female enumerators who completed 12^{th} grade and above and who are fluently speak the local language of the study area. During recruitment of enumerators, priority was given for individuals who have similar work experience and better educational background. Four HEW's supervisors were selected to supervise the data collection process and perform quality checks. While conducting a face-to-face interview through traveling house to house, mothers who are not present during first visit were revisited twice and the result of visiting was recorded.

Moreover, FGDs were made to substantiate and triangulate the reliability and validity of the quantitative data obtained by the structured questionnaire. Accordingly FGDs held since it can help to assess and to share the experiences, thoughts, perceptions, and attitudes of participants on determinants of maternal health care service utilization. FGD was organized in each selected kebeles.

The researcher and trained moderator led the discussion. Hadiyisa was the language used in all the discussions. At the beginning of the discussion, the moderator introduced all

participants; explicit the general aim of the study and topic of the discussions. A trained HEWs supervisor was taking the note while the discussion held. The participants were informed about the tape-recorder and permission to be recorded was requested. The moderators were followed the proposed guidelines and discussion topic carefully with consideration of cultural sensitivities.

3.7.3 Pre-Testing of Data Collection Instruments

The structured questionnaire was pre-tested on 10 % of the total sample size (34 mothers) in one of non-selected kebeles of the studied woreda. After the pre-testing, problems such as ambiguity and incompleteness associated with the questionnaire were modified without changing the meaning. The data collected for pre-test was not included in the actual data of the thesis because the pre-test was done before selecting the sampling frame.

3.7.4 Data Quality Assurance

Training was provided for data collectors and supervisors on data collection procedures to ensure the quality of the field operation. Additionally practical exercise was conducted. The training was mainly focused on how to fill the questionnaire, make good interviews and field exercise were conducted. The issues which are relevance of the study, about confidentiality of the information, informed consent were also a part of the training.

The researcher and supervisors were closely supervised the data collection process of the study. On daily bases the supervisors was countercheck for accuracy and completeness of the filled questionnaire and all completed questionnaires were given number after completing the work. And every day the researcher and supervisors contacted with the data collectors to solve problems and correct errors as early as possible.

Finally data was cleaned, coded and entered in to a computer. On this process four questionnaires were identified to be incomplete and excluded from the data. During data entry, consistency checks were made and entry errors were manually checked by going back to the questionnaires. For the qualitative the kebeles administrator, HEWs, and HEWs supervisors, with principal investigator were used to identify eligible discussants.

3.8 Data Analysis Methods

Quantitative analysis was done using statistical package for social sciences (SPSS) version 16. Accordingly descriptive statistics were generated. Descriptive analysis was done for each variable in the study by running frequencies, percentage and cross tabulation. Graphical techniques were used for presenting results in order to give a clear picture of magnitude and relationships of various study variables. Frequencies and measures of variation were used to describe the study population in relation to relevant variables. Cross tabulation used to determine the significant of association between independent variable and the outcome by using Chi-square test. Association between independent variable and dependent variable was considered significant if P-value is less than 0.05.

The qualitative data collected through FGDs was transcribed, translated, coded and categorized by the principal investigator. Then analyzed descriptively, paying attention to issues and matters that mentioned by the majority of informants, capturing any unique experience and strong quotes and facts.

3.9 Ethical Consideration

Research authorization letter was received from Addis Abeba University of Public Administration and Management Department. By providing the recommended letter, permission obtained from the Duna Woreda Health Office to carry out the study. When interview and FGD's conducted, sufficient information was verbally explained about the purpose of study. In the household survey, the consent from the participant was needed before starting the interview and thanks them at the end of the interview. Participant granted free will to withdraw from interview at any time based on her/his interest. So each respondent gave informed verbal consent after being told the purpose and procedures of the study. All responses were kept confidential and anonymous. Informed verbal consent was also obtained from all individuals participating in the FGDs.

CHAPTER FOUR

Data Presentation, Analysis and Interpretation

This part deals with presentation, analysis and discussion of collected data. Data collected from eligible women respondents and FGDs are systematically organized, analyzed and presented in this part. Out of the 341 sampled eligible respondents of the study, 333 respondents successfully completed the survey questionnaires with response rate of 97.6%. FGD's held at each sampled kebeles of Duna woreda with women, community leaders and health personnel to substantiate the quantitative results. This part is organized in two major parts which are the quantitative and qualitative aspects of data presentation and analysis. All the study results presented as follows:

4.1 Quantitative Data Presentation and Analysis

4.1.1 Profile of Respondents

Looking at biographical characteristics of respondents would help the readers to appreciate the composition of the respondents. Thus, age, marital status, religion, education, occupation, children ever born, household income, access to media are the basic features considered in this study for women respondents under the subheading of respondent's profile. This back ground information about the informant is a good indicator of the picture of the reality about the respondents.

As indicated in Table 4.1, a total number of 333 respondents were interviewed. Of which, 42.3% of the women were between 20 and 34 years old whereas 23.4% and 34.2% of women were divided between women who are below 19 years old and those in their mid thirties and above respectively. Almost 95 % of mothers were married. Regarding religious status 84.7% of mothers were Protestant Christian and the rest 7.5%, 5.1% and 2.7% were Orthodox Christian, Muslim and Catholic Christian respectively.

The majorities of respondents were illiterate comprising 46.2% of them and followed by women who attended primary education accounts 32.7% of the respondents. 16.8% had

completed secondary high school and 4.2% only attended tertiary level education. Regarding the occupation of respondents, 74.5% of the women are not working, they are housewives and 4.8% practice agriculture related works. Civil servants were account only for 5.4% and 13.2% were entitled as some form of trading and selling food. Finally daily labourers share only 2.1%.

In relation with birth order of respondents, 31.8% of the women had 1-2 children; slightly increment were observed, 33.3% of the women had 3-4 children and 34.8% of women had more than 5 children. With regard to household income, 39.6% of the respondents had gotten below 500 Birr monthly income, while 25.2%, 22.2% and 12.9% of respondents reported that the household earned between 501-1000, 1001-1500 and above 1500 Birr per month respectively.

Concerning the levels of education of the husbands, 38.4% of husbands were illiterate, whereas 35.4% and 20.1% of respondent's husbands had at most primary school education and secondary school education respectively. Only 6% of husbands attended tertiary level education. Regarding access to media, 79% of the respondents had no access to mass media but the rest 21% had the opportunity to attend either TV/Radio/Newspaper.

Table 4.1: Profile of Respondents

	Response	Frequency	Percentage
Age of respondents	15-19	78	23.4
	20-34	141	42.3
	35-49	114	34.2
	Total	333	100
Marriage Status	Married	316	94.9
	Widowed	14	4.2
	Divorced	3	.9
	Total	333	100.0
Religion	Orthodox Christian	25	7.5
	Catholic	9	2.7
	Protestant Christian	282	84.7
	Muslim	17	5.1
	Total	333	100
Women Education	Never Attended School (Illiterate)	154	46.2
	Basic Primary Education	109	32.7
	Secondary School	56	16.8
	Tertiary Level	14	4.2
	Total	333	100
Women Occupation	Housewife	248	74.5
	Farmer	16	4.8
	Trader	44	13. 2
	Daily Labourer	7	2.1
	Civil Servant	18	5.4
	Total	333	100
Children Ever Born	1-2	106	31.8
	3-4	111	33.3
	5+	116	34.8
	Total	333	100
Husband Education	Never Attended School (Illiterate)	128	38.4
	Basic Primary Education	118	35.4
	Secondary School	67	20.1
	Tertiary Level	20	6
	Total	333	100
Household Income	Below 500 Birr	132	39.6
	501-1000 Birr	84	25.2
	1001-1500 Birr	74	22.2
	1501 and Above	43	12.9
	Total	333	100
Access to media	Exposed to Mass Media	70	21
	No Exposure	263	79
	Total	333	100

Source: Own Survey, 2014

4.1.2 Utilization of Antenatal Care

4.1.2.1 Level of ANC Utilization

A description of the use of ANC services was done in relation to the requirements by WHO (1994; 2004). It is considered medically satisfactory when women receive ANC during their first trimester (1-3 months during pregnancy) and women undertake four or more ANC visits before delivery.

Based on the above WHO requirements, the collected data were analyzed. Results indicate that greater part (77.5%) of the women at least had one ANC visit during their last pregnancy whereas the rest 22.5% were not experienced. About 12.8 % made their first visits to a health facility for ANC treatment during the first trimester (1-3 months) of the pregnancy. But significant number of the women (54.3%) made their first ANC visit in their second trimester of pregnancy, while (32.9%) women underwent in their third trimester of pregnancy. Among the ANC service users 56.8% of women had less than four ANC services and the remained 43.2% of participants only had four or more ANC visits during their last pregnancy in the past three years preceding the survey (See Table 4.2). This indicates that the majority of respondents have under met the standards of WHO ANC visit.

Table 4.2: Proportion of Women Utilizing ANC Service

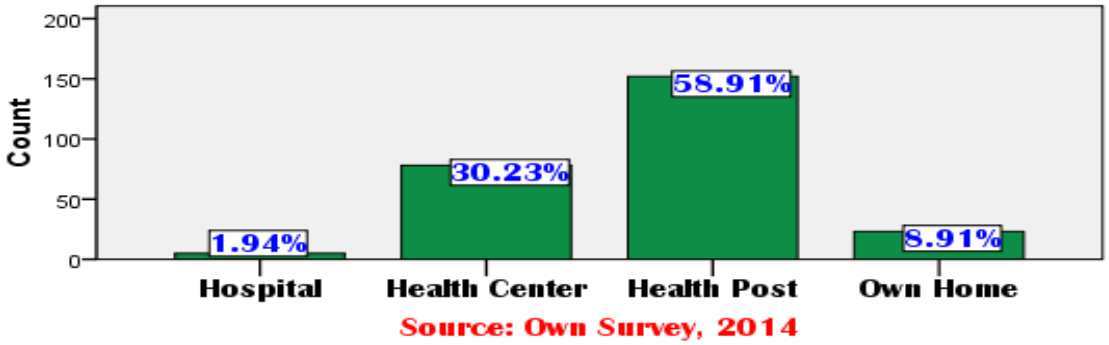
ANC Service Outcomes	Response	Fre.	Per.
Total level of Received ANC	Yes	258	77.5
	No	75	22.5
	Total	333	100
Timing of 1st ANC visit	1st Trimester /1-3 months of pregnancy/	33	12.8
	2nd Trimester /4-6 months of Pregnancy/	140	54.3
	3rd Trimester /7-9 months of Pregnancy/	85	32.9
	Total	258	100
Antenatal visits of four or more	Greater than or Equal to Four Visit	144	43.2
	Less than four Visit	189	56.8
	Total	333	100

Source: Own survey, 2014

4.1.2.2 Place of ANC Service Receipt

More than half (58.91%) of the respondents utilized ANC service in the health post by Health Extension Workers and the rest 30.23% and almost 2% of respondents were used in the Health Center and Hospital respectively. The rest 8.91% of respondents attended at their own home (See Fig.4.1).

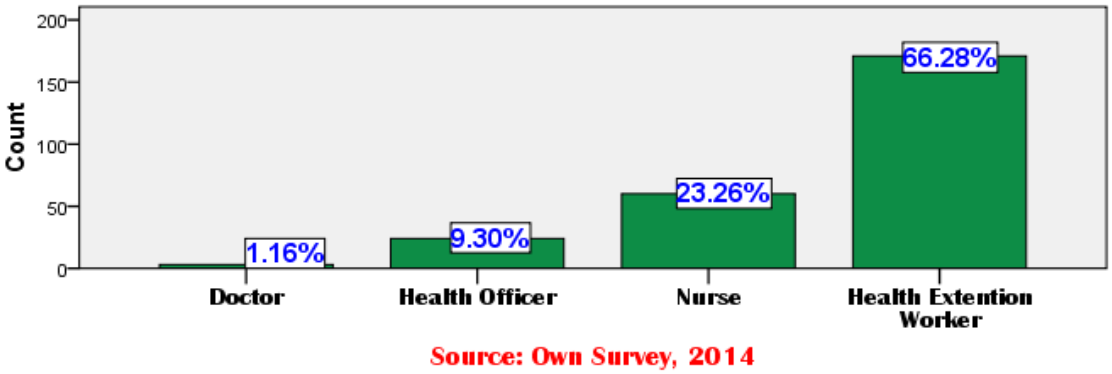
Fig 4.1: Place of ANC Service Receipted



4.1.2.3 The Type of Professionals Who Provide ANC

As indicated on Fig.4.2, mainly the ANC service had been given in the health posts; similarly the data shows that 66.28% of ANC service had been provided by Health Extension Worker. Nurses who work in Health Center had also a great contribution on provision of the service that contained 23.26%. Medical Doctors and Health officers would provide the remained 1.16% and 9.30% of ANC service respectively.

Fig 4.2 Providers of ANC Service



4.1.2.4 Reasons for Not Attending ANC Service

The participants of the study were asked their reason for not utilizing ANC service. As indicated in Table 4.3; the main reasons were absence of sickness/ feeling of Healthiness/ (25%), long distance from home to health facilities (13.4%), work overload at home (8.1%) and poor services at health facility particularly for long waiting of service (15.4%).

Others reasons were as follows; lack of satisfaction on the previous service receipted (5.3%) unfriendly services due to bad behavior of healthcare provider (8.1%), lack of knowledge on the importance of ANC (10.9%), husband disproval (10.3%) and financial constraint (2.7%) are mentioned as the reason for non attendance of the service.

Table 4.3: Reason for Non Attendance of the ANC Service.

Reasons for Not Attending ANC (Multiple answer were possible)	**Response**	
	Frequency	**Percentage**
I wasn't satisfied on the previous service	32	5.3%
Work Overload	49	8.1%
I didn't know the importance	66	10.9%
Long distance	81	13.4%
Long waiting time	93	15.4%
Bad behavior of health workers	49	8.1%
I was healthy	151	25%
Financial Constraints	16	2.7%
Husband disapproval	62	10.3%
Other	4	0.7%

Source: Own Survey, 2014

4.1.3 Utilization of Delivery Care Service

Similarly as that of ANC, A description of the use of delivery care was done in relation to the requirements by WHO (1994; 2004). It is considered medically satisfactory when

women are attended to PADC and delivered in a health facility. Based on these requirements the researcher collected data and described as follows:

4.1.3.1 Level of Institutional Delivery Care Utilization

The study finding revealed that the institutional delivery care utilization was very low in the studied area. Less than half of the women (38.1%) delivered in a health facility while about 61.9% delivered at home in the previous three years preceding the survey. (See Table 4.4)

Table 4.4: Proportion of Women Institutional Delivery Care Service Utilization

Response	Frequency	Percent
Health Institution	99	29.7
Home	234	70.3
Total	333	100

Source: Own Survey, 2014

4.1.3.2 Level of PADC Service Utilization

The study demonstrated that the utilization of PADC utilization was very minimal in the studied area. Less than half of the women (38.1%) delivered with the assistance of skilled birth attendant while about 61.9% delivered without the assistance of professional health personnel in the previous three years preceding the survey (See Table 4.5).

Table 4.5: Proportion of Women PADC Service Utilization

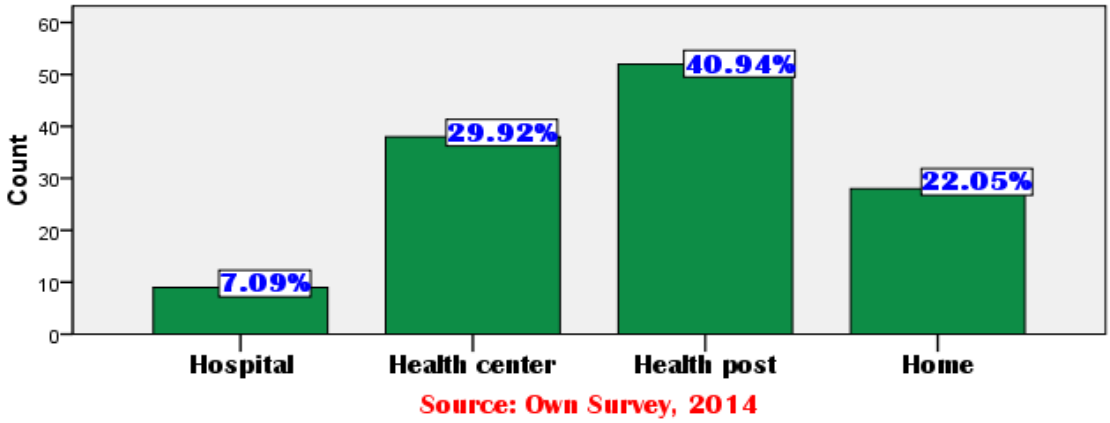
Response	Frequency	Percentage
Yes	127	38.1
No	206	61.9
Total	333	100

Source: Own Survey, 2014

4.1.3.3 Place of PADC Service Receipt

The study finding indicated that 40.94% of the respondents utilized PADC service in the health post by Health Extension Workers and the rest 29.2% and almost 7% of respondents were used in the Health Center and Hospital respectively. The rest of 22% of respondents attended at their own home (See Fig.4.1).

Fig 4.3: Place of PADC Service Receipt

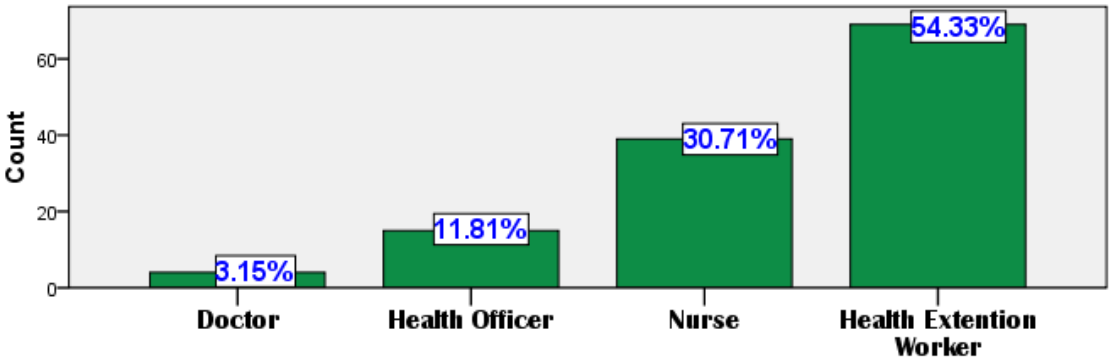


Source: Own Survey, 2014

4.1.3.4 The Type of Professionals who Assisted During PADC Service

The result presented in Fig.4.3 shows the type of professionals who gave assistance during delivery in both places (i.e., In Health institution and Home) in the previous three years preceding the survey. The type professionals who provide PADC service was 54.3% of the women gave birth by assistance of Health Extension Worker/HEW/ and 30.7% of women were delivered by assistance of medical nurses. But only 3.1% and 11.8% of women gave birth with assistance of Medical Doctor and Health officer respectively.

Fig. 4.4: The Type of Professionals Who Provide PADC Service



Source: Own Survey, 2014

4.1.3.5 Reason for not Utilizing PADC Service

The study finding also found that 18.5%, 15.9% and 13% of pregnant women wished to deliver without assistance of health professional personnel due to long distance, sudden onset labour and transportation challenges to access health facility respectively as the main reasons. The other reasons advanced by the respondents were 9.4% of women more trust on TBAs or relatives than health professionals and the other reasons are being comfortable to give birth in front of relatives (6.2%), dislike the behavior of heath workers (7.4%), negative attitude for health institutional delivery (7.4%), husband refusal (4.2%), financial constraints(1.8%), having no past experience of labour problem (6%), lack of awareness on the importance of PADC service (7.5%) and others (feeling of shame, refusal by the health facility when labour too early, lack of female midwives and women whose mother is TBAs) constitutes about (2.8%) (See Table 4.7).

Table 4.6: Reason for not Utilizing PADC Service

	Response (Multiple answer were possible)	**Freq.**	**Per.**
Reason for not utilizing PADC service	Sudden onset labour	87	15.9%
	Presence of TBAs and relatives	52	9.4%
	Being comfortable to give birth in front of relatives	34	6.2%
	Transport problem	71	13%
	Long distance to health Facility	102	18.5%
	Having no past experience of labour problem	33	6%
	Husband refusal	23	4.2%
	Financial constraints	10	1.8%
	Bad attitude for health institutional delivery	41	7.8%
	Dislike the behavior of heath workers	40	7.4%
	I didn't know the importance	41	7.4%
	Other	13	2.4%

Source: Own Survey, 2014

4.1.4 Utilization of Postnatal care/PNC/ service

Postnatal care can only be of good quality if it includes identification and management of problems in mother and newborn, counseling, information and services for family planning and health promotion for the newborn and mother, including immunization, advice on breastfeeding, and safe sex (WHO, 1995). Based on these requirements, the researcher tried the utilization and qualities of postpartum care service.

4.1.4.1 Level of Utilization of PNC

Respondents who gave birth in a health facility are assumed to have received a PNC check during their stay in the health facility. Similarly women who delivered at their home may have reason for utilizing PNC service, therefore; a number of women who delivered their last baby at home were asked on this survey study. As result showed in table 4.6, out of the selected women who had at least one birth in the previous three years

preceding the survey included in the study 53.5% had at least one PNC visit after their last birth while 46.5% had none (See Table 4.8).

Table 4.7: PNC Attendance in 45 Days after the Last Delivery

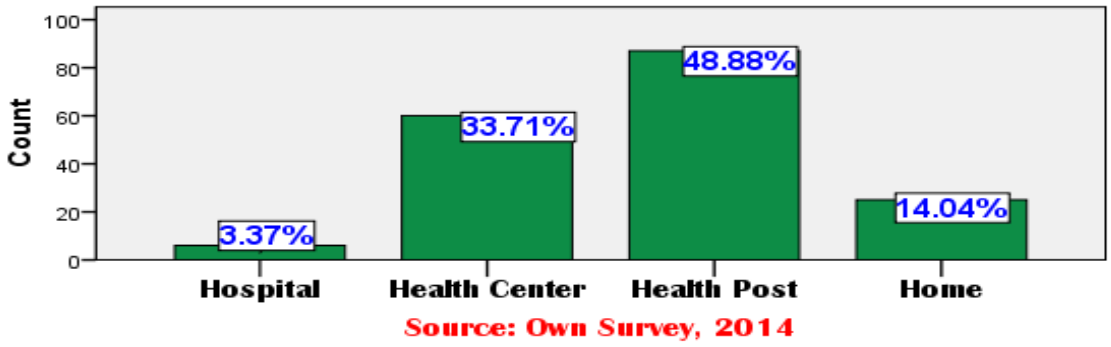
Response	Frequency	Percentage
Yes	178	53.5
No	155	46.5
Total	333	100

Source: Own Survey, 2014

4.1.4.2 Place of PNC Service Receipted

The study finding revealed that (49%) almost half of the respondents utilized PNC service in the health post by Health Extension Workers and the rest 33.71% and almost 3.37% of respondents were used in the Health Center and Hospital respectively. The rest of 14.04% of respondents attended at their own home (See Fig.4.1).

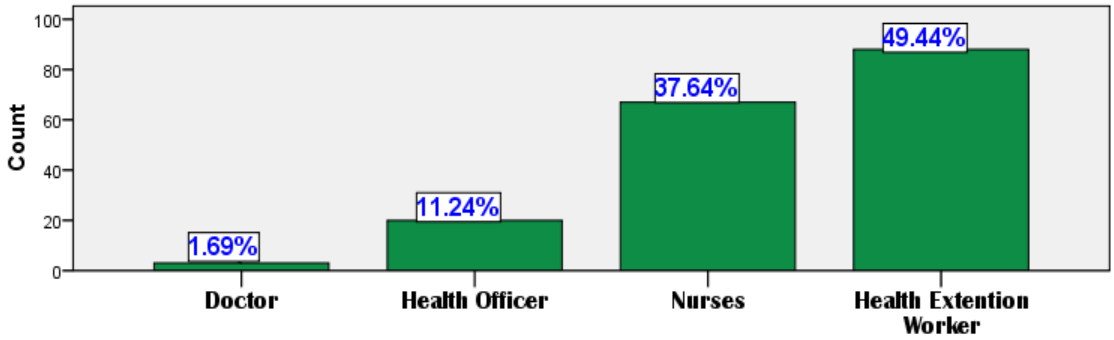
Fig. 4.5: Place of PNC Service Receipted



4.1.4.3 The Type of Professionals who Provide PNC Service

As indicated on Fig.4.6, similar to other MHC services, mainly the PNC service had been given in the health posts. The data shows that 49.44% of PNC service had been provided by Health Extension Worker. Nurses had also a great contribution on provision of the service that contained 37.64%. Medical Doctors and Health officers would provide the remained 1.69% and 11.24% of PNC service respectively.

Fig. 4.6: The Type of Professionals Who Provide PNC Service



Source: Own Survey, 2014

4.1.4.4 Reason for Non-Attendance of PNC

Similarly the study also identified the reason for non attendance of PNC. Reasons given by respondents on why they were not attending, feeling of healthy (21.7%), due to long walking distance to health facilities (16.3%), bad behavior of health workers (9.4%), unsatisfied on the previous service (14.5%), lack of awareness on the importance of PNC (7.6%), husband disproval (9.6%), bad attitude on the PNC service (11.6%), lack of role model women to follow their practice (3.4%), financial constraints (3.6%) and Other (2.4%) mentioned Cultural practice like after delivery for 40 days women doesn't allowed being out from home (See Table 4.10).

Table 4.8: Reason for non-attendance of PNC

Response (Multiple answer were possible)	Frequency	Percentage
I was healthy	109	21.7%
No one attend it here	17	3.4%
My husband prevent me	48	9.6%
Long distance	82	16.3%
Bad attitude to attend PNC service	58	11.6%
Bad behavior of health workers	47	9.4%
Financial constraints	18	3.6%
I didn't know the importance	38	7.6%
I wasn't satisfied on the previous service	73	14.5%
Other	12	2.4%

Source: Own Survey, 2014

4.1.5 Result of Bivariate Analysis

To identify factors for under utilization of MHC service, as a first step the researcher conduct various bivariate analyses of dependent and independent variables. The bivariate analysis serves for understanding and identifying factors those have statistical significant effect on the utilization of MHC service. Accordingly the MHC service/ANC,PADC and PNC/ was cross tabulated with different major independent variables such as socio-economic, areal, institutional and socio-cultural and psychological factors. The bivariate analyses used to show individual effects of those four selected major independent variables on the use of MHC services provided through health care facilities. Chi square (x^2) tests were used to examine the statistical significance of association between the dependent and selected independent variables at the 95% CI.

This section presents the main results of the bivariate analyses that show the associations of each MHC service elements with each selected independent variable.

4.1.5.1 Factors Affecting ANC Service Utilization in Duna Woreda

A bivariate analysis of the use of ANC services was done by dichotomizing the ANC visit in to two groups. The women who receive four or more ANC service were considered as fully utilized but the women who received less than four times were considered as not utilized ANC service. The results of the bivariate analyses are provided in Tables following the explanation.

4.1.5.1.1 Relationship between Selected Socio-Economic Factors and ANC Service Utilization

As it is shown in Table 4.11, the chi-square test has found that ANC service utilization significantly associated with women's age, education, and occupation, number of children, household income, husband education, autonomy, family support and access to media from socio-economic factors.

Depending on the findings of the study, the ANC utilization has a strong and statistically significant association with the age of women ($X^2=57.635$ $P=.000$). The proportions of

women under age category of 15-19, 20-34 and 35-47 who did not visit ANC service were 26.9%, 53.2% and 81.6% respectively. The data suggest that the association between ANC service utilization and age follows a linear relationship, with the lower usage among women between 35-49 age categories. The women in age group 15-19 were more likely to utilize all ANC services than those in 20-34 and 35-49 age groups.

The use of ANC was significantly associated with the level of women's education ($X^2 = 31.750$ $P=0.000$). It can be seen from the proportion of women of all educational level in Table that educated women are more likely to use ANC service than less educated women. As it is shown in Table 4.11, 72.1% of illiterate women and 48.6% of the women who attended a primary education had not received ANC service. But these proportions noticeably reduced to 39.3% of the women who attended secondary education and lower proportion (21.4%) of the women who attended tertiary education had not utilized ANC service. This might indicates that less educated women had shown less attention to the importance of using ANC services. While in contrary, the better educated women used ANC more than those women with no education.

The working status of women is also significantly associated with the utilization of ANC service ($X^2 = 23.153$ $P=0.000$). As indicated in Table 4.11, 11.1% of women proportion who are civil servants was non-user of ANC. In line with this, the proportion of non-users increase for the housewife (56.2%), trader (61.4%), farmer (86.7%) and daily labourer (100%) were unlikely use ANC service. The non-usage of ANC was more pronounced among women who are working in other sectors than civil servant women. This is indicated by significantly lower proportion of civil servant women compared to women who are working in other sector.

With respect to the association between ANC service and birth order, as Table 4.11 illustrates that the birth order has a significant impact upon the use of antenatal care ($X^2 = 11.604$ $p < 0.05$). The proportion of women who had not received ANC service for those categories with 1-2 and 3-4 children were 47.2% and 53.2% respectively while against for about 69% percent of those with five or more children. This may show the negative effect of birth order upon the use of antenatal care which is illustrated by the consistent decline in the proportion of women who received antenatal care with the

increase in number of children ever born. In other words, women who have more children tend to received less antenatal care. Such evidence suggests that women with more children tend to neglect their own health during pregnancy, although such care is important in avoiding the risk of pregnancy complications and the risk of dying that may occur during birth.

When the use of ANC service cross tabulated by the economic characteristics of the women's house hold income, the interaction between these variables were significantly associated in the study area ($X^2=18.251$ $P=.000$). The study finding revealed that the likelihood of utilizing ANC decreased, as the family income gets lower. From the Table 4.11, it may be observed that respondents who had an average monthly family income of less than 500 Birr were less likely to attend ANC as compared with those categories whose average monthly family income of 501-1000 Birr, 1001-1500 Birr, and 1501 birr and above. Of the women whose house hold income was below 500 Birr, 65.2% found to be the non-users but this proportion is decreased as house hold income increase to 501-1000 Birr categories. Similarly women whose household income lies between 1001-1500 Birr category were 41.9% of women proportion had not utilized the ANC service but this proportion were decreased to 39.5% of women proportion with increment of household income to 1501 and above category. This may indicate that as house hold income increase the utilization of ANC service increase linearly.

Another social indicator is husband's education. As expected, husband's education shows a significant association with the utilization of ANC service ($X^2=60.241$ $P= .000$). Women who had less educated husband tended to have less ANC services than those whose husbands were better educated. This is explained by the data which show that ANC was less prevalent among those women whose husbands were uneducated or in primary level education, compared to women whose husbands had above secondary education. As it is shown in Table 4.11, 81.2% of women whose husband were illiterate found to be non-user of ANC service. But these proportions noticeably reduced to 49.2%, 35.8%, and 15% of the women whose husbands were attended primary, secondary and tertiary education respectively.

Women's autonomy is also strong and significant association with the utilization of ANC service (X^2 =25.384*P=.000*). Women who had autonomy within house hold to give last decision on her personal health seeking behavior had a great opportunity for utilization of ANC service, whereas women who lack autonomy on personal matter were unlikely utilize ANC service. This is shown in Table 4.11, only 47.3% of the women who had autonomy within house hold to give last decision on her personal health seeking behavior were not received ANC service but this proportion of women increased to 76.6% for those women who lack autonomy to decide on personal matter.

The data suggest that there was high significant association between family support and utilization of ANC service (X^2 *=5.638 P= .018*). Result in Table 4.11 show that women who have not got sufficient support from their surrounding families had less opportunity to receive ANC service than women who have got help in order to use MHCS. This is indicated by the slightly higher proportion of these non-supported women compared to the supported women. The non-user of antenatal care among women who are not supported is 65.3% compared to 51.9% among those who are supported.

Women's exposure to media had a weak association with ANC service (X^2 *=2.047 P=.153*). The data illustrates that the proportion of women who received and those who did not receive ANC service, did not differ much among those who had exposure to media and who had not. 64.3% of women who are exposed to mass media did not undertake ANC service but this proportion unpredictably decreased to 54.8% of women who had not mass media exposure. This might be brought due to large count of women who were not exposed to media than women count who were exposed to mass media.

Table 4.9: Relationship between Selected Socio-Economic Factors and ANC Service Utilization in Duna Woreda, 2014

Variables		ANC Utilization		Chi-square (x^2)	P-value
		Yes No. (%)	No No. (%)		
Age	15-19	57(73.1%)	21(26.9%)	57.635	.000
	20-34	66(46.8%)	75(53.2%)		
	35-49	21(18.4%)	93(81.6%)		
Women Education	Illiterate	43(27.9%)	111(72.1%)	31.750	.000
	Primary school	56(51.4%)	53(48.6%)		
	Secondary school	34(60.7%)	22(39.3%)		
	Tertiary Education	11(78.6%)	3(21.4%)		
Women Occupation	Housewife	109(43.8%)	140(56.2%)	26.490	.000
	Farmer	2(13.3%)	13(86.7%)		
	Trader	17(38.6%)	27(61.4%)		
	Daily labourer	0(0%)	7(100.0%)		
	Civil Servant	16(88.9%)	2(11. 1%)		
Children Ever Born	1-2	56(52.8%)	50(47.2%)	11.604	.003
	3-4	52(46.8%)	59(53.2%)		
	5 and above	36(31.0%)	80(69.0%)		
Household Income	Below 500 Birr	46(34.8%)	86(65.2%)	18.251	.000
	501-1000 Birr	29(34.5%)	55(65.5%)		
	1001-1500 Birr	43(58.1%)	31(41.9%)		
	1501 and above	26(60.5%)	17(39.5%)		
Husband Education Level	Illiterate	24(18.8%)	104(81.2%)	60.241	.000
	Primary school	60(50.8%)	58(49.2%)		
	Secondary school	43(64.2%)	24(35.8%)		
	Tertiary Education	17(85%)	3(15%)		
Women autonomy	Yes	119(52.7%)	107(47.3%)	25.384	.000
	No	25(23.4%)	82(76.6%)		
Family support	Yes	102(48.1%)	110(51.9%)	5.638	.018
	No	42(34.7%)	79(65.3%)		
Access to mass media	Exposed to media	25(36.2%)	45(64.3%)	2.047	.153
	Not Exposed to media	119 (45.2%)	144 (54.8%)		

Source, Household survey, 2014

4.1.5.1.2 Relationship between Selected Areal Factors and ANC Service Utilization

The study findings revealed that, there is a strong and significant evidence of association between utilization of ANC service and the nature of road which linked their homes to health facility (X^2=*6.927 P=.008*). This entail that, there are strong evidence on women who perceived the nature of road as inconvenient had lower chances of using ANC service than women who thought the nature of road as convenient. As data appeared in Table 4.12, of larger proportions of women (61.6%) who did not undertake ANC service were more associated with the opinion that the connecting roads were bad whereas this proportion of women who consider the nature of road as convenient were reduced to 46.2%.

Similarly as that of the nature of road, the study finding revealed that there is strongly significant evidence of association between the time taken to get the nearest health facility and utilization of ANC service (X^2*= 24.512 P= 0.000*). Their relationship is a linear negative association. The study data shows that the proportion of women who attended the ANC service was decreased as the time of journey to health facility increase. Result in Table below shows, 76.2% of women proportion who spent for more than two hours on journey to access the health facility were not attended ANC service but this proportion of women who spent 1-2 hours and below one hour decreased to 64.2% and 42.7% respectively. In other word, comparatively many women who did not go for ANC service considered the time spent on the journey to the health facility as being too long.

A study finding also found a significant evidence of association between distances lengthened from women home to health facilities and utilization of ANC service (X^2= 27.388 P=.000). This association revealed that the opportunity of utilizing ANC service is decreased as distance increased to access health facilities. As presented in Table 4.12, 75.8% of women proportion who resides being too far from health facilities was unlikely used ANC service and this proportion of women who live at average and nearest distance from heath facilities significantly decreased to 65.8% and 41.8% respectively.

Another important finding of the study on area related factors were accessibility of public vehicles transportation which is strongly associated with the utilization of ANC service (X^2= *16.038 P=.000*). 62.3% of women who were not able to access public transportation service did not undertake ANC service but only 35.3% of women who were not able to access public transportation service were non-user of ANC service. This may indicate that as women have access the public transportation easily, they have a great opportunity to utilize the ANC service.

Table 4.10: Relationship between Selected Areal Factors and ANC Service Utilization in Duna Woreda, 2014

Variables		ANC utilization		Chi-square (x^2)	P-value
		Yes No. (%)	No No. (%)		
Nature of road	Convenient	56(53.8%)	48(46.2%)	6.927	.008
	Inconvenient	88(38.4%)	141(61.6%)		
	Total	144(43.2%)	189(56.8%)		
Time taken to get to the nearest health facility	Below 1hour	86(57.3%)	64(42.7%)	24.512	.000
	1-2 hour	43(35.8%)	77(64.2%)		
	Above 2 hour	15(23.8%)	48(76.2%)		
	Total	144(43.2%)	189(56.8%)		
Distance from home to health facility	Near	89(58.2%)	64(41.8%)	27.388	.000
	Average	39(34.2%)	75(65.8%)		
	Far	16(24.2%)	50(75.8%)		
	Total	144(43.2%)	189(56.8%)		
Accessibility of public vehicles transportation	Available	44 (64.7%)	24 (35.3%)	16.038	.000
	Not Available	100 (37.7%)	165 (62.3%)		
	Total	144 (43.2%)	189 (56.8%)		

Source, Household survey, 2014

4.1.5.1.3 Relationship between Selected Institutional Factors and ANC Service Utilization

Similarly as that of previous major factors, institutional factors also cross tabulated with utilization of ANC service in order to test the independence of variables by using bivariate analysis.

The study finding revealed that the women perception on the availability of professional personnel who render health service and ANC service utilization were significantly associated ($X^2=4.157$ $P=.041$). 62.3% of women proportion who were perceived the availability of professional personnel as low, did not undertake ANC service but this proportion decreased to 51.2% as the women perceived the availability of health professional personnel is sufficient in the area. This may imply that women perception on the availability of health personnel has a great impact on the utilization of ANC service. There was a clear tendency on utilization of ANC service among women who thought the existence of sufficient number of health professional personnel than who did not perceive.

The extent of confidence on the professional competency of health personnel and utilization of ANC service were strongly associated in the study area ($X^2=82.146$ $P=.000$). Surprisingly 93.3% of women proportion who had not confidence on the professional competency of health personnel did not received ANC service but this proportion of women who had confidence on professional competency of health personnel radically decreased to 40.2%. Probably this may entail those women who have confidence on the professional competency of health personnel received ANC service greater than those women who lack their confidence on the professional competency of health personnel.

Availability of health equipments and drugs in health institutions were also found to be significantly associated with utilization of ANC service ($X^2= 8.896$ $P=.003$). As the data revealed in Table 4.13, that the proportion women who received ANC service was higher among those who perceived the unavailability of health equipments and drugs (70.6%)

than among those who perceived availability of health equipments and drugs as sufficient (52%).

The study finding is not found association between privacy and confidentiality of the service and utilization of ANC service ($X^2=0.252$ $P=.616$). The lack of association between privacy and confidentiality of the service and utilization of ANC service can probably due to view on privacy and confidentiality of the service did not differ much among women proportion who did not received ANC service and those who did not. Result in Table below shows that 58.5% of women proportion who were perceived the provided health as not private and confidential found to be non-user of ANC service and as near as the previous women proportion, 55.7% of women proportion were not undertake ANC service in the study area.

The study finding revealed that the state of health personnel's encouragement and support of women and ANC service utilization were not associated ($X^2=1.202$ $P=.273$). This probably due to most women (almost 80%) responded that they have got encouragement and support from health personnel and it could be the result of minimum variation between proportion of women who received and not received ANC service. As shown in Table 4.13, 62.7% of the women who have got sufficient encouragement and support were not received ANC service as intended by WHO but a slight reduction of women proportion (55.3%) were viewed. Even though women's who have not got encouragement and support does not have a significant association on usage of ANC service, it seems that those women who have got encouragement were more likely to be used ANC service.

The use of ANC service was significantly associated with the average waiting of service in the health facility ($X^2=14.441$ $P=.002$). Their relationship were seems to be negative. It appears that there is a consistent decreased in the proportion of women who have received ANC service with increment of average waiting time to receive the service in the health facility. As indicated in Table 4.13, of the women proportion that wait for above 3 hours did not totally received ANC service but this proportion is linearly deceased to 68.96 %, 57.9% and 48.1% women proportion that were kept waiting the service reception for 2-3 hour, 1-2 hour and less than a hour categories respectively.

This study found that maternal health care education and utilization of ANC service were significantly associated ($X^2=21.563$ $P=.000$). 70% of women who attended maternal health care education did not undertake ANC service. But 48.5% of women who attended maternal health care education did not undertake ANC service in the study area.

The study finding also revealed that knowledge of maternal health care and the use of antenatal care had strong association ($X^2=29.273$ $P=.000$) which shows that women who have better knowledge of maternal health care had greater opportunity of using ANC. The data revealed that the proportion women who did not received ANC service is lower among those who had no knowledge of maternal health care (84%) than among those who had knowledge of maternal health care.

The result of this study revealed that, the quality of ANC service and the use of ANC service were significantly associated ($X^2=70.776$ $P=.000$). Poor quality of ANC care as perceived by the women in this study would be considered as a threat to the promotion of utilization of ANC service. As in Table 4.13, 90.5% of women who perceived the quality of ANC services to be poor were unlikely non-attendees of ANC service. Whereas this proportion of women surprisingly decreased 73.2% and 32.7% of women proportion who perceived the quality of ANC services to be satisfactory and good respectively.

Table 4.11: Relationship between Selected Institutional Factors and ANC Service Utilization in Duna Woreda, 2014

Variables		ANC utilization		Chi-square (x^2)	P-value
		Yes No. (%)	No No. (%)		
Availability of professional personnel	Adequate	81(48.8%)	85(51.2%)	4.157	.041
	Inadequate	63(37.7%)	104(62.3%)		
confidence on the professional competency of health personnel	Yes	137(59.8%)	92(40.2%)	82.146	.000
	No	7(6.7%)	97(93.3%)		
Availability of health equipments and drugs in health institutions	Adequate	119(48.0%)	129(52.0%)	8.896	.003
	Inadequate	25(29.4%)	60(70.6%)		
Privacy and confidentiality of the service	Yes	93(44.3%)	117(55.7%)	0.252	.616
	No	51(41.5%)	72 (58.5%)		
Encouragement and support of women by health personnel's	Yes	119(44.7%)	147(55.3%)	1.202	.273
	No	25(37.3%)	42(62.7%)		
Average waiting time	Less than 1 hour	69(51.9%)	64(48.1%)	14.441	.002
	1-2 hour	61(42.1%)	84(57.9%)		
	2 -3 hour	14(31.1%)	31(68.9%)		
	Above 3 hour	0(0.0%)	10(100%)		
Maternal Health Care Education	Yes	120(51.5%)	113(48.5%)	21.563	.000
	No	24(24.0%)	76(76.0%)		
knowledge of Maternal Health Care	Yes	132(51.2%)	126(48.8%)	29.273	.000
	No	12(16.0%)	63(84.0%)		
Overall Quality of health services	Good	103(67.3%)	50 (32.7%)	70.776	.000
	Satisfactory	37(26.8%)	101(73.2%)		
	Poor	4(9.5%)	38(90.5%)		

Source, Household survey, 2014

4.1.5.1.4 Relationship between Selected Socio-Cultural and Psychological Factors and ANC Service Utilization

Finally as that of previous major factors, some of selected socio-cultural and psychological factors also cross tabulated with utilization of ANC service to determine the association of independent and dependent variables by using bivariate analysis.

The study data revealed that there was strong association between attitude of women and the utilization of ANC service ($X^2=25.616$ $P=.000$). As it is revealed in Table 4.14, 85.5% of the women proportion who had negative attitude did not receive ANC service where as 50.2% of women proportion who had positive attitude did not undertake ANC service. This may imply that there is strong evidence of women proportion that had a negative attitude more unlikely to receive ANC services than those who had a positive attitude

The study finding similarly found that there was also strong association between attitude of husband and the utilization of ANC service ($X^2=14.467$ $P=.001$). As it is appeared in Table below, 75% of the women proportion who could not identify the attitude of their husband did not receive ANC service. while considerably 70.4% of women proportion whose husband had negative attitude towards MHC service is found to be non-user of ANC service, this proportion of women decreased to 49.1% for those women proportion whose husband had negative attitude towards MHC service in the study area. This may entailed that there is strong evidence of husband attitude that had a negative attitude more unlikely to receive ANC services than those who had a positive attitude.

Husbands willingness to offer permission for their wives to use MHC service were significantly associated with the utilization of ANC service ($X^2=21.065$ $P=.000$). 81.8% of the women proportion whose husbands refused seeking ANC service did not used ANC service but this proportion is significantly decreased to 50.6% for those women proportion whose husbands allow them to utilize ANC service.

The perception of Cultural and religious belief and practice were also significantly associated with the utilization of ANC ($X^2=8.657$ $P=.003$). The relationship showed that

the women who perceive cultural and religious belief and practice of the area as barrier for not seeking ANC service were more unlikely to had ANC visit. 70.7% of the women who perceive cultural and religious belief and practice of the area as barrier were found to be non-beneficiary of ANC service, but a significant reduction were registered on women proportion (52.2%) who does not perceive cultural and religious belief and practice as barrier for the utilization of ANC service. Women who perceived cultural and religious issues as barriers for utilization of ANC service were asked to mention some of it. As the result of this, some of them mentioned some cultural and religious barriers which minimize their attendance of ANC service. A number of women reported that disclosing the pregnancy of child at early stage is not encouraged by the society. They consider that if they announce their pregnancy at early stage, it's not safe for a baby and mother. Widely in the study area women feel shame to show their naked body for health professionals particularly for male personnel.

Another important finding of the study on socio-cultural related factors were a feeling of fear towards health institutions which is significantly associated with the utilization of ANC service (X^2= *19.339 P=.000*). 82 % of women who were afraid of health facility due to certain reason did not undertake ANC service but only 51.1% of women who were not afraid of health facility were non-user of ANC service. This may indicate that as women have felt fear of health institution, they have less opportunity to utilize the ANC service. Women who did not use ANC service gave diverse reasons for their feeling of fear. Women indicated that they were afraid of the needles or how the medical staff would treat them. Also some women fear the medical result that may lead their life anxious.

Table 4.12: Relationship between Selected Socio-Cultural and Psychological Factors and ANC Service Utilization in Duna Woreda, 2014

Variables		ANC utilization		Chi-square (x^2)	P-value
		Yes No. (%)	No No. (%)		
Attitude of women on the utilization of ANC	Positive	135(49.8%)	136(50.2%)	25.616	.000
	Negative	9(14.5%)	53(85.5%)		
Attitude of Husband on the Utilization of ANC service	Positive	109(50.9%)	105(49.1%)	14.467	.001
	Negative	34(29.6%)	81(70.4%)		
	Undefined	1(25.0%)	3(75.0%)		
Husband permission for utilization of ANC service	Yes	132(49.4%)	135(50.6%)	21.065	.000
	No	12(18.2%)	54(81.8%)		
Cultural and religious belief and practice	Yes	24(29.3%)	58(70.7%)	8.657	.003
	No	120(47.8%)	131(52.2%)		
A feeling of fear towards health institutions	Yes	11(18.0%)	50(82%)	19.339	.000
	No	133(48.9%)	139(51.1%)		

Source, Household survey, 2014

4.1.5.2 Factors Affecting PADC Service Utilization in Duna Woreda

Similarly the bivariate analysis were used for identifying factors those have statistically significant effect on the utilization of PADC service. Accordingly PADC service was cross tabulated with different major independent variables such as socio-economic, areal, institutional and socio-cultural factors. A bivariate analysis of the use of PADC services was done by dichotomizing the PADC service utilization as the cut point of 'Yes' and 'No'. The main results of the bivariate analyses are presented in table following the explanation.

4.1.5.2 Relationship between Selected Socio-Economic Factors and Utilization of PADC Service

The study finding found that socio-economic factors such as age, education, occupation, household income, husband education, autonomy on making decision were significantly associated with the use of PADC service.

The findings of the study show that women age has a linear and statistically significant association with the utilization of PADC service ($X^2=53.432$ $P=.000$). The use of PADC service at delivery was more pronounced for those 15-20 years than those at middle or older age groups. The lowest proportion 38.1% was in the women who are belongs under 19 years. The percentage radically declines from 73.1 % of women who are between 15-20 age group to 29.8% of women who are between 21-34 age group. In contrary, 26.9% of women who are between 15-20 were not assisted by health professionals. But this proportion is radically escalated to 70.2% and 75.4% of women proportion who were found to be non-user of PADC service.

The same relationship also found in the utilization of PADC service by women's education. As shown in Table 4.15, 78.6% of women proportion who were illiterate did not received PADC service ($X^2=38.355$ $P=.000$). But this proportion of women decreased to 50.5% of women proportion who attended primary school education. The effects are even lower for secondary and tertiary education (48.2% and 21.4% respectively). Similarly the study finding revealed that the proportion of women who were not obtaining delivery assistance from skilled health professional was much higher for women who had no or primary school education compared to those with secondary or tertiary school education. This shows that as educational level of women increase the use of PADC services will be increased. Probably this is because of education promotes new values and attitudes that are favorable to modern health care services.

Women occupation and PADC service were also associated significantly($X^2=24.389$ $P=.000$). As indicated in Table 4.15, 16.7% of women proportion who are civil servants was non-user of PADC. In line with this, the proportion of non-users increase for the housewife (60.9%), trader (75%), farmer (75%) and daily labourer (100%) were

unlikely use PADC service. The non-usage of PADC was more manifested among women who are working in other sectors than civil servant women. As expected the survey confirmed women in professional occupations were more likely to use PADC than those in other sector like agricultural workers, trader, and daily labourer.

Unexpectedly the study revealed that the birth order and utilization of PADC had no significant association ($X^2=2.365$ $P=.306$) in the study area. Although the difference was not statically significant, the non-usage of PADC was going to increase with the increment of children ever born. 57.5% of the women proportion who had 1-2 children were not assisted by skilled birth attendant whereas this proportion slightly increase to 60.4% and 67.2% of women proportion who had 3-4 and more than 5 children respectively.

The use of PADC service and house hold income significantly associated in the study area ($X^2=19.396$ $P=.000$). As survey data shows, of the women whose house hold income was below 500 Birr, 70.5% found to be the non-users but this proportion is decreased to 70.2% as house hold income increase to 501-1000 Birr categories. Similarly women whose household income lies between 1001-1500 Birr category were 48.6% of women proportion had not utilized the PADC service but this proportion were decreased to 41.9% of women proportion with increment of household income to 1501 and above category. This may indicate that the likelihood of utilizing PADC service decreased, as the family income become lower. In contrary the income of household become higher, the utilization of PADC service tends to be higher.

A linear positive association is also found between husband's education and PADC service ($X^2=82.024$ $P=.000$). Result in table below shows that the higher the education of husbands, the higher the tendency for using skilled professional birth attendants. Conversely, the percentage of women who did not assisted by professional health personnel was inversely related to husband's education. As data shows, 90.6% of the women proportions who are not attended school were found to be non-user of PADC service. On the other hand, the women proportion whose husband had primary, secondary and tertiary school education decreased to 51.7%, 37.3% and 20% respectively. The

corollary of this finding is that women's and their husbands' education are positively associated.

Women autonomy were significantly associated with the utilization of PADC service ($X^2=4.528$ $P=.033$). Only 58% of the women proportion who has autonomy to decide on utilization of maternal health service did not used PADC service but this proportion is notably decreased to 70.1% for those women proportion who lack autonomy to decide on utilization of maternal health service did not undertake PADC service. This shows that the status of women autonomy is very important aspect for utilization of PADC service.

Unexpectedly, the study finding was not found the relationship between family support and utilization of PADC service. As the study data suggest that the family support and utilization of PADC service had no association ($X^2= 1.458$ $P=.227$). Due to narrow difference between women proportion that was supported and unsupported by their families, the relationship lack significant association. As the data indicated in Table 4.15, the non-user of PADC service among women who were not supported is 59.4% compared to 66.1% among those who were supported.

Finally, the data shows that nearly equal proportion of women in terms of PADC service utilization between women who had an opportunity of media exposure and who had not exposed to media, the difference was not statistically significant ($X^2=2.365$ $P=.306$). As 38.6 % of women who were not exposed to mass media were assisted by skilled birth attendants, those women who were exposed to mass media and assisted by health professional are 38%. As the result of nearly equal proportion between two categories, the relationship tends to be insignificant.

Table 4.13: Relationship between Selected Socio-Economic Factors and PADC Service Utilization in Duna Woreda, 2014

Variables		PADC service utilization		Chi-square (x^2)	P-value
		Yes	No		
Age	15-20	57(73.1%)	21(26.9%)	53.432	.000
	21-34	42(29.8%)	99(70.2%)		
	35-49	28(24.6%)	86(75.4%)		
Women Education	Illiterate	33(21.4%)	121(78.6%)	38.355	.000
	Primary Education	54(49.5%)	55(50.5%)		
	Secondary Education	29(51.8%)	27(48.2%)		
	Tertiary Education	11(78.6%)	3(21.4%)		
Women Occupation	Housewife	97(39.1%)	151(60.9%)	24.389	.000
	Farmer	4(25%)	12(75%)		
	Trader	11(25.0%)	33(75.0%)		
	Daily labourer	0(0.0%)	7(100.0%)		
	Civil Servant	15(83.3%)	3(16.7%)		
Children Ever Born	1-2	45(42.5%)	61(57.5%)	2.365	.306
	3-4	44(39.6%)	67(60.4%)		
	5 and above	38(32.8%)	78(67.2%)		
Household Income	Below 500 Birr	39(29.5%)	93(70.5%)	19.396	.000
	501-1000 Birr	25(29.8%)	59(70.2%)		
	1001-1500 Birr	38(51.4%)	36(48.6%)		
	1501 and above	25(58.1%)	18(41.9%)		
Husband Education Level	Illiterate	12(9.4%)	116(90.6%)	82.024	.000
	Primary Education	57(48.3%)	61(51.7%)		
	Secondary Education	42(62.7%)	25(37.3%)		
	Tertiary Education	16(80.0%)	4(20.0%)		
Women autonomy	Yes	95(42.0%)	131(58.0%)	4.528	.033
	No	32(29.9%)	75(70.1%)		
Family support for using MHCS	Yes	86(40.6%)	126(59.4%)	1.458	.227
	No	41(33.9%)	80(66.1%)		
Access to mass media	Exposed to mass media	27(38.6%)	43(61.4%)	.007	.933
	Not Exposed to mass media	100(38%)	163(62%)		

Source, Household survey, 2014

4.1.5.2.1 Relationship between Selected Areal Factors and PADC Service Utilization

The study finding revealed that the nature of the road and PADC service utilization were significantly associated ($X^2=7.616$ $P=.006$). 66.8 % of women proportion who were perceived the nature of the road as inconvenient, did not undertake PADC service but this proportion decreased to 51% of the women who perceived the nature of road as convenient. This may imply that women perception on the nature of road has a great impact on the utilization of PADC service. There was a clear tendency on utilization of PADC service among women who thought the nature of road as convenient more likely used than who did not perceive in the same way.

Similarly as that of ANC service, the time taken to access the nearest health facility and the use of PADC service were significantly associated ($X^2=35.972$ $P=.000$). The study data shows that the proportion of women who delivered by assistance of health professional was decreased as the time of journey to health facility increase. Result in table below shows, 82.5% of women proportion who spent for more than two hours on journey to access the health facility were not used PADC service but this proportion of women who spent 1-2 hours and below one hour decreased to 72.5% and 44.7% respectively. It can be an indicator of the fact that women who spent long time on accessing the health facility were more likely non-user of PADC service when they delivered.

The use of PADC service was significantly associated with the distance of the nearest health facility ($X^2=40.828$ $P=.000$). Their relationship were seems to be negative. It appears that there is a consistent decreased in the proportion of women who have received PADC service with increment of distance to access the health facility. As indicated in Table 4.16, 83.3% of the women proportion who perceived the distance to health facility as far did not utilized PADC service but this proportion is linearly deceased to 73.7 % and 43.8% of women proportion who perceive the distance to access health facilities as average and close respectively.

The study also found that the accessibility of emergency vehicles transportation and utilization of PADC service had significant association ($X^2=26.988$ $P=.000$). As data in Table 4.16 shown, 67.6% of women proportions who perceived the accessibility of emergency vehicles transportation for emergent referral of pregnant women as unavailable were found to be non-user of PADC service. But only 28.6% of women proportion who perceived the availability of emergency vehicles transportation for emergent referral of pregnant women as available were found to be non-user of PADC service.

Table 4.14: Relationship between Selected Areal Factors and PADC Service Utilization in Duna Woreda, 2014

Variables		Utilization of PADC service		Chi-square (x^2)	P-value
		Yes	No		
Nature of road	Convenient	51(49.0%)	53(51.0%)	7.616	.006
	Inconvenient	76(33.2%)	153(66.8%)		
	Total	127(38.1%)	206(61.9%)		
Time taken to get to the nearest health facility	Below 1hour	83(55.3%)	67(44.7%)	35.972	.000
	1-2 hour	33(27.5%)	87(72.5%)		
	Above 2 hour	11(17.5%)	52(82.5%)		
	Total	127(38.1%)	206(61.9%)		
Distance of the nearest health facility	Very close	86(56.2%)	67(43.8%)	40.828	.000
	Average	30 (26.3%)	84 (73.7%)		
	Too Far	11 (16.7%)	55 (83.3%)		
	Total	127(38.1%)	206(61.9%)		
Accessibility of emergency vehicles transportation for emergent referral of pregnant women	Available	35(71.4%)	14(28.6%)	26.988	0.000
	Not Available	92 (32.4%)	192 (67.6%)		
	Total	127 (38.1%)	206 (61.9%)		

Source, Household survey, 2014

4.1.5.2.2 Relationship between Selected Institutional Factors and PADC Service Utilization

Selected institutional factors also cross tabulated with utilization of PADC service in order to test the relationship of variables by using bivariate analysis.

The study finding revealed that the women perception on the availability of professional personnel who render health service and PADC service utilization had significant association ($X^2=5.819$ $P=.016$). 68.3% of women proportion who were perceived the availability of professional personnel as inadequate, did not undertake PADC service but this proportion decreased to 55.4% as the women perceived the availability of health professional personnel is sufficient in the area. This may imply that women perception on the availability of health personnel has a great impact on the utilization of PADC service. There was a tendency on utilization of PADC service among women who thought the existence of sufficient number of health professional personnel than who did not perceive in similar way.

Being confident on the professional competency of health personnel and utilization of PADC service were strongly associated in the study area ($X^2=45.354$ $P=.000$). 88.5% of women proportion who are confident on the professional competency of health personnel did not received PADC service but this proportion of women who are not confident on professional competency of health personnel radically decreased to 49.8%. Probably this may entail those women who are confident on the professional competency of health personnel received PADC service greater than those women who lack their confidence on the professional competency of health personnel.

Availability of health equipments and drugs in health institutions were also found to be significantly associated with utilization of PADC service ($X^2= 5.938$ $P=.015$). As the data shown in Table 4.17, that the proportion women who received PADC service was higher among those who perceived the unavailability of health equipments and drugs (72.9%) than among those who perceived unavailability of health equipments and drugs (58.1%). This may indicate that the perception of women in the availability of health

equipments and drugs in health facility has a great impact on the utilization of PADC service in the study area.

The study finding also found that the availability of the service any time and utilization of PADC service had significant association ($X^2=122.044$ $P=.000$). Surprisingly 80.9% of women proportion who believed the availability of the service have not been given at any time were not utilized whereas this proportion were radically decreased to 16.3% of women proportion who believed the service were available at any time needed. It is crucial to provide the service at any time in order to maximize the user of PADC service.

The study finding was not find association between privacy and confidentiality of the service and utilization of PADC service ($X^2=0.463$ $P=.496$). The lack of association between privacy and confidentiality of the service and utilization of PADC service can probably due to view on privacy and confidentiality of the service did not differ much among women proportion who perceived the service as private and confidential and those who did not perceive. Result in table below shows that 64.2% of women proportion who were perceived the provided health as not private and confidential found to be non-user of PADC service and as near as the previous women proportion, 60.5% of women proportion were not undertake PADC service in the study area.

The study finding revealed that the state of health personnel's encouragement and support of women and PADC service utilization were not associated ($X^2=1.000$ $P=.317$). This probably due to most women (almost 80%) responded that they have got encouragement and support from health personnel and it could be the result of minimum variation between proportion of women who received and not received PADC service. As shown in Table 4.17, 67.2% of the women who have got sufficient encouragement and support were not received PADC service but a slight reduction of women proportion (60.5%) were viewed. Even though women's who have not got encouragement and support does not have a significant association with usage of PADC service, it seems that those women who have got encouragement were more likely to be used PADC service.

The use of PADC service was significantly associated with the average waiting of service in the health facility ($X^2=8.079$ $P=.044$). Their relationship were seems to be negative. It

appears that there is a consistent decreased in the proportion of women who have received PADC service with increment of average waiting time to receive the service in the health facility. As indicated in Table 4.17, of the women proportion that wait for above 3 hours did not received PADC service but this proportion is linearly deceased to 68.9 %, 60.7% and 57.9% women proportion that were wait the service reception for 2-3 hour, 1-2 hour and less than a hour respectively.

This study found that maternal health care education and utilization of PADC service were not significantly associated ($X^2=1.037$ $P=.308$). 66% of women who did not attend maternal health care education were found to be PADC service. But with slight difference 66% of women who attended maternal health care education were found to be non-user of PADC service in the study area. The lack of association may become the result of slight difference between women proportion who attended maternal health education and those did not attend.

The study finding also revealed that knowledge of maternal health care and the use of PADC service had significant association ($X^2=6.727$ $P=.009$) which shows that women who have better knowledge of maternal health care had greater opportunity of using PADC service in the study area. The data revealed that the proportion of women who were not assisted by health professional personnel were lower among those who had no knowledge of maternal health care (74.7%) than among those who had knowledge of maternal health care (58.1%).

The result of this study revealed that, the overall quality of PADC service and the use of PADC service were significantly associated ($X^2=111.52$ $P=.000$). Poor quality of ANC care as perceived by the women in this study would be considered as a threat to the promotion of utilization of PADC service. As the shown in Table 4.17, in almost equal manner 88.1% and 87.7% of women proportion who perceived the quality of PADC services to be poor and satisfactory were unlikely non-user of PADC service. Whereas this proportion of women surprisingly decreased 31.4% of women proportion who perceived the quality of PADC services as good.

Finally the utilization of ANC and PADC service were also cross tabulated in order to identify whether the utilization of ANC service has militating factors to the incidence of seeking the assistance of a trained health personnel or not. The utilization of PADC service during delivery and ANC service were significantly associated in the study area ($X^2=151.68$ $P=.000$). As data shown in Table 4.17, 90.5% of women proportion who were undertake ANC service for less than four times were unlikely used PADC service during delivery, whereas (24.3%) those who visited ANC service for four and more than four times were found to be non-user of PADC service. This may indicate that women who visited ANC service for four and more than four times during their pregnancy had a great opportunity to utilize professional health personnel for their delivery.

Table 4.15: Relationship between Selected Institutional Factors and PADC Service Utilization in Duna Woreda, 2014

Variables		Utilization of PADC Service		Chi-square (x^2)	P-value
		Yes	No		
Availability of professional personnel	Adequate	74(44.6%)	92(55.4%)	5.819	.016
	Inadequate	53(31.7%)	114(68.3%)		
confidence on the professional competency of health personnel	Yes	115(50.2%)	114(49.8%)	45.354	.000
	No	12 (11.5%)	92(88.5%)		
Availability of health equipments and drugs in health facility	Adequate	104(41.8%)	144(58.1%)	5.938	.015
	Inadequate	23(27.4%)	62(72.9%)		
Availability of the service any time	Yes	82(83.7%)	16(16.3%)	122.04	.000
	No	45(19.1%)	190(80.9%)		
Privacy and Confidentiality of the Service	Yes	83(39.5%)	127(60.5%)	0.463	.496
	No	44(35.8%)	79(64.2%)		
Encouragement of women by health personnel's	Yes	105(39.5%)	161(60.5%)	1.000	.317
	No	22(32.8%)	45(67.2%)		
Average waiting time	Less than 1 hour	56(42.1%)	77(57.9%)	8.079	.044
	1-2 hour	57(39.3%)	88(60.7%)		
	2 -3 hour	14(31.1%)	31(68.9%)		
	Above 3 hour	0(0.0%)	10(100.0%)		
Attendance of maternity health care related education	Yes	93(39.9%)	140(60.1%)	1.037	.308
	No	34(34.0%)	66(66.0%)		
Having sufficient knowledge and skill on MHC	Yes	108(41.9%)	150(58.1%)	6.727	.009
	No	19(25.3%)	56(74.7%)		
overall quality of health services	Good	105(68.6%)	48(31.4%)	111.52	.000
	Fair	17 (12.3%)	121(87.7%)		
	Poor	5 (11.9%)	37 (88.1%)		
Utilization of ANC service	4 or More than 4 times	109(75.7%)	35(24.3%)	151.68	.000
	Less than 4 times	18(9.5%)	171(90.5%)		

Source, Household survey, 2014

4.1.5.2.3 Relationship between Selected Socio-Cultural and Psychological Factors and Utilization of PADC Service

Some of selected socio-cultural and psychological factors also cross tabulated with utilization of PADC service to identify factors which had statically significant association with utilization of PADC service by using bivariate analysis. Factors like Women attitude, husband attitude, husband permission, cultural and religious belief and practice and fear of health facility were significantly associated with the utilization of PADC service. These factors could thus be seen as militating factors to the incidence of seeking the assistance of trained health personnel.

The study data revealed that there was strong association between attitude of women and the utilization of PADC service ($X^2=27.332$ $P=.000$). As it is revealed in Table 4.18, 76.8 % of the women proportion who had negative attitude were not assisted by skilled birth attendants where as 48.9% of women proportion who had positive attitude did not used PADC service. This may imply that there is strong evidence of women proportion that had a negative attitude more unlikely to receive PADC services than those who had a positive attitude on the utilization of PADC service.

The study finding similarly found that there was also strong association between attitude of husband and the utilization of PADC service ($X^2=7.206$ $P=.027$). As it is shown in Table 4.18, 75% of the women proportion who could not identify the attitude of their husbands was not assisted by skilled birth attendants. while considerably 71.3% of women proportion whose husband had negative attitude towards MHC service is found to be non-user of PADC service, this proportion of women decreased to 56.5% for those women proportion whose husband had positive attitude towards MHC service in the study area. This may entailed that there was strong evidence of women whose husband attitude is negative were more unlikely to use PADC services than those whose husband had a positive attitude.

Husbands willingness to offer permission for their wives to use MHC service were significantly associated with the utilization of PADC service ($X^2=16.085$ $P=.000$). 83.3% of the women proportion whose husbands prevented their wives from utilizing PADC

service is not assisted by PADC service but this proportion is significantly decreased to 56.6% for those women proportion whose husbands allow them to utilize PADC service. This may indicate that husband permission is important for women to decide the utilization.

The perception of Cultural and religious belief and practice were also significantly associated with the utilization of PADC ($X^2=35.706$ $P=.000$). 74.5% of the women proportion who perceived cultural and religious belief and practice of the area as impediment were found to be non-user of PADC service, but a significant reduction were registered on women proportion (41.9%) who does not perceived cultural and religious belief and practice as impediment for the utilization of PADC service. The relationship showed that the women who perceived cultural and religious belief and practice of the area as impediment for not seeking PADC service were more unlikely assisted by health professional personnel.

Women who perceived cultural and religious issues as impediments for utilization of PADC service asked to mention some of it. As the result of this, some of them mentioned some cultural and religious barriers which reduce the utilization of PADC service.

According to community culture, young married woman where expected to deliver her first baby at her own parents home. Sometimes it could be obligatory based on the nature of family. This cultural practice prevent young married woman who deliver for the first time from seeking PADC service.

In the study area most women believe that normal delivery should be conducted at home and delivery at health facilities are beneficial for those with complications only (women identified with problems and risk factors). As respondent perception, women who delivered at home with assistance of TBA's and relatives have got better care than who delivered at health facility. They believe that TBAs and relatives are able to protect mother and new born child from sunlight and cold air which are believed in the society as danger for their health condition.

In line with this, another reason is the existence of women with substantial experience in assisting in childbirth are widespread in these communities and most married aged

women have some level of traditional knowledge. These women provide not only assistance at birth, but also advice to women during pregnancy and care postnatal.

The feeling of fear towards health institutions and utilization of PADC service were significantly associated (X^2= *10.794 P=.001*). 80.3% of women who were afraid of health facility due to certain reason were not assisted by health personnel but only 57.7% of women who were not afraid of health facility were found to be non-user of PADC service. This may indicate that women who fear health institution have less inclination to utilize the PADC service. Women who did not use ANC service gave diverse reasons for their feeling of fear. Women indicated that they were afraid of the needles or how the medical staff would treat them. Also some women fear the medical result that may lead their life anxious as well as they felt the feeling of fear and shame to expose themselves to a male health care provider as well as to young midwives during their delivery.

Table 4.16: Relationship between Selected Socio-Cultural and Psychological and Utilization of PADC Service in Duna Woreda, 2014

Variables		Utilization of PADC service		Chi-square (x^2)	P-value
		Yes	No		
Women attitude on the utilization of PADC service	Yes	91(51.1%)	87(48.9%)	27.332	.000
	No	36(23.2%)	119(76.8%)		
Husband attitude on the utilization of PADC service	Positive	93(43.5%)	121(56.5%)	7.206	.027
	Negative	33(28.7%)	82(71.3%)		
	Undefined	1(25%)	3(75%)		
Husband permission for utilization of PADC service	Yes	116(43.4%)	151(56.6%)	16.085	.000
	No	11(16.7%)	55(83.3%)		
Cultural and religious belief and practice	Yes	75(58.1%)	54(41.9%)	35.706	.000
	No	52(25.5%)	152(74.5%)		
A feeling of fear towards health institutions	Yes	12(19.7%)	49(80.3%)	10.794	.001
	No	115(42.3%)	157(57.7%)		

Source, Household survey, 2014

4.1.5.3 Factor Affecting PNC Service Utilization in Duna Woreda

It has been discussed earlier that the respondent's choice of using ANC and PADC service is influenced by her socio-economic, areal, institutional and socio-cultural factors. In similar way, this part of the study presents that the relationships between the utilization of PNC service and the independent variables by means of a bivariate analysis. The bivariate analysis is done by dichotomizing the PNC service utilization in to two categories of 'Yes' and 'No'. The main results of the bivariate analyses are presented in table following the explanation.

4.1.5.3.1 Relationship between Selected Socio-Economic Factors and Utilization of PNC Service

The chi-square test revealed that socio-economic factors such as age, education, occupation, and husband education were significantly associated with the use of PNC service. Whereas factors like family support, number of ever born children, women autonomy, household income and access to media are not found statically significant association with the utilization of PNC service.

The findings of the study show that women age has statistically significant association with the utilization of PNC service ($X^2=38.492$ $P=.000$). The non-use of PNC service at delivery was more prominent for those at middle or older age groups than those between 15-19 years old. As revealed in Table 4.19, 16.7% of the women who are between 15-20 were not used PNC service after deliveries whereas this proportion is increased to 51.8% and 60.5% of women proportion who are between 20-34 and 35-49 age groups respectively.

Women education and PNC service were also associated significantly ($X^2=26.995$ $P=.000$). The study finding found that the proportion of women who were not attend PNC service was much higher for women who had no or primary school education compared to those with secondary or tertiary school education. As shown in Table 4.19, 60.4% of women proportion who were illiterate did not receive PNC service. But this proportion of women decreased to 38.5% of women proportion who attended primary

school education. The effects are even lower for secondary and tertiary education (33.9% and 7.1% respectively). This may indicate that as the women educational level increase, the possibility of using PNC service will be proportionally increased.

The same association is found between the women's occupation and the utilization of PNC service ($X^2=24.041$ $P=.000$). As indicated in Table 4.19, only 5.6% of women proportion who are civil servants was non-user of PNC service whereas the proportions of non-users of PNC service increase for the housewife (45.6%), trader (52.3%), farmer (68.8%) and daily labourer (100%). The non-usage of PNC was more manifested among women who are working in other sectors than civil servant women. As expected the survey confirmed women in professional occupations were more likely to use PNC service than those in other sector like agricultural workers, trader, and daily labourer.

Similar to PADC service utilization, unexpectedly the number of children ever born and utilization of PNC service had no significant association ($X^2=.655$ $P=.721$) in the study area. 43.4% of the women proportion who had 1-2 children was not utilized PNC service. With slight increment there were 48.6% and 47.4% of women proportion found to be non-users of PNC service who had 3-4 and more than 5 children respectively.

The use of PNC service and household income were not significantly associated in the study area ($X^2=6.295$ $P=.098$). As survey data shows, 53% and 47.6% of the women proportion whose household income is below 500 Birr and 501-1000 Birr were found to be non-user of PNC service respectively. With slight difference, 41.9% and 32.6% of women proportion whose household income is 1001-1500 Birr and 1501 Birr and above were found to be non-user of PNC service respectively. Even though the proportion of women continuously decreased as their household income increased, the relationship between this two variables lack Statical significance. This is due to the existence of little variation in the proportion of household income in the sample.

With respect to the association between PNC service utilization and husband education, Table 4.19 illustrates that the independent variable (husband education) has a significant impact upon the use of PNC service ($X^2=41.898$ $P=.000$). Result in Table below shows that the women proportion whose husband attended tertiary education were show the

highest tendency for using PNC service. As data shows, 68% of the women whose husband are illiterate were found to be non-user of PNC service. On the other hand, the women proportion whose husband had primary, secondary and tertiary school education are 37.3%, 31.3% and 15% respectively. The corollary of this finding is that women's and their husbands' education are positively associated.

Women autonomy were not significantly associated with the utilization of PNC service (X^2*=2.124 P=.145*). 43.8% and 52.3% of the women proportion who has autonomy to decide and who lack autonomy to decide on utilization of maternal health service did not used PNC service respectively. The existence of little difference in the proportion of women autonomy in the sample respondents is suggested as the reason of why they lack statically significant association.

Unexpectedly, the study finding is found the relationship between family support and utilization of PNC service. As the study data suggest that the family support and utilization of PNC service had no association (X^2*=.374 P=.541*). Due to narrow difference between women proportion that was supported and unsupported by their families, the relationship lack statically significant association. As the data indicated in Table 4.19, the non-user of PNC service among women who were not supported is 48.8% and 45.3% among those who were supported.

Like as that of PADC service, the data shows that nearly equal proportion of women in terms of PNC service utilization between women who had an opportunity of media exposure and who had not exposed to media, the difference was not statistically significant (X^2*=.182 P=.670*). 44.3% and 47.1% of women who had exposure to mass media and those women who were not exposed to mass media is found to be non-user of PNC service. As the result of nearly equal proportion between two categories, the relationship tends to be statically insignificant.

Table 4.17: Relationship between Selected Socio-Economic and PNC Service Utilization in Duna Woreda, 2014

Variables		PNC Service Utilization		Chi-square (x^2)	P-value
		Yes No. (%)	No No. (%)		
Age	15-19	65(83.3%)	13(16.7%)	38.492	.000
	20-34	68(48.2%)	73(51.8%)		
	35-49	45(39.5%)	69(60.5%)		
Women Education	Illiterate	61(39.6%)	93(60.4%)	26.995	.000
	Primary Education	67(61.5%)	42(38.5%)		
	Secondary Education	37(66.1%)	19(33.9%)		
	Tertiary Education	13(92.9%)	1(7.1%)		
Women Occupation	Housewife	135(54.4%)	113(45.6%)	24.041	.000
	Farmer	5(31.2%)	11(68.8%)		
	Trader	21(47.7%)	23(52.3%)		
	Daily labourer	0(0.0%)	7(100.0%)		
	Civil Servant	17(94.4%)	1(5.6%)		
Children Ever Born	1-2	60(56.6%)	46(43.4%)	0.655	.721
	3-4	57(51.4%)	54(48.6%)		
	5 and above	61(52.6%)	55(47.4%)		
Household Income	Below 500 Birr	62(47.0%)	70(53.0%)	6.295	.098
	501-1000 Birr	44(52.4%)	40(47.6%)		
	1001-1500 Birr	43(58.1%)	31(41.9%)		
	1501 and above	29(67.4%)	14(32.6%)		
Husband Education Level	Illiterate	41(32.0%)	87(68.0%)	41.898	.000
	Primary Education	74(62.7%)	44(37.3%)		
	Secondary Education	46(68.7%)	21(31.3%)		
	Tertiary Education	17(85%)	3(15%)		
Women autonomy	Yes	127(56.2%)	99(43.8%)	2.124	.145
	No	51(47.7%)	56(52.3%)		
Family support for using MHCS	Yes	116(54.7%)	96(45.3%)	.374	.541
	No	62(51.2%)	59(48.8%)		
Access to media	Exposed to mass media	39(55.7%)	31(44.3%)	.182	.670
	Not Exposed to mass media	139 (52.9%)	124 (47.1%)		

Source, Household survey, 2014

4.1.5.3.2 Relationship between Selected Areal Factors and Utilization of PNC Service

When the use of PNC service is cross classified by the areal factors like nature of road, time taken to get to the nearest health facility, distance to get to the nearest health facility and accessibility of public vehicles, the interaction between these variables is significant (p <.05) for the use of PNC service.

The study findings revealed that, there is significant evidence of association between utilization of PNC service and the nature of road which linked their homes to health facility (X^2=*6.088 P=.014*). As data appeared in Table 4.20, of larger proportions of women (51.1%) who were not receive PNC service were more associated with the opinion that the connecting roads were bad whereas this proportion of women who consider the nature of road as convenient were reduced to 36.5%. This entail that, there are strong evidence on women who perceived the nature of road as inconvenient has lower probability of using PNC service than women who thought the nature of road as convenient.

Similarly as that of the nature of road, the study finding revealed that there is strongly significant evidence of association between the time taken to get the nearest health facility and utilization of PNC service(X^2=*30.784 P=.000*). Result in Table 4.20 shows, 76.2% of women proportion who spent for more than two hours on journey to access the health facility were not attended PNC service but this proportion of women who spent 1-2 hours and below one hour remarkably decreased to 45.8% and 34.7% respectively. This shows that the proportion of women who attended the PNC service was decreased as the time of journey to health facility increase. In other word, as the time taken to get health facility is long, the possibility of women to attended PNC service will be lower.

A study finding also found a significant evidence of association between distances lengthened from women home to health facilities and utilization of PNC service (X^2= *31.391 P=.000*). As presented in Table 4.20, 75.8% of women proportion who resides being too far from health facilities was unlikely used PNC service and this proportion of women who live at average and nearest distance from heath facilities significantly

decreased to 45.6% and 34.6% respectively. This association revealed that the opportunity of utilizing PNC service is decreased as distance increased to access health facilities. It has a clear indication that the women who reside at far place from health facility were unlikely used PNC service.

With respect to areal factors, another important finding of the study were accessibility of public vehicles transportation which is statically associated with the utilization of PNC service ($X^2=5.559$ $P=.018$). 49.8% of women proportion who were not able to access public transportation service is found to be non-user of PNC service but only 33.8% of women who were able to access public transportation service is found to be non-user of PNC service. This may indicate that as women have access the public transportation easily, they have a great possibility of using PNC service.

Table 4.18: Relationship between Selected Areal Factors and PNC Service Utilization in Duna Woreda, 2014

Variables		PNC Service Utilization		Chi-square (x^2)	P-value
		Yes No. (%)	No No. (%)		
Nature of road	Convenient	66(63.5%)	38(36.5%)	6.088	.014
	Inconvenient	112(48.9%)	117(51.1%)		
Time taken to get to the nearest health facility	Below 1hour	98(65.3%)	52(34.7%)	30.784	.000
	1-2 hour	65(54.2%)	55(45.8%)		
	Above 2 hour	15(23.8%)	48(76.2%)		
Distance to get to the nearest health facility	Close	100(65.4%)	53(34.6%)	31.391	.000
	Average	62 (54.4%)	52 (45.6%)		
	Far	16 (24.2%)	50 (75.8%)		
Accessibility of public vehicles	Available	45 (66.2%)	23 (33.8%)	5.559	.018
	Not Available	133(50.2%)	132(49.8%)		

Source, Household survey, 2014

4.1.5.3.3 Relationship between Selected Institutional and Utilization of PNC Service

Institutional factors also cross tabulated with utilization of PNC service in order to test the independence of variables by using chi-square test.

The study finding found that the women perception on the availability of professional personnel who provide health service and PNC service utilization were not significantly associated (X^2*=.515 P=.473*). 44.6% and 48.5% of women proportion who were perceived the availability of professional personnel adequate and inadequate respectively were found to be non-user of PNC service. The study finding revealed that a clear tendency on utilization of PNC service among women who thought the existence of sufficient number of health professional personnel than who did not perceive.

The extent of confidence on the professional competency of health personnel and utilization of PNC service were strongly associated in the study area (X^2*=49.209 P=.000*). Amazingly 75% of women proportion who had not confidence on the professional competency of health personnel did not received PNC service but this proportion of women who had confidence on professional competency of health personnel radically decreased to 33.6%. This may entail those women who have confidence on the professional competency of health personnel received PNC service greater than those women who lack their confidence on the professional competency of health personnel.

Availability of health equipments and drugs in health institutions were also found to be significantly associated with utilization of PNC service (X^2*=4.518 P=.034*). As the data revealed in Table 4.21, that the proportion women who received PNC service was higher among those who perceived the unavailability of health equipments and drugs (56.5%) than among those who perceived availability of health equipments and drugs (43.1%).

The study finding is not found association between privacy and confidentiality of the service and utilization of PNC service (X^2*=.728 P=.394*). The lack of association between privacy and confidentiality of the service and utilization of PNC service can

probably due to view on privacy and confidentiality of the service did not vary much among women proportion who did not received PNC service and those who did not. Result in Table below shows that 49.6% of women proportion who were perceived the provided health as not private and confidential found to be non-user of PNC service and as near as the previous women proportion, 44.8% of women proportion were not undertake PNC service in the study area.

The study finding revealed that the state of health personnel's encouragement and support of women and PNC service utilization were not associated ($X^2=1.092$ $P=.296$). This probably due to most women (almost 80%) responded that they have got encouragement and support from health personnel and it could be the result of narrow gap between proportion of women who received and not received PNC service. As shown in Table 4.21, 52.2% of the women who have not got sufficient encouragement and support were not received PNC service but a slight reduction of women proportion (45.1%) were viewed with women who have got support and encouragement. Even though women's who have not got encouragement and support does not have statically significant association on usage of PNC service, it seems that those women who have got encouragement were more likely to be used PNC service.

The use of PNC service was significantly associated with the average waiting of service in the health facility ($X^2=9.870$ $P=.020$). The study finding appears that there is a consistent decreased in the proportion of women who have received PNC service with increment of average waiting time to receive the service in the health facility. As indicated in Table 4.21, 90% of the women proportion that wait for above 3 hours did not received PNC service but this proportion is linearly deceased to 53.3%, 46.2% and 41.4% women proportion that were kept waiting the service reception for 2-3 hour, 1-2 hour and less than a hour categories respectively.

This study found that there was no statically significant association between maternal health care education and utilization of PNC service ($X^2=1.708$ $P=.191$). 44.2% and 52% of women who attended and not attended maternal health care education respectively did not undertake PNC service.

The study finding also revealed that knowledge of maternal health care and the use of PNC had significant association ($X^2=5.715$ $P=.017$) which shows that women who have better knowledge of maternal health care had greater opportunity of using PNC service. The data revealed that the proportion women who did not received PNC service is lower among those who had no knowledge of maternal health care (58.7%) than among those who had knowledge of maternal health care (43%).

The result of this study revealed that, the quality of health service and the use of PNC service were significantly associated ($X^2=60.626$ $P=.000$). Poor quality of health service as perceived by the women in this study would be considered as a threat to the promotion of utilization of PNC service. As in Table 4.21 stated, 78.6% of women who perceived the quality of health services to be poor were unlikely non-attendees of PNC service. Whereas this proportion of women surprisingly decreased 61.6% and 24.2% of women proportion who perceived the quality of health services to be satisfactory and good respectively.

The utilization of PADC and PNC service were also cross tabulated in order to identify whether the utilization of PADC service has pushing factors to the incidence of seeking the PNC or not. The utilization of PNC service and PADC service were significantly associated in the study area ($X^2=78.267$ $P=.000$). As data shown in below table, 65.5% of women proportion who were not undertake PADC service were unlikely used PNC service whereas (15.7%) those who used PADC service were found to be non-user of PNC service. This may indicate that women who used PADC service had a great opportunity to utilize PNC service.

Table 4.19: Relationship between Selected Institutional and PNC Service Utilization in Duna Woreda, 2014

Variables		PNC Service Utilization		Chi-square (x^2)	P-value
		Yes No. (%)	No No. (%)		
Availability of professional personnel	Adequate	92(55.4%)	74(44.6%)	0.515	.473
	Inadequate	86(51.5%)	81(48.5%)		
Confidence on the professional competency of health personnel	Yes	152(66.4%)	77(33.6%)	49.209	.000
	No	26(25.0%)	78(75.0%)		
Availability of health equipments and drugs in health institutions	Adequate	141(56.6%)	107(43.1%)	4.518	.034
	Inadequate	37(44.0%)	48(56.5%)		
Privacy and Confidentiality of the Service	Yes	116(55.2%)	94(44.8%)	.728	.394
	No	62(50.4%)	61(49.6%)		
Encouragement of women by health personnel's	Yes	146(54.9%)	120(45.1%)	1.092	.296
	No	32(47.8%)	35(52.2%)		
Average waiting time	Less than 1 hour	78(58.6%)	55(41.4%)	9.870	.020
	1-2 hour	78(53.8%)	67(46.2%)		
	2 -3 hour	21(46.7%)	24(53.3%)		
	Above 3 hour	1(10.0%)	9(90.0%)		
Attendance of maternity health care related education	Yes	130(55.8%)	103(44.2%)	1.708	.191
	No	48(48.0%)	52(52.0%)		
Having sufficient knowledge and skill on MHC	Yes	147(57.0%)	111(43.0%)	5.715	.017
	No	31(41.3%)	44(58.7%)		
overall quality of services received from health institution	Good	116 (75.8%)	37 (24.2%)	60.626	.000
	Fair	53 (38.4%)	85 (61.6%)		
	Poor	9 (21.4%)	33 (78.6%)		
Utilization Of PADC service	Yes	107(84.3%)	20(15.7%)	78.267	.000
	No	71(34.5%)	135(65.5%)		

Source, Household survey, 2014

4.1.5.3.4 Relationship between Selected Socio-Cultural and Psychological and Utilization of PNC Service

Selected socio-cultural factors also cross tabulated with utilization of PNC service to identify factors which had statically significant association with utilization of PNC service by using chi-square.

The study data revealed that there was strong association between attitude of women and the utilization of PNC service ($X^2=12.878$ $P=.000$). As it is revealed in Table 4.22, 59.2 % of the women proportion who had negative attitude were not utilized PNC service where as 38.9% of women proportion who had positive attitude were not used PNC service. This may imply that there is strong evidence of women proportion that had a negative attitude more unlikely to receive PNC services than those who had a positive attitude on the utilization of PNC service.

On the contrary, the study finding unexpectedly found that there was no association between attitude of husband and the utilization of PNC service ($X^2=1.760$ $P=.415$). As it is shown in Table 4.22, 75% of the women proportion who could not identify the attitude of their husbands was not used PNC service. In the study area, 48.7% of women proportion whose husband had negative attitude towards MHC service is found to be non-user of PNC service, this proportion of women decreased to 44.9% for those women proportion whose husband had positive attitude towards MHC service in the study area. Even though the difference between the women proportion whose husband had positive and negative attitude is seen, there was no statically significant relationship. This is happened because of narrow variation between two categories.

Husbands willingness to offer permission for their wives to use MHC service were significantly associated with the utilization of PNC service ($X^2=11.452$ $P=.001$). 65.2% of the women proportion whose husbands prevented their wives from utilizing MHC service is found non-user of PNC service but this proportion is significantly decreased to 41.9% for those women proportion whose husbands allow them to utilize PNC service. This may indicate that husband permission is significant determinant for women to decide on the utilization of PNC service.

The perception of Cultural and religious belief and practice were also significantly associated with the utilization of PADC (X^2=*13.718 P=.000*). 62% of the women proportion who perceived cultural and religious belief and practice of the area as impediment were found to be non-user of PNC service, but a significant decline were found on women proportion (39.9%) who does not perceived cultural and religious belief and practice as impediment for the utilization of PNC service. This shows that women who perceived cultural and religious belief and practice of the area as impediment were not show a tendency for utilizing PNC service.

Women who perceived the cultural and religious issues as barrier for utilization of PNC service were asked to mention some of it. Accordingly the existence of well experienced TBA's, traditional medicine and the assumption of women should stay for at least one month at home after delivery were mentioned by respondents.

The feeling of fear towards health institutions and utilization of PNC service were significantly associated (X^2= *7.444 P=.006*). 62.3% of women who were afraid of health facility due to certain reason were not used PNC service but only 43% of women who were not afraid of health facility were found to be non-user of PNC service. This may indicate that women who fear health institution have less inclination to utilize the PNC service.

Table 4.20: Relationship between Selected Socio-Cultural and Psychological Factors and Utilization of PNC Service in Duna Woreda, 2014

Variables		PNC Service Utilization		Chi-square (x^2)	P-value
		Yes No. (%)	No No. (%)		
Women attitude on the utilization of PNC service	Positive	127(61.1%)	81(38.9%)	12.878	.000
	Negative	51(40.8%)	74(59.2%)		
Husband attitude on utilizing PNC service	Positive	118(55.1%)	96(44.9%)	1.760	.415
	Negative	59(51.3%)	56(48.7%)		
	Undefined	1(25.0%)	3(75.0%)		
Husband permission for utilization of PNC service	Yes	155(58.1%)	112(41.9%)	11.452	.001
	No	23 (34.8%)	43 (65.2%)		
Cultural and religious belief and practice	Yes	38(38%)	62(62%)	13.718	.000
	No	140(60.1%)	93(39.9%)		
A feeling of fear towards health institutions	Yes	23 (37.7%)	38 (62.3%)	7.444	.006
	No	155 (57%)	117 (43%)		

Source, Household survey, 2014

4.2 Qualitative Data Presentation and Analysis

The researcher employed FGD's to substantiate the quantitative results. Four FGD's were carried out with a total of forty people who have sufficient experience and ideas on the studied issue. Each group contains ten people with women, religious and community leaders and health personnel. In the presentation of the results, strong quotes originated from the discussion are indicated in the result.

4.2.1 The Status of Antenatal Care Utilization

In order to get an understanding of the status of ANC service utilization in the woreda, the focus group discussants were asked their perception of how much women were utilizing the ANC in their kebele. Additionally they were requested to discuss about barriers that might have had an influence on the decision to not utilize ANC service in a health facility. Focus group discussants responded that ANC service is not well utilized in their kebele because of several reasons. According to most participants, the main barrier that prevented the women from attaining ANC was caused by the lack of awareness. The community had low awareness about its importance. This is because of most members of the community did not received health education on the importance of ANC service.

According to discussant even if women have awareness on the importance of ANC service, distance to access the health facility was another problem. More over the distance is more worsen due to poor road condition, difficult geographical landscape and river crossing. During discussion a man and woman shared the following:

> *"While my wife was six month pregnant, she tried everything to receive ANC but she couldn't cross Shapa River, the road particularly in summer time it is very difficult for pregnant women, how could a pregnant woman travel in such mountainous road to receive ANC? Obviously it's very difficult to be examined the pregnancy especially when the pregnancy grows up" (Married man 43 years from Kankicho Kebele)*

"I went to the health post when I was 4 months pregnant for first time; my pregnancy was very complicated and therefore decided to go to the health center continuously based on the given appointment schedule. But I had only two ANC visits because my village is too far from the health facility, so I was tired to go in my appointment days" (Married woman 32 years from Koja Gembera Kebele)

Most informants mentioned that behavior and skill of health professionals were among some factors hindering ANC service utilization. Several participants perceive that most HEW had not competent; they were not well equipped with necessary professional skill. Furthermore health professional's behavior was mentioned as one of barriers for not utilizing ANC. Here some of bad Health personnel behaviors were mentioned which are repetitively brought up in the discussions. These are disgracing women by their personal hygiene, insulting women due to their illiteracy, not giving sufficient time during examination room, lack of attention for help, and not providing service on time /unpunctuality/.

Most FGD's participants mentioned that most of the women had tendency to hide the pregnancy from community. The reasons for this denial were fear, shame and traditionally it is not supported disclosing the early stage of pregnancy. Participants were also revealed that some women pursued ANC service very late because they were unsure whether they were pregnant or not. So they lost 1st trimester checkup which is more important to make intervention for save pregnancy.

4.2.2 The Status of Professionally Assisted Delivery Care Utilization

Most of the discussants mentioned that the usage of professionally assisted delivery care is minimal in the area. It was expressed in the discussion that birth at home is still widely practiced and preferred by most women. According to participants, home delivery is better for woman privacy and assisted by TBAs without payment. Most members of discussants described that birth at home was their only option due to the distances that needed to be covered to reach health facility, mountainous road, or lack of roads and inadequate transport were loudly mentioned.

Significantly some discussant revealed that they lack confidence to the health care providers particularly to HEW and also expressed their dissatisfaction on the quality of delivery care service which they and their neighbors had before. For instance, when the discussion held a woman said that:

> *''I do not believe that HEW at the health post can provide good delivery care services, they are not capable of giving any better treatment than an old aged experienced mothers'' (Married woman 29 years from Koja Gembera Kebele)*

4.2.3 The Status of Postnatal Care Utilization

To assess the extent of PNC service utilization, FGD's discussants were asked to discuss the level and practice of PNC in their area based on their personal experience. According to the majority of FGD's discussants, the utilization of PNC service is very minimal and it was not widely recognized as one of MHCS. Most participants revealed that unless their children or the mother herself get some kind of illness, they will not go to the health institutions for health checkup. All FGD's participants were also invited to discuss the main reasons for low utilization of PNC services in the study area. Here the main reasons which had been mentioned during the discussions were due to lack of awareness, ignorance due to feeling of healthiness, family refusal, lack of quality PNC service and cultural beliefs.

Mainly all the discussants agreed that the local cultural beliefs were considered as most barrier for utilization of PNC. According to discussants most members of the society traditionally believed that women should stay at home after delivery for at least 6 weeks. Because of this women could not go to health facility after delivery to protect her from some kind of suddenly happen illness which is mainly caused from sun light. According to woman who spoke at discussion:

> "*As I delivered in my home, my child had got sickness. Even if culturally women don't come out from their home after delivery, to save my child I*

went to health centers. Unfortunately I was sickened due to light ray. We believe that sun light is dangerous for delivered women…"

4.2.4 Socio-Economic Factors

Participants in all FGDs brought up socio-economic factors as the obstacle for seeking MHCS. Two sides of the Socio-economic issue became clear during the FGDs. First of all, even though care is often free of charge, the travelling costs often make the visit unaffordable for poor women. According to participants majorities of the women were economically poor as well as majority of the women were economically dependent on their husband. Even though all MHCS are provided based on the free rider principles which means any women who seek MHCS are granted freely without any payment, some of medication were not given freely. Particularly institutional delivery service was not preferable, since it usually needs transportation vehicles or else a group of people who manually carries women to health facilities which may incur a lot of money. Cost of medicine, transport cost and other due costs were told as the major economic constraints. A woman described that:

"*Even if MHCS are provided free, the cost of travelling to utilize MHCS particularly delivery service is a challenge for the poorest households, additionally when you go to health facilities you may not returned without eating food. Sometimes health personnel requested us to pay for medication. We can't pay all the costs of transport and medication. So they couldn't afford the care." (Married women 36 years old from Samen Wagabeta Kebele)*

The other side of the issue was expressed that many women were busy due to their multifunctional responsibilities within a family like caring children, preparing foods, cultivating gardens, rearing animals and etc. So the opportunity cost of losing a day's work might discourage them from utilizing MHCS. The reasoning behind this statement comes from the fact that rural women are economically productive. Due to this fact their husbands and they did not want to lose their daily job which had direct impact on their household income.

"Most of the time the reason why we don't use the MHCS is because of our poverty, if I go to attended the service, who take care of my home? Who prepare food for my children? Who take care of my little child? I am always busy on serving my family. That why I was not receiving the service particularly ANC" (Married women 39 years old from Domba Kebele)

4.2.5 Area Related Factors

The participants who participated on FGD's thought that the accessibility of MHCS was very poor in rural areas. The participants mostly mentioned as major obstacles to accessing MHCS were the long distance which took a long period of time from their home to get health institutions, lack of transportation particularly difficulty of transporting a labouring mother for two-three hours and inaccessibility of public ambulance due to shortage of rural Kebele road network.

Several respondents in the FGDs manifested that distance has an adverse effect on the utilization of service. Most health facilities particularly health centers are far away from villages which are not located in the middle of kebeles. Additionally the topography of the area made things worse on accessing MHCS. As a man told on the discussion:

"…last year my neighbor wife died due to a critical labour complication. Fuga's (a minority ethnic group who considered as traditional birth attendants in the area) and other our relatives couldn't help her on time. So lastly we preferred to take her to health facility which has took 2:30 hour's journey on foot. As you see the topography is difficult, it is very mountainous. As the time increase she was much tried. So we were begin travelling by carry her on traditional bed which is made from bamboo wood, but regrettably at the middle of the journey we lost her breathing. She died. We couldn't reach health facilities on time due to distance…'' (Married man 38 years old from Domba Kebele).

So the long distance to reach a health care facility was raised as a problem which affected especially women, since they could not be away from the household for a longer time.

4.2.6 Institutional Service Delivery Related Factors

Quality issues of MHCS had been demonstrated on FGD's to be an important barrier for the utilization of MHCS. The participants of the discussion perceived the quality of MHCS as main challenges to utilize it which were provided through health institutions. The availability of supplies and equipment, availability of health personnel, the cleanness of the facility, long waiting time, behavior of health workers, and lack of confidence in the service provided were the major impediments that perceived during the discussion on quality of MHCS.

Most participants confirmed that the available health institutions did not have sufficient equipment for providing MHCS particularly kebele Health Posts are well known with their ill-equipped organizational setup. Most of the Health Posts are not fully furnished with the necessary equipment and supplies. As participants approved that from selected four kebeles Health post three of them lack a delivery kit which also comprises delivery bed. In line with this, most participants complained on the health posts on which they had no sufficient medicine and other supplies.

With regard to human resource the participants believe that the number of health workers were not sufficient. According to them due to the number of house hold and geographical landscape two health extensions workers were not accommodate the need of women at large. Similarly participants were perceived that the number and types of professionals in health centers are minimal. Most health centers were lack highly competent professionals. On the other hand, the HEWs were not available in the HP when they are needed particularly at night time. They will not give service at night time even for emergent delivery case; because of this women had been obligated to deliver at home.

The environment of the health institutions was also a crucial issue as mentioned by several participants. Most participants revealed that the state and cleanness of the health centers were not seen as a barrier for utilizing MHCS where as the majority of health

posts are not well qualified in their setting. As participants discussed most health post buildings were not constructed properly, due to this they are not suitable and attractive for using MHCS particularly for delivery care. During discussion time, a HEW said about health posts,

> "*Kitchen is better than our kebeles Health Post, it is surrounded with bushes, and its wall sheltered with mud, more adversely its wall is not still enclosed well. It's simply exposed for cold air and sun light. How can a woman delivered in such setting? So how can we encourage women's to utilize MHCS particularly delivery care" (Single HEW of 26 years old from Domba Kebele)*

Most participants believed that they experienced the waiting times as barrier in the health centers. As they reveled particularly rural women have multiple roles in their home. Due to this, women felt uncomfortable and stressed when they are waiting long times as they worried about their children at home. Other major complaints with respect to the long waiting times before receiving MHC checkups were that the women would often feel very bored while waiting and would feel very uncomfortable because of the labour they endured.

The vast majority of participants revealed that older mothers and TBAs were more accepted by the community than HEWs because of their experience and the respect to privacy of the labouring mother. They also perceived that the HEWs and HWs were not good on handling and respecting the labouring mothers. Most participants have no confidence on the professional competency of junior fresh women nurses, they were not happy when they will check out during ANC. Particularly they didn't prefer delivery service at health institution due to lack of confidence on their skill. For example a Known community leader reported that:

> *"I do not believe that HEW can provide good services, they are not capable of providing any better treatment than experienced mothers particularly during delivery'' (57 years old Community leader from Samen Wagabeta Kebele)*

Similarly FGD's participants perceived the behavior of health personnel as bad particularly the health personnel's /mostly nurses/ who work at health centers were highly criticized. Lack of understanding their background and values, looking down their lifestyles, undermining because of their dressing style and hygiene, and treated them in an unequal manner were mentioned as the major barriers. A woman described her compliant in the following way:

> "*HEW of our kebele does not behave well; she does not come to the health post on time. Moreover she treated elderly women with disrespectful manner; I don't want to visit Health Posts due to her bad behavior" (Married women 42 years old from Kankicho Kebele)*

Similarly another woman expressed her dissatisfaction in the following manner:

> *"I need to go to the health posts leaving all work at home, but several times I came back without treatment. They don't want to take sufficient time for help; even sometimes we could not see them, so why should we visit there?" (Married women 32 years old from Koja Gembera Kebele)*

The researcher understood from discussion that knowledge on importance MHCS is one of the major impediments on the utilizing of MHCS in the studied area. Most participants believed that Health education particularly maternity related health issues were not formally educated in their kebele. Mothers were less involved in maternal health related sessions. Due to this most women were not well informed about the importance of having MHC service at all.

Generally the participants perceived that the quality of MHCS which are provided in the studied area have been poor. To reach on this judgment they tried to show some major impediments which deteriorate their satisfaction on the rendered service. Among major impediments which were mentioned by most participants were long waiting time, poor facilities, lack of awareness on importance of MHCS, poor provider versus client interaction, the availability of supplies and equipment, availability of health personnel, the cleanness of the facility, behavior of health workers, and lack of confidence in the service provided.

4.2.7 Socio-Cultural and Psychological Factors

Socio-cultural forces including family and community attitudes are strong militating factors in the studied area, where tradition and religion are very important parts of society. In the FGDs the participants were asked about how socio-cultural factors hinder their utilization of MHCS. As participants believed that the strong patriarchal society and the prevalence of male dominated norms of the society, limited women's autonomy and reduced their possibility to make independent decisions about their own reproductive health. The responsibility of other members of the family, such as husbands or parents-in-law in decision-making can also be a barrier preventing women access to necessary care.

Most participants revealed that women are traditionally preferred to give birth at home because they like the friendship and support of female relatives and neighbors. Furthermore most women hesitated in utilizing MHCS due to fear of being examined by male health personnel, which is the source of shame and sometimes they felt as disgrace their honor. This might be for the reason that culturally rural women are mostly not allowed to talk with men who are not family members and open to discuss their problem with male even sometimes to their husband.

> *"It is common to hear husband disproval of women preference to utilize MHCS where it is believed that she will be exposed to men and lose her honor. Particularly if he knows the male personnel, he may ashamed and prohibit his wife from utilization of MHCS. I also prefer female nurses than male health personnel because I ashamed and am not comfortable to allow him to see my naked body'' (Married women 29 years old from Kankicho Kebele)*

Similarly according to FDG's participants the choice of health care place and the decision for health care is mainly decided by the head of the family, in most cases the husband. This is mainly because of the traditional culture of the society and their economic contribution to the family. Religious factors were also hindering the utilization of MHCS particularly the use of institutional delivery in the studied area. As the matter of fact most of the respondents were Protestant Christians, they thought that God help them to have a

safe pregnancy and delivery, particularly they believe that God would ease the pain during labour. It is religious practice that all the relatives, mothers, husbands, religious leaders gather and make religious prayers until the mother gives birth instead of taking the labouring mother to the health. There is tendency to believe the prayer will help the mother to have an easy delivery without the assistance of a skilled attendant.

> *"I think it needs to be lucky to have easy pregnancy and delivery, and it depends on the willingness of God. I usually pray to God to make my delivery safe. Personally I believe that no one could help you, the only one is God.'' (Married women 43 years old from Samien Wagebeta Kebele)*

Some traditional practices such as untying her husband belt, emitting strange sounds, and massaging women abdomen are believed to let the mother's uterus to be open enough to facilitate a safe delivery. As discussants expressed that for most women attending PNC were the most difficult task in the area. Majority of the participants thought if the women exposed her for cold air and sunlight, she will be attacked by illness. Rather they mentioned that after delivery, women who are coming from neighboring homes would take care of her health status with traditional herbs. So women strictly wouldn't be allowed to be out from their home.

With regard to attitudinal problem women believe that normal delivery should be conducted at home and delivery at health facilities are beneficial for those with complications only (women identified with problems and risk factors during antenatal clinic). Regrettably some participants were believe that when women died at home during delivery, many believed these deaths were due to the unwillingness of God, and it was a matter of chance for a mother. Similarly most women thought that at earlier time bad things were not happened on our mothers who did not utilize any modern treatments but they were safely brought child without any health personnel intervention. This might be the reason for some participants for not utilizing MHCS.

CHAPTER FIVE

Summary of Major Findings, Conclusion and Recommendation

5.1 Summary of Major Findings

This study was conducted in four kebeles of Duna woreda which is located in the Hadiya zone, SNNPR to assess the factors that affect the utilization of maternal health care service through the household survey and participatory qualitative focus group discussions. The main findings of the study are summarized as follows:

- Based on the recommendation of WHO, the utilization of the ANC service in the woreda is low. This was evident from findings of the study where four and more than four ANC visit attendance was 43.2% and the first initiation of ANC visit occur at late stage of pregnancy for almost 86% of the respondents.
- The most important reasons for not utilizing ANC service in the woreda are found to be absence of sickness/ feeling of Healthiness/ for one forth of women respondents, long distance from home to health facilities, work overload at home, and poor services at health facility particularly for long waiting of service, lack of knowledge on the importance of ANC and husband disproval are accounted for the rest share of the reason.
- The bivariate analyses results suggest that most socio-economic, areal, institutional and socio-cultural and psychological predictor variables show statistically significant relationships with the use of ANC service. Among all studied independent variables, encouragement and support of health personnel's and privacy and confidentiality of the service from institutional related factors has been found to have no relationship with ANC service utilization. Women's exposure to media is an important factor in utilizing the maternal health care services, though there were not found to be significant association with utilization of ANC service in this study.

- Similarly, the utilization of institutional delivery is very low. Only 29.7% of women respondents were deliver their babies at health institutions whereas the use of PADC service has reached to 38% of women in the woreda. Probably, the result of this variation becomes the presence of HEW's at each kebele. Because of this, mothers have a possibility to receive MHCS at home.
- The main reasons given by the individual and through FGD's for not assisted by health personnel were long distance, sudden onset labour and transportation challenges to access health facility accounted for almost half of women respondents share. And even if the share tend to be minimum, more trust on TBAs and relatives, being comfortable to give birth in front of relatives, lack of female midwives, lack of awareness on the importance of PADC service, lack of privacy room, unfriendly behavior of health personnel, negative attitude for health institutional delivery, husband refusal, having no past experience of labour problem, feeling of shame, refusal by the health facility when labour too early and alike were given as the reason for non user of PADC service in the woreda.
- The bivariate analysis of this study confirmed that most socio-economic, areal, institutional and socio-cultural and psychological predictor variables show statistically significant association with the utilization of PADC service. But some of independent variables from socio-economic determinants such as children ever born, family support for using MHCS, access to mass media and also from institutional factors attendance of maternity health care related education, encouragement of women by health personnel's, privacy and confidentiality of the service were found to be no association with the use of PADC service in the studied woreda.
- The utilization of ANC service was seen to be a strong positive predictor of PADC service utilization in the woreda.
- The study result shows that the utilization of PNC service was significantly larger than ANC and PADC service. The coverage of PNC service utilization is 53.3% in the studied area.
- The study also identified the reason for non attendance of PNC service. Almost half of women told the feeling of healthiness, long walking distance to health

facilities and lack of satisfaction on the previous service persuade them to ignore the service. Similarly on FGDs, cultural practice like after delivery for 40 days women doesn't allowed being out from home, lack of awareness on the importance of PNC and husband disproval was additionally mentioned.

- The bivariate analysis of this study confirmed that most socio-economic, areal, institutional and socio-cultural and psychological predictor variables show statistically significant association with the utilization of PNC service. But some of independent variables from socio-economic determinants such as children ever born, house hold income, women autonomy, family support for using MHCS, access to mass media and also from institutional factors availability of health professional, attendance of maternity health care related education, encouragement of women by health personnel's, privacy and confidentiality of the service were found to be no association with the use of PNC service in the studied woreda. Similarly from socio-cultural factors husband attitude is weak predicators of PNC usage.
- The utilization of ANC service is strong positive impact on the utilization of PADC service and similarly PADC service is strong predicator of PNC service utilization in the studied woreda.
- With regard to service provider, the maternal health care service was provided by HEW's for more than half of women in the woreda.

5.2 Conclusion

This study has tried to assess important issues on the status of maternal health care services utilization in Duna Woreda, Hadiya Zone by giving a particular emphasis on rural women. The findings of this study demonstrate the prevalence of inadequate utilization of maternal healthcare services among rural women, as clearly depicted by the major maternal health care indicators (ANC, PADC and PNC services) during the period of three year preceding the survey. The study also confirmed disparity in utilization of among service; better utilization of PNC service was visible when compared with both ANC, and PADC service utilization. Because of their accessibility, majority of women receive the service in the health posts by health extension workers in the studied rural kebeles.

The most important socio-economic factors like middle age, higher women education, higher husband education, and high economic status, having autonomy for making decision and attending ANC and PADC service were enabling factors for utilization of the MHCS. As evident in this study, all the areal factors had a great negative impact on almost all the maternal health outcomes. The nature of road, distance, access to transport can be mentioned as disabling factors. Similarly institutional factors such as adequate availability of health professionals and equipments, being confident on health personnel competency, short waiting time, sufficient attendance of health education, perceiving qualities of the service as good were found as enabling factors. Finally socio-cultural and psychological factors which are women and husband attitude, cultural and religious beliefs and fear of health institution were also found as disabling factors.

In general terms to conclude the finding of the study, low educational status, low socio-economic status, lack of women decision making power on the utilization of the services, the unsuitable nature of road and transport facility, lack of knowledge on the importance of the service, poor access of the health facility, poor quality of health service, negative attitude of mothers, religion and cultural believes are the major causes for low record of MHCS utilization.

The findings of this study will play a great role in planning and formulating possible strategies on improving maternal health care service with short and long term point of view. In order to bring sustainable outcome on the utilization of MHCS, the health sector as main agent, should increasing rural community awareness, strengthening Health Extension programs, providing an intensive health education by using mass media with local language will be important. It also expected to develop and implement effective interventions to improve the quality of maternal health care services at the primary health care unit by strengthening institutional capacity of health facility.

On a broader perspective, women in rural areas are vulnerable due to certain peculiar issues related to being women group as well as other individual challenges. So, the health sector needs to adopt a multi-sectoral approach for meaningful results in improving utilization of MHS in rural areas. Discussion with the sector of Agriculture and Rural Development, Road and Transport, Education, Communication, Culture and Tourism should be made on issues relating to rural health in general and maternal health in particular for designing integrated intervention mechanism. The respective sectors involved as well as other NGOs could come to the aid of the rural peoples in developing the women economic freedom, constructing the roads that link the communities to other areas especially health centers, improving transport service, creating awareness on MHC service, disseminating information that increase the knowledge of the community, fighting bad cultural and religious practices which prevent the utilization of MHC service.

Such conclusion could be useful in formulating and implementing effective interventions to improve the utilization of maternal health care service at rural areas. Therefore, it could be used as the basis for a number of recommendations.

5.3 Recommendation

Based on the above findings of the study the following recommendations were made: -

1. **Improving The Status' of Women**
   - Promotion of girl education is very important factor on the utilization of MHCS; with regard to this all stake holders particularly the government should act to foster women educational level beyond primary school levels.
   - Maximizing the autonomy of women with in a family for making decision on seeking health service and personal matter through integrated activities that enhance women's economic freedom, like granting microfinance projects, providing vocational trainings to supplement their incomes and etc.
   - Policies and efforts should have been taken to increase men involvement on fostering MHCS utilization.

2. **Enhancing Institutional Capacity of Health Institutions**
   - Strengthen the effort to improve accessibility of health facilities in the rural areas by increasing the number of health facilities.
   - Increasing the number transport vehicles (Ambulance) should be given a high consideration to minimize women morbidity and mortality which happen due to delay of time during delivery complication at local level.
   - MHCS should be provided throughout the day (24hours service) particularly for delivery care service.
   - The provision of primary health care services is a fundamental pillar in the reduction of maternal mortality. However, the quality challenges observed at the health posts (especially inputs and personnel competency related constraints) requires immediate attention.
   - Sufficient trained medical personnel should be posted to Health Posts and Health centers particularly midwives nurses.
   - Traditional Birth Attendants could be incorporated to assist women in emergency situations due to access problems by going through several training programmes and workshops to equip them with the necessary skills

and providing new roles of encouraging and bringing pregnant mothers to utilize MHCS.

- Health extension workers should be given better training to identify and transfer high risk mothers for better ANC, safe delivery and PNC service in health institution.
- Policy makers and health program managers should enforce standards and protocols for service delivery, management and supervision, and using them to monitor and evaluate the quality of MHCS.

3. Fostering the Provision of Information and Education

- Policy makers should exert their effort to strengthened maternal health care service programs through incorporating maternal health care education within the existing curriculum of action centered adult education program.
- Early visiting of ANC and completion of more than four visits should be promoted at community level as those attending ANC service early acquire enough information about safe delivery and PNC service since majority of those attending more than four visit ending up deliver in health facility.
- The government and other stakeholders should play a great role to increase community based health education, awareness creation and improve better access to information for women regarding maternal health care service through public discussions and local mass media.
- Health sector stakeholders should integrate and maximize their efforts to create awareness regarding the disadvantages of the traditional and religious harm full practices through mobilization of general public and involvement of elderly mothers and religious leaders as well.

4. Constructing rural roads and improving transport service should be given emphases that link the communities to other areas especially to health facilities through multi-sectoral approach and community participation.

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Appendix 1: Questionnaire for Community Based Survey

ADDIS ABABA UNIVERSITY SCHOOL OF GRADUATE STUDIES
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT MANAGEMENT

Part One: Verbal Consent

Greeting!

The Researcher is a student of the Addis Abeba University, Faculty of Business and Economics, Department of Public Administration and Development Management. His name is **Abaychew Zeleke.** He is attending a Master of Public Administration specialization on Development Management. He is researching in the area of **Factors Influencing the Utilization of Maternal Health Services: The Perspective of Rural Women in Duna Woreda, Hadiya Zone, SNNPR** in partial fulfillment of the requirement for the award of a Masters degree in the above named program.

The purpose of this study is to assess factors that affect the utilization of Maternal Health Care Service Delivery in Duna Woreda. The researcher believes, this study will help to improve the usage of Maternal Health Care Service Delivery which is provided in the Woreda. The reliability of the information that you provide me is very curtail for the quality of the study. Therefore, you are kindly requested to participate in this study and provide information required from you. Your participation in this study is completely on voluntary bases and you have a right to refuse, to take part or to interrupt the interview at any time. But the information that you will give me is quite useful to improve Maternal Health Care Service Delivery that provided in the Woreda.

This questionnaire is for academic purpose only and respondents are assured of utmost confidentiality. The researcher has promised all information obtained from you; will be kept confidential. Any reporting of data will be anonymous. He will not use your name on any reports.

Are you willing to participate in this study?

1) Yes, Signature_____

2) No_____

If the answer is yes, thanks and conduct the interview. If the answer is no, thanks and transfer to other respondent. Don't force them to participate in the study.

Name of the interviewer_____signature_____

Date of the interview_____ Month_____2014

Kebele name:_____ Kebele code: _____Household code:_____

Name of the supervisor _____signature_____

Date of checking_____Month_____2014

Remark: Complete ☐ Incomplete ☐

Part Two: Interview questionnaire for community based survey on Factors Influencing the Utilization of Maternal Health Services: The Perspective of Rural Women in Duna Woreda, Hadiya Zone.

Section One: Socio-Demographic Characteristic

1. How old are you? Age (Actual Figure)_____
   1. 15-19 2. 20-34 3. 35-49
2. What is your marital status?
   1. Single 2. Married 3. Divorced 4. Widowed
3. What is your level of education?
   1. Never attended school (Illiterate) 2. Basic primary Education (Grade 1-8)
   3. Secondary school (Grade 9-12) 4. Tertiary Level
4. What is your Occupation?
   1. Housewife 2. Farmer 3. Civil Servant
   4. Trader 5. Daily Laborer 6. Other
5. How many children do you ever have?
   1. 1-2 children 2. 3-4 children 3. More than 5 children
6. What is your husband Education level?
   1. Never attended school (Illiterate) 2. Basic primary Education (Grade 1-8)
   3. Secondary school (Grade 9-12) 4. Tertiary Level

7. What is the average monthly household income per month in monetary terms?

   1. Below 500 Birr 2. 501-1000 Birr 3. 1001-1500 Birr 4. 1501 and above

8. Do you have access to follow mass medias / Television, Radio, Newsletter, etc. /?

   1. Exposed to Mass Media 2. Not Exposed to Mass media

Section Two: Areal Characteristic

9. What do think the nature of road to health facility?

   1. Convenient 2. Inconvenient

10. How do you rate the time taken to get the nearest health facility?

    1. Below 1hour 2. 1-2 hour 3. Above 2 hour

11. How do you rate the distance that stretched from home to the nearest health facility ?

    1. Near 2. Average 3. Far

12. Do you believe that public vehicles accessible for pregnant Women?

    1. Available 2. Not Available

13. Are emergency vehicles accessible for emergent referral of pregnant women?

    1. Available 2. Not Available

Section Three: Institutional Characteristics

14. Do you think that sufficient professional personnel are available in the health facility in where you attend maternity health care service?

    1. Adequate 2. Inadequate

15. Are you confident on the professional competency of health personnel who gives you health maternal health care service?

    1. Yes 2.No

16. Do you think that the health institution where you are attending is equipped adequately with necessary resource such as beds, medical equipments, medications, etc?

    1. Adequate 2. Inadequate

17. Are you comfortable with Privacy and Confidentiality of the Service?

    1. Yes 2. No

18. Do you think that health personnel's promotes support and encouragement for your utilization of maternal health care service?

    1. Yes 2. No

19. Have you got maternal health care service any time particularly delivery care service?

    1 Yes 2. No

20. On average for how long do you wait for attending maternity health care service?

    1. Less than 1 Hour 2. 1-2 Hour 3. 2 -3 Hour 4. Above 3 Hour

21. Have you ever attend maternity health care related education?

    1. Yes 2. No

22. Have you got sufficient knowledge and skill on importance of maternal health care service utilization?

    1. Yes 2. No

23. Over all, how do you rate the quality of services you received from health institution?

    1. Good 2. Satisfactory 3. Poor

Section Four: Socio-Cultural and Psychological Characteristic

24. Women attitude on maternal health care service

    24.1 Do you believe that pregnant women should get antenatal care service from modern health institutions?

        1. Yes 2.No

    24.2 Do you think that professional assisted delivery care is crucial for child and mother health?

        1. Yes 2. No

    24.3 Do you believe that women after delivery should get postnatal care service?

        1. Yes 2. No

25. Does your husband offer you permission to go to maternal health care service?

    1. Yes 2. No

26. How does your husband feel the attendance of maternal health care service?

    1. Positive 2. Negative 2. Undefined

27. Do your families give you sufficient financial, time, advice, and others supports for the utilization of maternal health care?

    1. Yes 2. No

28. Do you have autonomy to decide on the utilization of maternal health care service?

1. Yes 2. No

29. Cultural and religious belief and practice

27.1 Is there any cultural belief and practice that prevent the utilization of antenatal care?

1. Yes 2. No

If your response is 'Yes', please mention some of it.

27.2 Is there any cultural belief and practice that prevent the utilization of professionally assisted delivery care?

1. Yes 2. No

If your response is 'Yes', please mention some of it.

27.3 Is there any cultural belief and practice that prevent the utilization of postnatal care?

1. Yes 2. No

If your response is 'Yes', please mention some of it.

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30. Do you fear health institution while you seek maternal health care service?

1. Yes 2. No

If your response is 'Yes', please answer the following question. Why did u fear to utilize health facility service? _____

Section Five: Level of Antenatal Care

31. Did you attend antenatal care service for your recent pregnancy? If your answer is 'No', please give your response for question number 34.

1. Yes, I attended 2. No, I didn't attend

32. Totally, for how many times do you attended Antenatal visits for recent pregnancy?

1. Greater than or Equal to Four Visit 2. Less than four Visit

33. How old was your pregnancy when you started antenatal visits?

1. 1st Trimester /1-3 months of pregnancy/

2. 2nd Trimester /4-6 months of Pregnancy/

3. 3rd Trimester /7-9 months of Pregnancy/

34. Where did you attend your antenatal visits?

1. Hospital 2. Health center 3. Health post 4. Own home

35. What type of professional personnel provides the antenatal care service?

1. Doctor 2. Health Officers 3. Nurse 4. Health Extension Worker

36. If not attend antenatal care, what prevented you from attending antenatal visits?

1. I wasn't satisfied on the previous service
2. Work Overload
3. I didn't know the importance
4. Long distance
5. Long waiting time
6. Bad behavior of health workers
7. I was healthy
8. Financial Constraints
9. Husband disapproval
10. Other

If your response is Other, Please mention it.

Section Six: Level of Delivery Care

37. Where do you deliver your last baby?

1. Health Institution 2. Home

38. Did you receive professional assistance from health personnel while you deliver your last baby?

1. Yes 2. No

39. Where did you attend your professionally assisted delivery care service?

1. Hospital 2. Health center 3. Health post 4. Own home

40. What type of professional personnel provides the professionally assisted delivery care service?

1. Doctor 2. Health Officers 3. Nurse 4. Health Extension Worker

41. What made you decide to deliver in a health facility?

1. Because complication of pregnancy
2. Safe delivery for mother and child
3. Received health education during ANC
4. No fee
5. Good service
6. Others

If your response is Other, Please mention it.

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42. What made you decide to deliver at home? (Multiple responses are allowed)

1. Sudden onset labour
2. Presence of TBA's and relatives
3. Comfortable to give birth in front of relatives
4. Transport problem
5. Long distance to health Facility
6. Having no past experience of labour problem
7. Husband refusal
8. Financial constraints
9. I didn't know importance
10. Bad attitude for health institutional delivery
11. Dislike the behavior of heath workers
12. Other

If your response is Other, Please mention it.

Section Seven: Level of Postnatal Care

43. Have you attend postpartum health care service in 45 days after the last delivery?

1. Yes 2. No

44. Where did you attend your postpartum health care service?

1. Hospital 2. Health center 3. Health post 4. Own home

45. What type of professional personnel provides the postpartum health care service?

1. Doctor 2. Health Officers 3. Nurse 4. Health Extension Worker

46. What was your reason for attending postnatal care?

1. I was sick
2. Baby was sick
3. To check my health and baby health
4. Other

If your response is Other, Please mention it.

---

47. What was your reason for not attending postnatal care?

1. I was healthy
2. No one attend it here
3. My husband prevent me
4. Long distance
5. Bad attitude to attend PNC service
6. Bad behavior of health workers
7. Financial constraints
8. I didn't know the importance
9. I wasn't satisfied on the previous service
10. Other

If your response is Other, Please mention it.

Thank you again in Advance!!

Appendix 2: Focus group Discussion Questions and Guide Line

ADDIS ABABA UNIVERSITY SCHOOL OF GRADUATE STUDIES
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT MANAGEMENT

Part One: Verbal Consent

Dear Discussant,

The purpose of this discussion is to gather information on factors that affect the utilization of Maternal Health Care Service Delivery in Duna Woreda for the partial fulfillment of master's degree in Public Administration and Development Management. I am interested to understand about the practice, experience and barriers of the community about maternal health care service utilization particularly ANC, birth assistance care, PNC service.

The researcher believes, this study will help to improve the usage of Maternal Health Care Service Delivery which is provided in the Woreda. The reliability of the information that you provide me is very curtail for the success of the study. Therefore, the researcher is very much grateful for the sacrifice you pay to this end and you are kindly requested to participate in this study and provide information required from you. Your participation in this study is completely on voluntary bases and you have a right to refuse joining the discussion. But the information that you will respond to me is quite useful to improve Maternal Health Care Service Delivery provided in the Woreda. For the sake of accuracy and efficiency, we will take notes and tape recording this session, unless any one has any objections.

This discussion is for academic purpose only and respondents are assured of utmost confidentiality. The researcher has promised all information obtained from you; will be kept confidential. Any reporting of data will be anonymous. The researcher will not use your name in any reports. Before beginning the discussion, we would like to request you to introduce yourself to the rest of the group. Let us start with the research team (Name,

age, education status). Kindly requested to tell me your name, age, how long you have lived in this area and your job.

Thank you in advance!!

Name of Facilitators:_____ Name of Note taker:_____
Kebele name:_____ Date of discussion:_____
Time discussion started:_____ Time ended:_____
Number of Participants:_____ Women_____ Man_____

1. What is your opinion about the level of women utilization of ANC, professionally assisted delivery care and PNC services? Do the mothers seek care on pregnancy, delivery and after child birth?
2. Do you believe that most women attend their ANC? Why?
3. When mothers are pregnant, do they usually see a health worker or Traditional birth attendants (TBAs)? Why? What are the differences of assisting by HW, HEW/TBAs, and mothers? Why?
4. Do women look for professional assistance when they experience difficult labor? If not, why?
5. Do you believe that most women utilize health care service within 42 days after birth to check their own and baby health status? Why?
6. What are the impediments for pregnant women for not attending ANC service? Why? Can you give some examples?
7. What are the factors influencing selection of delivery assistance and place of delivery? Why? Can you give some examples?
8. What are the barriers for pregnant women for not attending PNC services? Why? Can you give some examples?
9. Do you think that a healthy pregnant woman should attend antenatal, professionally assisted delivery care and postnatal care services?
10. What are the practices and experience of the mother on selection of delivery place? Why do you think most of mothers who are pregnant do not seek any skilled assistance during child birth?

11. Who is responsible for making decisions on utilization of maternal health care service in the family?
12. How do man deal and participate in maternal health care issues?
13. Are there any religions, traditional and cultural practices of the community that prevent the women from utilization of health care service during pregnancy, child birth and after child birth? Can you give some examples?
14. Do you believe that the community particularly women have got adequate health education on maternal health care service?
15. Do you think that maternal health care service is accessible for all mothers?
16. What are the major constraints of health facilities to render quality service for women who seek maternal health service? Do the existing services helping mothers during pregnancy, child birth and after child birth? Can you give some examples?
17. What should be expected from all stakeholders in order to improve the maternal health care service in rural areas? What has been done here to improve mother's health? Is there anything expected from community, government and NGOs?
18. Are there any issues, questions, comments that you would like to raise or points that you want to add? If anyone would like to speak privately, you can talk to me after the meeting.

Thank you very much for your time and information!!

Declaration

I, the undersigned, declare that the thesis is my original work, has not been presented for degrees in any other University and all sources of materials used for the thesis have been duly acknowledged.

Name: Abaychew Zeleke

Signature:_____

Place of submission: Department of Public Administration and Development Management, College of Business and Economics, Addis Ababa University

Date of submission: February/2015

This thesis has been submitted for examination with my approval as a University advisor.

Advisor's Name: Mulugeta Abebe /PhD/

Signature:_____