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Therapeutic abortion in Nicaragua and El Salvador

**A comparative study of this policy and its influence on maternal
mortality and the UN Millennium Development Goals**

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Abstract

The total prohibition on therapeutic abortion is an issue that prevents the delivery of quality medical care to women that are pregnant. Subsequent maternal mortality is one of the outcomes on this policy. The aim of this literature review is to address and explore how this ban on abortion will influence maternal mortality. There are two research questions: 1. *How has the total ban on therapeutic abortion affected Maternal Mortality in El Salvador and Nicaragua?* 2. *How will the total ban on therapeutic abortion influence the achievement of the UN Millennium Development Goals for 2015 in Nicaragua and El Salvador, specifically MDG target number 5 for improving maternal health?*

The methodological approach of this thesis is qualitative by a literature review of academic documents dealing with the topic before and after the legislation on abortion changed. The thesis was constructed with primary and secondary sources that were read and analyzed critically then they were compared within the country and between them.

The core findings were that maternal mortality was not affected by the prohibition on abortion, in addition it has been reduced on both countries, but it is still high compared to other nations. The legislation on abortion, among others, is one of the causes of maternal mortality. The United Nations Millennium Development Goal five was achieved by El Salvador, according to the government, while in Nicaragua the progress towards it remains slow.

Within each of these categories there are similarities, differences and ongoing debates, since abortion, either therapeutic or not, is still a controversial issue in many countries.

Key Words: therapeutic abortion, maternal mortality, millennium development goals.

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1. Introduction

The introduction will begin by describing legislation around the world on abortion, and the laws governing the countries of study including the circumstances on which the policies on abortion shifted. Further on, the main definitions and arguments related to the topic will be presented. The thesis will end with an analysis, a comparison and a discussion of the literature selected; which will be followed by a few concluding remarks and some recommendations for further research.

Abortion is an extreme and painful decision, no one can recommend it as an ideal measure but it is part of an un-avoidable social necessity which according to Carpizo and Valdés is only comparable to euthanasia. Both are practiced without regulation and the consequent negative effects on women's health and dignity of terminally ill patients (Carpizo and Valdés 2008, X). According to the United Nations Population Division (UNPD), legislation in almost all countries permits abortion to save the woman's life. In more than three-fifths of countries, abortion is also allowed to preserve the physical and mental health of the woman. And in forty percent of the world's nations, abortion is permitted in cases of rape, incest or fetal impairment. One third of all these countries allow abortion on economic or social grounds and one fourth permit abortion on request (WHO 2003a, 15-16).

The most restrictive laws today are those that are either permitting abortion solely to save a woman's life or banning the procedure entirely. Many countries in this category (i.e. Guatemala, Panama, Brazil and Mexico) explicitly permit abortion when a pregnancy threatens a woman's life. In other countries, laws that make no explicit exception are generally interpreted as to permit abortion only if there are life-threatening circumstances on the grounds of "necessity". In the Latin American Countries of Chile, Dominican Republic, El Salvador and Nicaragua legislation in recent years has eliminated all exceptions to abortion prohibition (Center for Reproductive Rights 2009, 1-2).

According to a report by Amnesty International, the political circumstances in Nicaragua influenced the change of the law on abortion during the national elections in 2006. The Roman Catholic Church influenced the elections by supporting the prohibition of therapeutic abortion which had been made a key campaign issue for the left wing ruling party (Amnesty International 2009 b, 11).

Prior to that date, therapeutic abortion had been recognized as a legal right for more than a hundred years in Nicaragua, but beginning in July 2008, abortion became a criminal offence in all circumstances. The new Penal Code legislation provides for lengthy prison sentences for women and girls who seek or have an abortion and for health professionals who perform this procedure (Amnesty International 2009 a, 3-4).

In El Salvador, the performance of an abortion was governed until 1997 by the provisions of the 1973 Penal Code. Under the Code, an abortion could be legally performed under three major circumstances: to save the life of the mother, in cases of rape and in cases of foreseeable serious fetal deformity (United Nations 2001, 137). By 1997, however, the views of El Salvador's legislature on abortion shifted, owing to the efforts of conservative legislators on the National Assembly who introduced a ban on abortion on all circumstances. The country's Archbishop, an active member of the conservative Catholic group Opus Dei, influenced the decision by actively campaigning to pass the new law (Hitt 2006).

The new legislation removed all exceptions to the general prohibition against abortion and made women seeking abortions and health personnel performing them subject to imprisonment for two to twelve years (United Nations 2001, 137).

According to the World Health Organization (WHO); approximately 515,000 women on a worldwide basis die yearly from pregnancy-related complications. Treatment for these conditions is not costly or technically extravagant, yet women are denied simple life saving treatments for multiple reasons and chief among them are health policies adopted by national and local governments as well as financial constraints. Maternal mortality it seems is a tolerated tragedy, tolerated because often very little is done to prevent it (Chamberlain et al. 2003).

In October 2000, at the United Nations Millennium Summit, all countries agreed on the global imperative to reduce poverty and inequities. The need to improve maternal health was identified as one of the key Millennium Development Goals (MDG's) with a target of reducing levels of maternal mortality by three-quarters between 1990 and 2015 (WHO 2003a, 8). A central target of this MDG was preventing women from dying from preventable pregnancy related complications (Chamberlain et al. 2003).

Clearly the total ban on therapeutic abortion in both Nicaragua and El Salvador creates a barrier preventing the delivery of safe and high quality medical attention to women, especially those whose pregnancy endanger their lives as well as those pregnant as a result of rape and incest. This paper will analyze, in a comparative manner, how these policies preventing appropriate medical care affect maternal mortality and may also impact negatively on the achievement of the United Nations Millennium Development Goal of improving maternal health by the year 2015.

1.1 Background

The Pan-American Health Organization (PAHO) conducted a study in Nicaragua in 2007 that analyzed the impact on health after the new ban on therapeutic abortion. The study concluded that prohibiting therapeutic abortion would increment the risk of dying in women that are pregnant and have a complication or where the pregnancy itself represents a risky condition. Additionally, there would be a considerable increase in clandestine and unsafe abortions leading to women dying mainly among the poorer families in the country. Given these factors, it is evident that the MDG of reducing maternal mortality by 2015 is unlikely (PAHO 2007, 17). The study recommended that therapeutic abortion should not be seen as a felony but as an emergency medical-surgical intervention intended to prevent complications and to save lives (*ibid.*).

A report submitted to The United Nations Human Rights Committee (UNHRC) on violation of women's rights due to the complete criminalization of abortion in El Salvador, states that the country's restrictive abortion laws denies access to this medical procedure when there are pregnancy related complications and in cases of rape and incest (UNHRC 2010, 7). The fear of prosecution by the medical staff and the possibility of being arrested prevent women from seeking health services when suffering from pregnancy complications. This represents a clear violation of women rights and in many cases contributes to maternal death (*ibid*, 5).

One of the key recommendations made to the Salvadoran State by the UNHRC was to guarantee effective access of women to sexual and reproductive health-related services and partially decriminalize abortion in certain circumstances, thus allowing women to interrupt pregnancies without fear of prosecution when their life or health was in danger and when the pregnancy was a result of rape or incest (*ibid*, 10).

There are relatively few studies on how these prohibitions on therapeutic abortion affect maternal mortality leaving room for new research. The present study is aimed at helping us understand that new policies are needed in order to reduce maternal mortality and in so doing, contribute to the abilities of these two nations to achieve the goals for maternal health spelled out in the United Nations Millennium Development Goals.

1.2 Purpose of the Study

The present study is a literature review that aims to analyze the total ban on therapeutic abortion in the countries of El Salvador and Nicaragua and the influence of this legislation on maternal mortality as well as on the chances for these nations to make substantial improvements of maternal health by the year 2015. It must be emphasized that absolutely no research was conducted in these countries prior to these bans and thus there was no empirical evidence to support them. Instead, the decisions to impose these bans were taken on the basis of political and religious concerns (Amnesty International 2009 b, 11; Amnesty International 2009 a, 3-4).

In countries where access to abortion services is legally restricted, or services are not fully available or are of poor quality, women are at particular risk of unsafe abortion and maternal death. The risk of death following complications of unsafe abortion procedures is several hundred times higher than that of an abortion performed professionally under safe conditions (WHO 2003a, 14). These statistics had much to do with the frame of Millennium Development Goal 5 aimed at improving maternal health by reducing the maternal mortality ratio (MMR) by three-quarters between 1990 and 2015. This was to be accomplished mainly by increasing the numbers of skilled health personnel attending births (WHO 2003b, 9).

1.3 Research Questions

Central in the present study are two research questions addressing what may be the most critical issues of the entire thesis. The first one seeks to analyze the effect of the ban on abortion on maternal mortality on both countries while the second one focuses on the long term effect by analyzing how will it affect the achievement of the MDG's. These questions can be framed thusly:

- 1. How has the total ban on therapeutic abortion affected Maternal Mortality in El Salvador and Nicaragua?*

2. *How will the total ban on therapeutic abortion influence the achievement of the UN Millennium Development Goals for 2015 in Nicaragua and El Salvador, specifically MDG target number 5 for improving maternal health?*

The process to answer these questions is to analyze, compare and discuss relevant literature from both countries.

1.4 Limitations and Clarifications

The present study draws from primary and secondary sources. Primary sources are the original research articles reported by researchers and secondary summarizes the work of others: these are publications in research journals in the form of literature syntheses, research reviews, articles published in newspapers, unpublished academic sources and textbooks (Bui 2009, 48-49). Some papers included in this literature review are those published by independent researchers, feminist groups, human rights associations and multilateral institutions like the UN, WHO and PAHO. Availability of data is the reason as to why include these different types of resources.

Maternal mortality is influenced by several factors like education, poverty, access to quality medical care, access to birth control and many others. The focus of the present study will be on how maternal mortality might have shifted after the ban on therapeutic abortion. Therefore published and unpublished articles that have been written since 1999 (when the law changed in El Salvador) are more relevant to my study since in Nicaragua it changed fairly recently (2006).

At the beginning of the study I intended to perform in-depth interviews of physicians working in the public health system to enhance validity of the research through triangulation -the use of more than one approach to the investigation of a research question in order to improve confidence in the ensuing findings (Bryman 2004, 1), but the idea was dropped due to real ethical problems. If I had attempted interviews among medical personnel who had performed therapeutic abortions, my potential respondents could have faced legal harm in their home countries – including imprisonment and loss of their licenses to practice medicine - therefore I abandoned that idea and instead focused my attention on data gathered by previous researchers.

Ideally the data collected for this thesis should be scientific and reliable but, it should be kept in mind that this policy on abortion was changed because of political reasons therefore official sources might not be completely reliable (MINSA 2012; Escobar 2011). On the other hand, underreporting is a big issue because of the sensitivity and the legal implications of the topic (Sedgh et. al. 2012, 625; MINSA 2006, 19). This I have to keep in mind in analyzing, discussing and comparing the policies of each country and the goals set by the UN.

1.5 Structure of the thesis

The thesis consists of six chapters. First, there is an introduction of the topic and a presentation of the research questions. It also includes some background of the research and a description of the limits of and clarifications about the thesis. The second chapter deals with methodology and the design of the study, while the third explores and defines the main concepts of abortion, religion and politics, human rights and a brief description of the law in Costa Rica. The fourth chapter is in regard to the results and a discussion on the main literature (namely the literature dealing with maternal mortality and abortion in both countries). Here the main aim is to answer the research questions through a presentation of the countries policies which are followed by a comparison between the two. Chapter five and six are respectively a short conclusion of the thesis and a list of the literature consulted.

2. Methodology

This chapter describes the methodological approach of the thesis and the process of searching and selecting literature. As a general physician with experience on gynecology and obstetrics, my search and analyses of the data was guided by this medical knowledge.

2.1 Description of the research

With respect to methods, the thesis uses a qualitative research frame based on in-depth analysis of texts relevant to the topic. Chambliss and Schutt describe qualitative data analysis as a technique to search textual data rather than numbers with no predefined measures or hypothesis. The researcher in this case has gone through a process of discovery by analyzing literature to seek relevant data and interpret it to draw conclusions related to the research questions. This

relates to what Chambliss and Schutt describe as an “artful” way of combining both inductive and deductive processes (Chambliss and Schutt 2010, 250-253).

2.2 The process of searching and selecting literature

Reliability and validity are important in order to answer the research questions in this literature review. The reliability of a measure is the degree to which it produces a consistent answer that reflect an actual change on the phenomenon; this consistency is a prerequisite for measurement validity. The latter refers to how well indicators measure what they are intended to measure (Chambliss and Schutt 2010, 93). The present study is based on literature relevant to the topic and the research questions; by using Chambliss and Schutt’s criteria, the findings ought to have a strong foundation on the literature presented.

When conducting literature reviews, much data is usually available and for this thesis, the documents selected were read critically so as to find only those appropriate to the topic. The search engines used in selecting and choosing literature were: ebscoHost, HINARI, Google and Google Scholar. The search was conducted in both English and Spanish. In addition to employing these search engines, the researcher conducted an exhaustive search of governmental documents as well as documents from non-governmental organizations, human rights associations and some feminist groups that had important data regarding the topic. Some of these were: Amnesty International, Ipas, the Allan Guttmacher Institute, the Nicaraguan and Salvadorian Penal Codes and Health Ministries respectively, the UN, PAHO and the WHO.

Another step on the research process was to do an in-depth analysis of important literature on the list of references of the documents consulted. This search resulted on a greater understanding and stronger basis to support the findings.

2.3 Review of literature and the method of comparison

According to Bui (2010, 46-47) a literature review consists on gaining knowledge from previous researches to bridge the existing literature with one’s own research topic. Hart (1998, 13-19) defines literature review as the selection of available documents (both published and unpublished) on the topic, that contain information, data and evidence to express certain views

on the nature of the topic and the effective evaluation of these documents in relation to the research. In the end this process involves the use of existing literature to focus on a particular context (*ibid*). The present literature review is based on these definitions, presenting to the reader existing arguments derived from multiple sources on both countries in order to have a strong base to support the findings.

Comparative research is a broad term that includes both quantitative and qualitative comparison of social entities. Social entities may be based on many lines, such as geographical or political ones in the form of cross-national or regional comparisons (Mills et. al. 2006, 621-622). This thesis is a qualitative one where the social entities to be compared are the nations of El Salvador and Nicaragua. Ebbinghaus (2005) argues that case selection is one of the most critical problems within comparative research, in cross-national comparative research cases have been preselected due to historical and political processes (as cited in *ibid*). The present study is based on neighboring Central American countries that were chosen because of similar policies implemented under political circumstances. Therefore these countries will be the units of analysis according to the definition given by Chambliss and Schutt (2010, 37).

When performing comparative research the goal is to search for similarity and variance (Mills et. al. 2006, 621). Øvretveit also notes that the purpose of comparative health research studies is to explore, interpret or explain the similarities and differences between comparable items or phenomena in different areas, in order to improve health and the functioning of health services (Øvretveit 1998, 8). One of the aims is to discover whether an event, phenomena or entity that occurs in one place also occurs in another (*ibid*). The present study seeks to find out if maternal mortality has shifted after the complete ban on abortion on both countries. Another aim described by Øvretveit is to explain the similarities and differences between items in different places in order to contribute to decisions and actions to improve health or the functioning of health services (*ibid*). Different arguments are presented and debated on how maternal mortality might have changed after the ban, and in the near future how will this policy influence the achievement of the MDG's, mainly goal number five. Policies influenced by religion and politics are difficult to discuss and even to change, but in the end research projects like this can recommend some actions to improve health and health services to women on these countries.

3. Main Concepts and Framework

3.1 Usage of concepts on the present study

In order for the reader to have a better understanding of the discussion around the topic, the next step is presenting the definitions of different terms (some of them medical) as well as the United Nations conventions and agreements worldwide related to the topic. The medical terms are related to abortion, therapeutic abortion, maternal mortality and the way it is measured by countries in relation to the MDG's of the UN. As for the UN, there is a large variety of programs, conventions and agreements, therefore only the main ones related to this literature review will be presented.

3.2 Abortion

In medicine, an abortion is the premature exit of the products of conception (the fetus, fetal membranes, and placenta) from the uterus. It is the loss of a pregnancy and does not refer to why that pregnancy was lost. It subdivides in two: Spontaneous Abortion (Miscarriage) and Induced Abortion (MedTerms, 2011).

3.2.1 Spontaneous Abortion (Miscarriage)

A miscarriage is any pregnancy that ends spontaneously before the fetus can survive. A miscarriage is medically referred to as a spontaneous abortion. The World Health Organization (WHO) defines this un-survivable state as an embryo or fetus weighing 500 grams or less, which typically corresponds to a fetal age (gestational age) of 20 to 22 weeks or less. Miscarriage occurs in about 15% to 20% of all recognized pregnancies, and usually occurs before the 13th week of pregnancy (MedicineNet, 2011).

3.2.2 Induced Abortion

It is an abortion that is brought about intentionally by the woman or when is medically indicated, it is also called artificial or therapeutic abortion (MedTerms, 2011). This procedure can be performed medically (non-invasive) or invasive by a surgical procedure called dilation and evacuation (Abortion Access and Information Center, 2006).

3.2.3 Therapeutic Abortion

It is defined as the termination of pregnancy for medical indications, to save the mother's life or health. The ability to define therapeutic abortion performed for maternal indications is difficult because of the subjective nature of decisions made about potential morbidity and mortality in pregnant women. A variety of medical conditions in pregnant women have the potential to affect health and cause complications that may be life threatening (Medscape, 2011).

3.3 Indications for pregnancy termination

Indications for pregnancy interruption are debated on policy grounds all over the world (UN 2011, 1-2). According to Obstetrics books like Schwarcz et. al. a therapeutic abortion should be performed when the following conditions are met: 1) the life of the patient is endangered by a disease caused or aggravated by pregnancy, 2) when there is no other therapy for the patient or the existing therapy failed and 3) when having reasonable certainty that, through abortion, there will be complete cure or relief for the patient (Schwarcz et. al. 2000, 570). These indications are medical and do not underline the perspective of the expecting mother; whom beyond the previous indications, has to face the tough and painful decision (Carpizo and Valdés 2008, X) of ending her pregnancy in order to save her life.

Further, authors divide the indications for therapeutic abortion in fetal and maternal. Some maternal indications are: severe heart disease, neurological disorders, malignancy (i.e. cervical and breast cancer, leukemia and colorectal cancer among others), renal disease (hypertension, renal failure), autoimmune (Systemic Lupus Erythematosus-SLE), infectious diseases (HIV/AIDS, Hepatitis), psychological and psychiatric disorders. Fetal indications include malformations like anencephaly (absence of the brain and part of the skull) and/or chromosomal disorders like Trisomy 18 -Down Syndrome (Shabnam Bazmi et. al. 2008, 322). When pregnancy is a result of rape or incest the indication falls in the mental health ground for abortion where psychological distress is argued and/or diagnosis of fetal impairment due to incest (WHO 2003a, 87).

Other indications for pregnancy termination are discussed next.

3.3.1 Molar Pregnancy

The abnormal proliferation of trophoblastic tissue in the developing human placenta results in a condition known as gestational trophoblastic neoplasia (GTN). Hydatidiform mole, commonly known as molar pregnancy, is one of four neoplastic manifestations of GTN (Celeski et. al. 2001, 51). Molar pregnancies develop as a result of abnormal fertilization and are categorized as complete or partial. In a complete molar pregnancy the placenta becomes swollen and in most cases the fetus, cord and amniotic membranes are absent, these women have a 20% incidence of complications like malignancy. Partial moles usually develop in conjunction with identifiable fetal tissue and malignant sequels are uncommon. As a result of the high risk for associated morbidity, the obstetric management for both partial and complete molar pregnancies requires therapeutic termination of the pregnancy to protect the life of the mother (*ibid*). Tierney et. al. (2006, 774) indicate that, the uterus should be emptied as soon as the diagnosis of hydatidiform mole is established.

3.3.2. Ectopic Pregnancy

An ectopic pregnancy (EP) is any pregnancy in which the fertilized ovum implants outside the uterine cavity. EP remains the leading cause of maternal mortality in the first trimester and accounts for 10-15% of all maternal deaths (Goksedef 2010, 96). Because of the risk of tubal rupture, hemorrhage and consequently death, the management of this condition is pregnancy termination by either surgery (laparoscopic or laparotomy) or medical -with systemic methotrexate administration (*ibid*). Tierney et. al. state that in the United States, undiagnosed or undetected, and therefore untreated ectopic pregnancy is currently the most common cause of maternal death during the first trimester (Tierney et. al. 2006, 770). Surgery (laparoscopy) is the procedure of choice both to confirm the diagnosis and to remove the ectopic pregnancy (*ibid*).

3.3.3 Preeclampsia-Eclampsia

According to Tierney et. al, preeclampsia is defined as the presence of elevated blood pressure and proteinuria (abnormal presence of proteins in urine) during pregnancy. Eclampsia occurs with the addition of seizures (Tierney et. al 2006, 771). This condition can occur anytime after 20 weeks of gestation and up to 6 weeks postpartum. It is a disease unique to pregnancy, with the only cure being delivery of the fetus and placenta. Preeclampsia-eclampsia develops in

approximately 7% of pregnant women in the United States. Five percent of women with preeclampsia progress to eclampsia and uncontrolled eclampsia is a significant cause of maternal death (*ibid*). In Latin America and the Caribbean hypertension is the main cause of maternal mortality (25.7%) followed by hemorrhage -20.8% (Gonzalez 2010, 413).

3.4 Maternal Mortality

In an article written by Rasch (2007) some historical references are made on the efforts made by the international community to reduce maternal mortality. He states that the international community has dedicated (for the past two decades) to reduce the number of maternal deaths. In 1987, the Safe Motherhood Initiative, a coalition formed by the WHO, United Nations Children's Fund (UNICEF), the World Bank and the United Nations Population Fund (UNDP) was launched at a conference in Nairobi. It committed itself to cut the number of maternal deaths by half by year 2000. Some years later, in 1994 at the International Conference on Population and Development (ICPD), this goal was reiterated and another target of a further 50% reduction by 2015 was added. In 1995, the Fourth World Conference on Women in Beijing gave substantial attention to maternal mortality and confirmed the commitments made at the ICPD. Now, he states, almost 20 years after the first initiative, these aims have not been met and the world is still faced with unacceptable high numbers of maternal deaths (Rasch 2007, 167).

The WHO defines maternal mortality as the death of a woman while pregnant or within 42 days of termination of pregnancy, regardless of the site or duration of pregnancy, from any cause related to or aggravated by the pregnancy or its management. Causes of death can be divided into direct causes that are related to obstetric complications during pregnancy, labor or the post-partum period, and indirect causes are those that occur from either previously existing conditions or from conditions arising in pregnancy (HIV and AIDS, malaria, anemia and cardiovascular diseases) which are not related to direct obstetric causes but may be aggravated by pregnancy (UNICEF, 2006).

The *International statistical classification of diseases and related health problems*, tenth revision (ICD-10) defines a maternal death as a “death of a woman while pregnant or within 42 days of termination of pregnancy, regardless of the site or duration of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental

causes” (WHO 1992, as cited in Hill et. al. 2006, 173). In addition to maternal deaths, the ICD-10 introduced a new category of “pregnancy-related death”, defined as any death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of cause (Hill et. al. 2006, 173).

When it comes to maternal deaths, just because a woman develops a complication does not mean that death is inevitable; inappropriate or incorrect treatment or lack of appropriate, timely interventions underlie most maternal deaths (UNICEF, 2006). To accurately categorize a death as maternal, information is needed on the cause of death as well as pregnancy status, or the time of death in relation to the pregnancy. This information may be missing, misclassified or under-reported even in industrialized countries with fully functioning vital registration systems, as well as in developing countries facing high burdens of maternal mortality (*ibid*). Nicaragua and El Salvador no not escape to underreporting, misclassification and/or missing information, gathering data is a challenge in both countries.

3.4.1 Measuring Maternal Mortality

There are different techniques to measure maternal mortality from country to country (i.e. civil registration, demographic surveys); according to articles discussed next, there is no standardized way to accurately quantify it. The measurements established by the UN for the purpose of the MDG’s will be explained in this section.

The target of MDG number five is to reduce the maternal mortality ratio (defined as maternal deaths in a time period, usually 1 year, divided by the number of live births in the same period, and conventionally expressed per 100 000 live births) by 75% between 1990 and 2015; for a country to achieve this target requires an average decrease of 5.5% per year in the maternal mortality ratio (Hill et. al. 2007, 1311).

Hill et. al. states that maternal mortality estimates by country are necessary for national decision-making and resource allocation, yet available data vary greatly in quality and quantity, resulting in comparisons between countries over time, challenging (Hill et. al. 2007, 1311). The best way

to reliably measure maternal mortality is through civil registration system but in most low income countries alternative approaches are needed (*ibid*).

According to AbouZahr and Wardlaw (2001) in developed countries, the civil registration system records deaths by cause as well as live births on a continuous basis, but even in these countries maternal deaths are under recorded in official statistics as a result of misclassification of cause and underreporting (AbouZahr and Wardlaw 2001, 561-562). In countries that are less statistically developed, errors in both numbers of deaths and attribution of cause may result in biased measures of maternal mortality; therefore efforts on reducing it become problematic (*ibid*). Further, deaths most often misclassified in routine reporting are those associated with abortion (where it is illegal); early pregnancy deaths (resulting from ectopic or molar pregnancy) because it might have been unknown to the woman or her family; and indirect maternal deaths (i.e. due to AIDS or malaria) among others (*ibid*, 562).

Beside civil registration, there are alternative methods to study maternal mortality including RAMOS and sisterhood surveys, both are explained next. The Reproductive Age Mortality Studies (RAMOS) use varied sources (existing records from civil registration, health facility records, morgue records, burial/cemetery records and newspapers, survey/census of households and survey of key informants), depending on the context, to identify all deaths of women of reproductive age and ascertain which of these are maternal or pregnancy-related (Campbell and Foster 2007, 1). This approach provides an estimate of the proportion of maternal deaths among female deaths (PMDF) but can be combined with other data to obtain the maternal mortality ratio –MMR (*ibid*). An advantage of RAMOS is that if rigorous, it can provide one of the most complete estimations of maternal mortality; the main limitation is that it requires complete death reporting and this can be complex, it is also costly and time consuming (*ibid*).

The sisterhood method was designed to overcome the problem of large sample sizes and thus reduce costs (Graham et. al. 1989 as cited in WHO 1997, 5). It is an indirect measurement technique used to measure demographic parameters such as child or adult mortality; it was adapted for the measurement of maternal mortality (WHO 1997, 5). The method reduces sample size requirements because it obtains information by interviewing respondents about the survival of all their adult sisters (*ibid*, 6). This approach was designed to be used in settings where there

are no alternative means of generating estimates (Graham et. al. 1989 as cited in WHO 1997, 5); therefore it provides estimates of maternal mortality that should be seen as giving orders of magnitude rather than precise ratios since it can have wide margins of error (Hanley et. al. as cited in *ibid*, 8). One drawback is that the method does not provide a current estimate for the year of the survey, for this reason, sisterhood studies cannot be used to monitor changes in maternal mortality. Despite these limitations, the sisterhood method remains an important tool for policy-makers and health planners who want a baseline estimate of maternal mortality (WHO 1997, 8).

In 2006 a new maternal mortality working group was established that included WHO, UNICEF, United Nations Population Fund (UNFPA), the UN Population Division and The World Bank to develop improved estimation methods in order to analyze trends in maternal mortality since 1990. The new methods were developed and used depending on the type of data available to produce comparable country, regional and global estimates of maternal mortality ratios (Hill et. al. 2007, 1311). They identified eight broad types of data availability categorized by country groups; these are Group A) Countries with satisfactory civil registration data, Group B) Countries with complete registration of deaths but excessive proportions of ill-defined causes, Group C) Countries with direct sisterhood surveys, Group D) Countries with reproductive age mortality surveys (RAMOS), Group E) Countries with sample registration estimates, Group F) Countries with population census based estimates, Group G) Countries with other empirical bases and Group H) Countries lacking appropriate empirical data (*ibid*, 1312). Using this division, different strategies were used to estimate or adjust reported maternal mortality ratios for each group and the UN Population Division estimates of 2005 births (the denominator of the maternal mortality ratio) for consistency (*ibid*).

Based on this division by Hill et. al. (2007, 1315), Nicaragua falls in Group F (2% of global births) where population census data in household deaths identifies pregnancy-related deaths; and El Salvador falls into Group H (2.5% of global births) which has no empirically base data sets or estimates, for this group maternal mortality values were predicted on the basis of statistical modeling, maximizing the strengths in empirical data while minimizing the effects of data weaknesses on previous global estimates (Hill et. al 2007, 1312-1315).

UNICEF highlights that measures of maternal mortality ratios have a high degree of uncertainty. Actual rates may be lower or higher than the average, and although this is true for many statistics, data should be interpreted cautiously (UNICEF 2006).

3.4.2 The proportion of births attended by skilled personnel

The proportion of births attended by a skilled health worker at delivery was selected as a proxy measure to monitor the progress towards the MDG target number five. It was agreed at a special session of the United Nations General Assembly in 1999 that globally 90% of all births should be assisted by skilled attendants by 2015 (WHO 2008a, 1).

The “proportion of births attended by a skilled health worker” represents the percentage of all births attended by a skilled health worker. According to the WHO (2004) the term “skilled health worker” refers to “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 (TBA) either trained or not (independent of the health system, non-formally trained and community-based providers of care during pregnancy, childbirth and the postnatal period), are excluded from the category of skilled health workers (WHO 2008a, 1-2). Measuring the proportion of births attended by a skilled health worker has been problematic. Countries where maternal mortality is a major public health problem have also limitations on the availability of qualified health personnel (ibid).

The proportion of births attended by skilled health worker at delivery is defined here because is an indicator for MDG target five. But, for the purpose of the thesis the MMR will be used as a method of comparison since it reflects deaths at early pregnancy stages where therapeutic abortion can be performed.

As discussed before, maternal mortality ratios around the world are difficult to measure because there are no standard procedures established for this purpose. Current statistics are based on data availability including estimates and adjustments; the countries included in this research paper will be compared using consistent data available in research articles as described in the methods segment of this paper.

3.5 The United Nations Millennium Development Goals

The United Nations Millennium Declaration marked a symbolic passage. Issued in September 2000, it was meant to signal the end of a century and the dawn of a new millennium (United Nations 2003, 17). At the Millennium Summit in September 2000 which was the largest gathering of world leaders in history (189 member states including 147 heads of state), the UN Millennium Declaration was adopted committing all signatories to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets, with a deadline of 2015 that have become known as the Millennium Development Goals –MDG’s (Millennium Project 2006). The UNFPA website state that the MDG’s are an achievable blueprint for reducing poverty and improving lives agreed to by not only countries, but all leading developing institutions which guide and focus developing priorities for governments, donors and practitioner agencies worldwide (UNFPA 2011).

The Millennium Development Goals are time-bound and quantified targets for addressing extreme poverty in its many dimensions: income poverty, hunger, disease, lack of adequate shelter, and exclusion-while promoting gender equality, education, and environmental sustainability. They are also basic human rights, the rights of each person on the planet to health, education, shelter, and security (Millennium Project 2006).

The eight MDG’s include: Goal 1) Eradicate extreme hunger and poverty: Goal 2) Achieve universal primary education:;, Goal 3) Promote gender equality and empower women:;, Goal 4) Reduce child mortality:;, Goal 5) Improve maternal health, Goal 6) Combat HIV/AIDS, malaria and other diseases, Goal 7) Ensure Environmental sustainability and Goal 8) Develop a global partnership for development. Progress towards the eight MDG’s is measured through 21 targets and 60 official indicators (Millennium Project 2006).

The UNDP states that the eight MDG’s are arguably the most politically important pact ever made for international development since they identify specific development priorities across a very broad range, including poverty, education, gender, health, environment, and international partnerships (Waage et. al. 2010, 2). Although progress has been made towards the MDG’s, it is uneven and many of the MDG targets (21 in total) are likely not to be achieved in many regions

(Jensen 2010, 4). The broad conclusion is that few goals are entirely on track globally, and those that are, show substantial variation (Waage et. al. 2010, 2).

Attaran (2005) argues that many of the most important MDG's suffer from a worrying lack of scientifically valid data. Although progress on each of these goals is portrayed in time-limited and measurable terms, he states that the subject matter is immeasurable, or the measurements are so inadequate, that one cannot know the baseline condition before the MDGs, or know if the desired trend of improvement is actually occurring. He concludes his paper stating that the UN lacks data to prove whether the MDG's are or are not being met (Attaran 2005, 0955).

According to Haines and Cassels (2004), the achievement of MDG's is one of the greatest challenges in international development and skeptics may question whether it is worthwhile to have ambitious goals of this nature. The authors state that the MDG's represent desirable ends and are valuable because they provide a focus for development efforts. They conclude that progress is possible and is a matter of political choice in the developed and the developing world (Haines and Cassels 2004, 394-395).

3.5.1 Millennium Development Goal number Five

In 1994 at the International Conference on Population and Development (ICPD) in Cairo, Egypt, representatives of 179 countries committed their nations to an ambitious Program of Action (PoA) for improving sexual and reproductive health and rights (SRHR) over the world. The PoA included goals to reduce maternal mortality and to ensure universal access to reproductive health care by 2015 (CONCORD 2010, 17).

Millennium Development Goal 5 includes targets deriving from the ICPD Program of Action (*ibid*). Improve maternal health by reducing the maternal mortality ratio (MMR) by three-quarters between 1990 and 2015 is the target of MDG 5a which will be measured by both the MMR (indicator 5.1) and the proportion of births attended by skilled health personnel -indicator 5.2 (WHO 2003b, 9).

By 2005 the monitoring framework of MDG 5 was revised on the World Summit to include a new target 5b aimed at achieving universal access to reproductive health by 2015 and four new indicators were set: 5.3 to increase the contraceptive prevalence rate, 5.4 to reduce adolescent birth rate, 5.5 to increase antenatal care coverage and 5.6 to reduce unmet need for family planning (van den Broek and Falconer 2011, 26-27).

The European Confederation of Non-Governmental Organizations for Relief and Development (CONCORD) is emphatic on declaring that MDG 5 is the most off track of all MDG's especially in fragile states where no significant progress has been made since 1990 (CONCORD 2010, 17). According to their calculations, some of the main barriers to the advancement of MDG 5 are lack of political will when donors and recipients neglect women's health and rights in their policies including gender discrimination and barriers to quality services (*ibid*).

Furthermore Hulton et. al. (2010) states that MDG 5 has shown the least progress of all MDG's as indicated by the fact that maternal mortality remains unacceptably high across much of the developing world. Globally it decreased by less than 1% per year between 1990 and 2005 – far below the 5.5% annual improvement needed to reach the MDG targets (Hulton et. al. 2010, 1-5; CONCORD 2010, 17).

However, an analysis of all available data on maternal mortality between 1980 and 2008 for 181 countries made by Hogan et. al. (2010) concluded that most of these countries have shown a substantial decline on maternal deaths. Furthermore the analysis points out that global progress to reduce the MMR has been similar to progress to reduce maternal deaths (since the size of the global birth cohort has changed little during this period) and that substantial decreases in the MMR are possible over a fairly short time (Hogan et. al. 2010, 1619).

The previous analysis differs substantially from the assessment undertaken by Hill et. al. (2007), on a time-series analysis of MMR between 1990 and 2005, he indicated an average decline of 2.5% (in middle income countries) and 1% per year for countries in Latin America, northern Africa and Asia. It concluded that progress towards achieving MDG 5 is slow (Hill et. al. 2007, 1318).

Some sources state that there has been progress towards the MDG's while other sources argue that no improvement has been made. Attaran (2005) stated that data in the poorest countries,

where the issue of maternal mortality is greatest, is not satisfactory and that MMR based solely on estimates and “educated guesses” is basically immeasurable (Attaran 2005, 0958).

Additionally Harrison (2009) affirmed that statistical manipulation, for example, by the WHO, tends to generate further inaccuracy in estimates of morbidity and mortality from elective abortion worldwide. In concluding her findings, Harrison states that ensuring accurate research and data collection to meet MDG 5 has been virtually ignored and that without this clear data, policy decisions will be founded on political assumptions rather than scientific fact (Harrison 2009, 4-7).

3.6 The Problem of Unsafe Abortion

The WHO defines unsafe abortion as a procedure for terminating an unintended pregnancy carried out either by persons lacking the necessary skills or in an environment that does not conform to minimal medical standards, or both (WHO 2008b, 2). These include a) abortions in countries where the law is restrictive and b) abortions that do not meet legal requirements in countries where the law is not restrictive (Sedgh et. al. 2007, 1338-1339). There is not a perfect correlation between the legal status of abortion and its safety, but there is strong evidence that most abortions are safe in countries where the procedure is lawfully permitted under a broad range of criteria (*ibid*). While the WHO definition seems to be linked to the process, characteristics of an unsafe abortion touch on inappropriate circumstances *before, during* or *after* an abortion (WHO 2008b, 2).

The importance on discussing unsafe abortion in this paper involves the reasons women have for seeking abortion. Some of these are socioeconomic concerns (including poverty or employment); family building preferences; relationship problems with the husband or partner; risk to maternal or fetal health; and pregnancy resulting from rape or incest. Other causes include poor access to contraceptives and contraceptive failure (Grimes et. al. 2006, 1909).

Pregnancy related to rape and incest and a risk to maternal or fetal health are reasons for therapeutic abortion, since the latter is not provided in countries with restrictive abortion laws (like Nicaragua and El Salvador) women have no choice but to seek unsafe abortion services (Haddad and Nour 2009, 124). Furthermore de Bruyn (2003) states that due to stigma

surrounding abortion, women who choose to have a clandestine abortion (in cases of rape and incest) may also face abuse when they seek assistance and care from the legal system and the health-care system (de Bruyn 2003, 25).

According to the WHO unsafe abortion is typically characterized by a number of conditions. Sometimes only a few conditions prevail, and sometimes all or most of them prevail. Central among these conditions are: a) no pre-abortion counseling and advice, b) abortion induced by an unskilled provider, frequently in unhygienic conditions, or by a health practitioner outside official/adequate health facilities, c) abortion provoked by insertion of an object into the uterus by the woman herself or by a traditional practitioner, or by a violent abdominal massage, d) medical abortion prescribed incorrectly or medication issued by a pharmacist with no or inadequate instructions and no follow-up and e) abortion self-induced by ingestion of traditional medication or hazardous substances (WHO 2008b, 2).

Hazardous features of unsafe abortion are: a) the lack of immediate intervention if severe bleeding or other emergency develops during the procedure, b) failure to provide post-abortion check-up and care, including no contraceptive counseling to prevent repeat abortion, c) the reluctance of a woman to seek timely medical care in case of complications because of legal restrictions and social and cultural beliefs linked to induced abortion (*ibid*).

These hazardous features are applicable to the countries of study since as already noted women and health personnel are prosecuted and face imprisonment if it is proven that an abortion was performed (Amnesty International 2009 a, 3-4; United Nations 2001, 137). In addition, women most at risk of suffering serious morbidity from unsafe abortion are also young and poor (Ipas as cited in OHCHR, 2010) since women with a better economic status can travel to a country with no prohibitions on abortion or buy services from the private sector, while women who are poor have less access to these services and instead have to rely on unsafe abortions from unskilled providers (Bott 2001, Gardner and Blackburn 1996, Mundigo and Indriso 1999 as cited in WHO 2003a, 14; Moloney 2009, 77).

Obtaining accurate data for abortions is a challenging task and this is especially so for unsafe abortion because is often done clandestinely by untrained individuals or by the pregnant women themselves. Consequently, exact figures are non-existent and one has to rely on estimates (Haddad and Nour 2009, 123). Even though their data consists mainly of estimates, Sedgh et. al. claimed that during the period of 1995 to 2003 the overall abortion rate declined while the proportion of unsafe abortion was on the rise especially in developing nations (Sedgh et. al. 2007, 1342-1343).

The WHO categorizes unsafe abortion as a staggering public health issue as well as one of the easiest preventable causes of maternal mortality. Annually, it has been estimated on a worldwide basis that 20 million unsafe abortions are performed. Approximately 68,000 women die annually making it one of the leading causes of maternal mortality (WHO as cited in Haddad and Nour 2009, 122). Furthermore in the Latin America Region, it has been reckoned that 4.2 million unsafe abortions have been performed (*ibid*), 1.07 million of which are performed in Central America where nine percent of all maternal deaths are due to unsafe abortion (WHO 2008c, 2). Moreover, the number of unsafe abortion in the region, have shown a rise as new data have become available (WHO 2008b, 22). Figures for unsafe abortion for the countries of study on this paper will be discussed on the findings segment since it is a known contributor to maternal mortality.

3.6.1 Unsafe Abortion: Prevention, Costs and MDG 5

Primary methods for preventing unsafe abortion are less restrictive abortion laws and greater contraceptive use but these face social, religious, and political obstacles, particularly in developing nations, where it has been estimated that most (97%) unsafe abortions have been performed (Haddad and Nour 2009, 122; Grimes et. al. 2006, 1908).

According to Haddad and Nour, there is an association between unsafe abortions and restrictive abortion laws as evidenced by the fact that abortion related deaths are more frequent in countries with the most restrictive laws on abortion (Haddad and Nour 2009, 124). For instance, in Latin America and the Caribbean, where contraceptive use is low and abortion laws are the most restrictive, the ratio of unsafe abortion is higher (20 to 39 per 1000 women) than in nations that

allow abortions -2 per 1000 women (Sedgh et. al 2007, Grimes et. al. 2006 as cited in Haddad and Nour 2009, 124).

A study by Sedgh et. al. (2012) examining abortion trends from 1995 to 2003, contradicts the previous findings stating that restrictive abortion laws are not associated with lower abortion rates, since abortions continue to occur in measurable numbers regardless of the status of abortion legislation. Moreover the study points out that abortion rates are virtually equal in developed as in developing countries, and that almost half of all abortions worldwide are unsafe (Sedgh et. al. (2012, 627-630).

In addition Grimes et. al. and Haddad and Nour are emphatic in pointing out how the burden of unsafe abortion lies not only on women and their families, but also on the public health systems of the developing world where the financial and logistic impact sometimes prevents attention to be administered to other patients (Haddad and Nour 2009, 123; Grimes et. al. 2006, 1914). Grimes et. al. have shown that conversely ensuring women's access to safe abortion services lowers medical costs to health systems (Grimes et. al. 2006, 1914).

Indirect costs of unsafe abortion are difficult to quantify, they include the loss of productivity from abortion related morbidity and mortality not only on women, but in household members (*ibid*). According to Singh et. al. (2003) estimates of disability adjusted life-years (DALYs) provide an indicator of one part of the indirect costs, women's loss of productive life. An estimated 5 million DALYs are lost per year by women of reproductive age as a result of mortality and morbidity from unsafe abortions (as cited in Grimes et. al. 2006, 1914). However, as Valssoff et. al. (2004) state, this rate probably underestimates the true burden because of limitations in the methods of estimating DALYs resulting from maternal causes (*ibid*).

Rasch states that there is not a simple and straightforward intervention that by itself will lower maternal mortality and that the target of reducing the MMR by 2015 is not likely to be achieved if the problem of unsafe abortion is not addressed too. He stresses that political leadership and willingness to discuss women's rights, family planning and safe abortion openly is essential to the achievement of MDG 5 (Rasch 2007, 167-169).

3.7 Human and Women Rights

3.7.1 Defining Human Rights

In looking at the question of abortion, it is impossible to separate this issue from discussions of human and women rights since prohibiting abortion is clearly a violation of these rights. In examining human rights, there are a number of definitions to consider. Central among these, are the recognition and respect for human dignity; a set of moral and legal guidelines that promote and protect our values and our identity and ability to ensure an adequate standard of living. One basic standard which can be used to identify and measure inequality and fairness is represented by the Universal Declaration of Human Rights (Australian Human Rights Commission 2009).

The Universal Declaration of Human Rights (UDHR) is a milestone document in the history of human rights. It was drafted by representatives from all regions of the world, and proclaimed by the United Nations General Assembly in Paris on December 10, 1948 as a common standard of achievements for all peoples and all nations (OHCHR 2012). The 30 articles of the UDHR establish the civil, political, economic, social, and cultural rights of all people. It is a vision for human dignity that transcends political boundaries and authority, committing governments to uphold the fundamental rights of each person (Amnesty International USA 2012).

3.7.2 Women's Rights

The International Conference on Population and Development (ICPD) in Cairo in 1994 and the Fourth World Conference on Women (FWCW) in Beijing in 1995 both affirmed the human rights of women in the area of reproductive and sexual health. The Cairo Conference agreed that “Reproductive rights embrace certain human rights that are already recognized in national laws and international human rights documents. These rights rest on the recognition of the basic rights of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health” (UN 1995 as cited in WHO 2003a, 11).

Following the ICPD, in Beijing, Governments agreed that “The human rights of women include their right to have control over and decide freely and responsibly on matters related to their

sexuality, including sexual and reproductive health, free of coercion, discrimination and violence. Equal relationships between women and men in matters of sexual relations and reproduction, including full respect for the integrity of the person, require mutual respect, consent and shared responsibility for sexual behavior and its consequences.” (UN 1996 as cited in WHO 2003a, 11).

Historically, there have been many conferences held, declarations and agreements made that gave birth to what we know today as the women’s rights. During the 1970’s the international feminist movement began to gain momentum leading to the UN General Assembly declaring 1975 as the International Women’s Year. This was followed by the first World Conference on Women, held in Mexico City. Subsequently, the United Nations declared the years 1976-1985 as the UN Decade for Women (United Nations 2012).

In 1979, the General Assembly adopted the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), which is often described as an International Bill of Rights for Women. The Convention is the first human rights treaty to affirm the reproductive rights of women (*ibid*).

In 1985, the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, was held in Nairobi. Today, many view that conference as “the birth of global feminism”. Realizing that the goals of the Mexico City Conference had not been adequately met, the 157 participating governments then meeting in Kenya adopted the Nairobi Forward-looking Strategies to the Year 2000. This was significant for its declaration that **all** issues were women’s issues (United Nations 2012).

The Fourth World Conference on Women, held in Beijing in 1995, went a step farther than the Nairobi Conference. The Beijing Platform for Action asserted women’s rights as human rights and committed to specific actions to ensure respect for those rights. According to the UN Division for Women in its review of the four World Conferences:

In the aftermath of the Millennium Declaration of the September 2000 Millennium Summit, gender issues were integrated in many of the subsequent Millennium Development Goals

(MDGs) — and explicitly in Goal No. 3 “Promote gender equality and empower women” and Goal No. 5 “Reduce by three quarters the maternal mortality ratio” (United Nations 2012).

On 2 July 2010, the United Nations General Assembly unanimously voted to create a single UN body tasked with accelerating progress in achieving gender equality and women’s empowerment. The new UN Entity for Gender Equality and the Empowerment of Women or UN Women became operational on 1 January 2011 (*ibid*).

3.7.3 Abortion and Human and Women’s Rights

Most Governments have ratified legally-binding international treaties and conventions that protect human rights, including the right to the highest attainable standard of health, the right to life and the right to be free from inhuman and degrading treatment. In accordance to these human rights, Governments decided in the ICPD+5 review and appraisal process that “...in circumstances where abortion is not against the law, health systems should train and equip health service providers and should take other measures to ensure that such abortion is safe and accessible. Additional measures should be taken to safeguard women’s health.” (UN 1999 as cited in WHO 2003a, 83).

According to the WHO a clear understanding of laws on abortion as well as related policy considerations is required to ensure that all women eligible under the law have access to safe services. Further, the majority of the world’s Governments at the 1995 Fourth World Conference on Women agreed they should “...consider reviewing laws containing punitive measures against women who have undergone illegal abortions.” (UN 1996, as cited on *ibid*).

The UN Monitoring Committee for CEDAW stated in May 1999: “When possible, legislation criminalizing abortion should be amended, in order to withdraw punitive measures imposed on women who undergo abortion” (CEDAW as cited in de Bruyn, 26). According to de Bruyn, this recommendation resulted from the fact that, in countries where abortion is legally restricted, health professionals may be required to report abortions to the legal authorities and women may be imprisoned for exercising their human right to family building (de Bruyn, 26 2003, 26).

A document on abortion by Singh et. al (2009) states that countries with highly restrictive abortion laws force women to rely on unsafe abortion procedures, and this represents an unacceptable infringement of not only women's human rights but also of medical ethics. The report also states that making abortion legal is a strong imperative grounded on the rights of all women to maintain their health, avoid harm and make their own decisions on childbearing (Singh et. al. 2009, 47-49).

Thaddeus and Maine (1994) emphasized that investing in women and guaranteeing their wellbeing is an end in itself because women are intrinsically valuable (as cited in Nanda et. al. 2005, 19). There are also compelling human rights and social justice dimensions to reducing death and illness associated with pregnancy and childbirth. During the last decade, a human rights lens has been increasingly applied to view and monitor maternal health through a great number of international covenants including the CEDAW and the ICPD (*ibid*).

The main concepts and arguments regarding abortion together with human and women's rights have been presented, next the particularities of Nicaragua and El Salvador on these rights will be discussed.

3.7.4 Abortion and Human and Women's rights in Nicaragua and El Salvador

According to the Center for Reproductive Rights, the current abortion laws in Nicaragua and El Salvador are among the most restrictive in the world (Center for Reproductive Rights 2009, 1-2). Møllmann reports that the ban on therapeutic abortion in Nicaragua eliminates legal access to life or health saving abortion services contravening international human rights standards on the right to life, the right to health, the right to non-discrimination, and a number of other established human rights (Møllmann 2007, 6). Further it was found that the Nicaraguan Health Ministry has no data on the effects of this new policy, therefore, it is impossible to ascertain how many women the ban has prevented from accessing safe therapeutic abortion services and with what effect (*ibid*). Moreover, the prohibition also violates the rights of doctors to practice their profession ethically and confidentially and provide needed emergency services to their pregnant patients (*ibid*; UNHRC 2008, 28).

A human rights analysis by Varela in El Salvador (2001) concluded that the punitive and restrictive abortion legislation in that country, akin to Nicaragua, constituted a violation of the rights guaranteed by the Salvadoran Constitution and international conventions ratified by the country, including the right to life, liberty and security of person; the right to health and the right to physical integrity (Varela 2001, 55). On the right to health, she points out that women are deprived from this right when they are forced to continue with a pregnancy that endangers their lives, physical and mental health. Moreover, the Salvadoran Health Code contains a binding obligation to promote preventive and curative healthcare for women during pregnancy and to children from the moment of conception. This creates a conflict between the rights of the mother and that of the fetus prioritizing the life of the unborn over the life of the mother (*ibid*, 57-58).

A shadow report to the United Nations Human Rights Committee (UNHRC) stated that in addition to violation of human rights, El Salvador's denial of women's rights to safe abortion services, in specific circumstances amounts to torture and also cruel, inhuman and degrading treatment. When women are denied access to therapeutic abortions due to complications on their pregnancy or in cases of rape and incest, they are forced to suffer physical pain, mental anxiety and life-threatening conditions in addition to the fear of being prosecuted (UNHRC 2010, 7).

Much like the situation in El Salvador, a briefing to the United Nations Committee against Torture by Amnesty International about Nicaragua argued that by compelling women and girls to carry unwanted or non-viable pregnancies to term caused them suffering and pain violating article 1 of the convention against torture, where torture is defined as infringing an essential health service intentionally denied in this case by the state (Amnesty International 2009 c, 9-11).

One example of these human rights violations is the case of "Amalia" in Nicaragua, a 27 year old pregnant woman who in February 2010 made national and international headlines when cancer treatment was denied her using the argument that it might harm the fetus (Kruk 2010; Martinez 2010 and López 2010). In July 2008 a revised penal code introduced sanctions for doctors and nurses who treat a pregnant woman for medical conditions such as cancer or cardiac emergencies where the treatment may cause injury to or death of the embryo or fetus (Kruk 2010). Eventually

“Amalia” received her chemotherapy, lost her newborn child on July 2010 and passed in December 2011 (Gonzalez 2011).

Further “Manuela” a 33 year old Salvadoran mother of two is currently suffering the consequences of this new law. She was convicted of murder and sentenced to 30 years in prison after suffering an apparent miscarriage. Upon arrival to the hospital she was treated as if she had attempted an abortion, the police were called and she was accused of murder. After some months in prison she was diagnosed with Hodgkin’s lymphoma (a type of cancer), a disease that likely caused the obstetric emergency she suffered. Later she died in prison (Center for Reproductive Rights as cited in Jacobson 2012). Eighteen year-old Cristina and 31 years-old Maria Edis were sent to the women’s penitentiary of El Salvador in 2009. There were both sentenced to 30 years in prison accused of the same crime, abortion; although both women claimed they had suffered miscarriages. Cristina was released following four years after her case for appeal determined that the judgment had been wrong, but Maria Edis unfortunately died of cancer while in prison (Carías and Aguilar 2011; Velázquez 2011 and UNHRC 2010, 11).

As discussed previously, when it comes to human rights, Nicaragua and El Salvador have more similarities than differences. According to most sources in the literature on abortion laws in both countries are violating human rights as well as international conventions and treaties ratified by them, even the one against torture. Although this paper is based on country comparisons, the particular cases of women are the ones that, in the end, count for the statistics; therefore it was considered important to mention how their fates illustrate the violations of human rights in both countries.

3.8 A Brief Discussion on Costa Rica’s Abortion Policies

Although the main focus of the thesis has been on the background and consequences of the two Central American nations of Nicaragua and El Salvador, it may be helpful here to include a brief description of the policy of the neighboring country of Costa Rica.

Unlike El Salvador and Nicaragua, Costa Rica is often presented as a nation that has a high standard of living and enjoys a social and political system similar in many ways to the welfare

states of Scandinavia (CIA 2012). Also like all nations in Central America, the country has a strong Catholic Church that accounts for 76.3% of the population (*ibid*).

In addition, compared to the nations presented on this paper, the country has a less restrictive law on abortion. It permits the procedure to protect the pregnant woman's physical health stipulating that if no physician is available a midwife may perform an abortion (Rahman et. al. 1998, 57-59). But as in Nicaragua, El Salvador and other countries in Latin America, legislation prohibits the performance of abortion in cases of rape or incest and fetal impairment (United Nations 2011; United Nations 2012a). Moreover the Penal Code states that a person who performs an illegal abortion is subject to imprisonment for a period of one to three years for a woman that induces her own abortion on consents to it. And a person who performs an abortion without the woman's consent or when she is under fifteen years of age is subject to three to ten years' imprisonment (*ibid* 2012a).

Since legislation in Costa Rica permits therapeutic abortion only, the problem of unsafe abortion as in Central America is great because it is done clandestinely and there is discrimination and stigma attached to women who undergo the procedure regardless of the reason (Gómez 2008, 8). A study conducted in 1995 estimated that the number of induced abortions from 1984 to 1991 was on average 10 per 1000 women aged 15 to 49 yearly (Brenes 1995 as cited in Sagot and Carcedo 2002), this number was relatively low and is comparable to current data from European countries where abortion is legal and the use of contraceptives is high -less than 10 per 1000 woman (Sedgh et. al. 2007 as cited in Haddad and Nour 2009, 124). But it should be noted that the numbers for Costa Rica akin to the ones for Nicaragua and El Salvador, are mainly based on data from the health system excluding those performed clandestinely (Sagot and Carcedo 2002).

Further a study by Gómez (2008) estimated that by 2007 the figures for Costa Rica doubled to 22.3 per 1000 women which accounts for 27,000 induced abortions yearly (Gómez 2008, 8). This recent data is similar to that of countries with restrictive abortion laws and low contraceptive use like some Latin American nations, where the rates range from the mid 20s to 39 per 1000 women (Sedgh et. al. 2007 as cited in Haddad and Nour 2009, 124).

Although therapeutic abortion is legal in Costa Rica, according to Arango (2011) access to this procedure, when the woman's health is in danger, is being denied by the state. She points out that according to official statistics, between 2002 and 2007, a total of 26 abortions were legally performed, a small number compared to the 379 deaths due to congenital malformations incompatible with extra uterine life; and excluding other diseases like cancer and hypertension. She concluded her paper stating that clearly, women are not receiving a procedure entitled to them by law and that the Costa Rican State has been reported to the Inter-American Commission on Human Rights (IACHR) because of violation of the right to life, health and non discrimination (Arango 2011).

3.8.1 The Case of "Rosa"

In January 2003 a Nicaraguan girl made national and international headlines when she became pregnant at the age of nine because of rape. "Rosa" or "Rosita" was the only child of illiterate and impoverished *campesinos* (farm workers) who had moved to neighboring Costa Rica as coffee pickers at the time of the assault perpetrated by a neighbor (Attie and Goldwater 2006). "Rosita", who had not started menstruating, was vomiting and losing weight, doctors then discovered she had a sexually transmitted disease and was two and a half months pregnant (Ramsay 2006, 1862).

"Rosita's" parents fought to get an abortion for their child but at the time abortion was illegal in Nicaragua and Costa Rica except when deemed necessary to save the woman's life, not in cases of rape. Back in Nicaragua the proposed abortion was opposed by the government, physicians and the Roman Catholic Church (Attie and Goldwater 2006; Ramsay 2006, 1862). The only chance was to prove that her life was in danger, the requirement for a therapeutic abortion. Because of media coverage, women's health groups and, despite an avalanche of opposition and official obstruction, "Rosita" eventually had an abortion when she was 4 months pregnant (*ibid*).

According to McNaughton et. al. (2006) several health and human rights issues underlie "Rosa's" story, including child welfare policies, sexual violence, and the role of nongovernmental organizations (NGOs) in human rights protection and their relation to the state. Limited access to legal abortion services unduly affects the well-being of vulnerable individuals who, like "Rosa",

depend on the state to ensure they have access to needed health care (McNaughton et. al. 2006, 67).

Four years later, in 2007, “Rosita” now fourteen made headlines again, her mother confessed that her husband (“Rosita’s” adoptive father) was the perpetrator of the abuse that started with a pregnancy a subsequent abortion and a 19-month-old child she gave birth (Collado 2007). She was then sent to a shelter together with her child, her mother was being investigated and the father was a fugitive from justice (Aleman, 2007). The alleged Costa Rican rapist, the neighbor, was released from all charges (Mendoza, 2007).

3.9 A word on politics and religion

Although briefly mentioned in the introduction, a short discussion on politics and religion in the countries of Nicaragua and El Salvador will be presented so the reader can understand how these two movements influenced the decision to change the policy on abortion on both countries.

3.9.1 Religion and Politics in Nicaragua

The main religion in Nicaragua is Catholicism (58.5%) and Evangelical 21.6%- (CIA 2012). According to Conscience (1991) with the centralization of power in the Catholic Church, various ideas on abortion have been standardized into a single inflexible position, that is, that the church is convinced all abortion is wrong (as cited in Holmes 1993, 123). It can be argued that Catholicism and the deep religious beliefs of the people in both countries may have, by themselves, influenced the change of the law but, as it will be discussed next; it took more than religion only to modify the law on abortion.

Religion and politics became dynamically intermingled in Central America during the late seventies and early eighties. The event that most compellingly triggered interest in Central America was the Popular Insurrection, which broke out in Nicaragua in late 1978 and finally led, in July 1979, to the overthrow of General Anastasio Somoza's dictatorship since 1936. The Insurrection brought to power a revolutionary government led by the Sandinista Front of National Liberation (FSLN) and president Daniel Ortega was elected (for the first time) in 1985 (Dodson 1986, 37, 49). During the Sandinista government (1979-1990) there was a marked

Church-State conflict due to what some called a Marxist ideology and the Church opposing abuses and injustices of the regime (Stein 1995, 12).

A paper by Vuola (2001) stated that during the 1980s, and especially during the contra war (rebel groups financed by the United States opposing the FSLN regime); the Catholic hierarchy was the forefront of the internal opposition to the Sandinistas. Both due to this and the anti-imperialist revolutionary pro-natalist rhetoric of the FSLN, the Sandinistas were reluctant to make any changes in the abortion law, in spite of the demands of women from within their own ranks (Vuola 2001, 21).

After losing free and fair elections in 1990, 1996, and 2001, former Sandinista President and leader of the FSLN, Daniel Ortega Saavedra was elected president on November 2006 (CIA 2012). During the pre-electoral campaign, candidates were particularly responsive to the demands of various interest groups. The two major parties took up the call by leading members of the Roman Catholic Church and some Christian groups to impose a complete ban on abortion. Prohibiting therapeutic abortion became a key campaign issue; the Church led a large procession to the National Assembly, calling on parliament to remove the penal code provisions exempting therapeutic abortion from punishment. Moreover, both main candidates – Daniel Ortega and Eduardo Montealegre, the Nicaraguan Liberal Alliance (Alianza Liberal Nicaragüense) candidate, advocated for a total ban on abortion (Amnesty International 2009 b, 11).

According to Moloney (2009) some Nicaraguans agree that the country's strict abortion laws were endorsed by the country's major political parties to secure votes during the previous presidential elections and to gain support of the Roman Catholic Church and the Evangelical Church. Moreover the report states that it is unlikely that while they remain in power, the law will be overturned (Moloney 2009, 677).

Until November 2006, the Penal Code—in force since 1893—had criminalized all abortion, except for those carried out for therapeutic reasons (Møllmann 2007, 3), but during this time period, legal changes took place affecting the law on abortion . The new penal code, reformed after a year, specifies prison sentences of one to three years for the person who performs the

abortion, and one to two years for the woman who procures it. It provides no exceptions, even when the pregnant woman's life is at stake (*ibid*).

Arguing that every abortion is unjustified, the campaign material at the moment did not use accurate medical evidence or refer to the impact the ban would have on the provision of life-saving medical treatment or on women and girls who become pregnant as a result of rape or incest. Proponents of the ban on abortion argued that a total ban would have no negative effects. Those advocating criminalization of abortion in all circumstances claimed that medical advances meant that there was no need for therapeutic abortion to save the lives of women and girls in Nicaragua (Amnesty International 2009 b, 11-12). Although the law has five years in effect, the literature consulted has no data on women serving prison sentence for the crime of abortion in the country. Daniel Ortega was elected president for the third time in November 2011 (CIA 2012); again, keeping the prohibition on therapeutic abortion was one of the main campaign issues (Sánchez 2011).

3.9.2 Religion and Politics in El Salvador

The main religions in El Salvador are Roman Catholic (57.1%) and Protestant -21.2% (CIA 2012). History in El Salvador is similar to that for Nicaragua; just months after the overthrow of the Somoza regime in Nicaragua, armed opposition groups seemed poised to overthrow the regime in El Salvador too, and the entire region appeared ripe for revolution (Dodson 1986, 37).

By the mid seventies, after half a century of rule by fifteen military dictatorships and more than a hundred years with the political economy being dominated by just sixty five families (Dunkerley 1985 as cited in Varela 2001, 15); El Salvador's social, political and economic fabric began to unravel, and around 1980 the country was plunged into a civil war that marked its history (Varela 2001, 15).

The social influence of the Catholic Church was and still is very significant. During this same time period, in the seventies, the Church helped create the peasant organizations, which were one of the driving forces in the civil war. The ruling class accused the Church of instigating a class

war and launched a campaign against clerics; a number of them were assassinated (North 1992 as cited in Varela 2001, 17).

Robertro d'Aubuisson founded in 1981 the Nationalist Republican Alliance (ARENA), a far-right political party, and served as president of El Salvador's Constituent Assembly until 1983 (Severo 1992). He was a former National Guard officer and a violent right-wing radical, who was widely believed to be a principal proponent of assassinations by "death squads" during El Salvador's civil war (*ibid*). Moreover he was believed to be the author of many killings, including the 1980 slaying, while performing a funeral mass, of Archbishop Oscar Arnulfo Romero (*ibid*), who strongly condemned the repression of the ruling party and defended people's rights (North 1982, 80; Kellogg Institute 2012); additionally, the slayings of six Jesuit priests in 1989, three US nuns and many other acts of violence against clerics and others, including the 1980 killing of El Salvador's Attorney General (Severo 1992) and the 1981 massacre of 1,500 Salvadoran refugees who were sealed on an isolated cave while seeking shelter (Jenkins 1981).

The central historical difference between Nicaragua and El Salvador occurred in the eighties. The FSLN of Nicaragua, a leftist revolutionary movement, ran the government for a decade through a civil war. El Salvador also experienced a long period of military rule, the civil war raged during the period of 1980-1992 between the military Junta and the Farabundo Martí National Liberation Front -FMLN (Jacoby and Dosh 2009, 1-5), the latter was Latin America's most powerful guerilla movement (Alvarez 2010, 7); but in El Salvador the FMLN was never in control of the government (Jacoby and Dosh 2009, 1-5).

After twelve years of armed and "genocidal" (so called by the United Nations Truth Commission) conflict that claimed the lives of 75,000 Salvadorans, or more than three times that number according to international investigating agencies (Kellogg Institute 2012); in January 1992, the Government of El Salvador and the FMLN signed a peace agreement in Mexico, known as the "Chapultepec Agreements" (Varela 2001, 16). The agreements included Armed Forces reforms, judicial and electoral system reforms, demobilization of the FMLN's military forces, and the FMLN's institution as a legal political party (*ibid*).

According to Varela (2001), the main political parties in El Salvador are the ARENA, which has been in power since the first elections held after the signing of the Peace Accords, and the FMLN (*ibid*) which is the leading strength within the Legislative Assembly and won the presidency in 2009 (Alvarez 2010, 7). Despite popular discontent, both parties have an indisputable hold on their constituents (Varela 2001, 16).

In El Salvador abortion first surfaced as a potent political issue in 1993, when conservative members of the Assembly proposed that December 28, the Catholic Feast of the Holy Innocents, be declared a national day to remember the unborn (Hitt 2006). Further in 1995, the FMLN — former guerrilla and the country's main left-wing party — supported a proposal in the National Assembly addressing a variety of women's issues, including domestic violence and rape (*ibid*). It contained a provision to extend the abortion exceptions to include cases in which the mother's mental health was threatened, even if her life was not. This liberalizing proposal was rejected, but it provoked a debate, which in turn had the effect of raising the political heat around the subject of abortion (*ibid*).

Since then, the Catholic Church's role as a protector of social justice and human rights changed in the mid-1990s, with the appointment of the new Archbishop of San Salvador, Fernando Saenz Lacalle. He was a member of the right-wing Opus Dei, who opposed abortion firmly and had the support of the ruling class as well as close ties with right-wing nongovernmental organizations. This change influenced the posture of both the Church and the government with regard to social issues that affect women in particular (Varela 2001, 17).

Induced abortion had always been a criminal act in El Salvador except for therapeutic abortion, in cases of rape and fetal impairment (*ibid*, 27). But in 1998, The Penal Code of El Salvador was amended to remove all exceptions to the prohibition against abortion thus making abortion for any reason a criminal act (UN Report-El Salvador 2003 as cited in Jelen and Bradley 2012, 6). The Code mandates punishment for inducing abortion for both the mother and anyone who assist in the abortion (including health care providers) with sentences between two to thirty years (when is ruled as homicide) of imprisonment (Hitt 2006 as cited in Jelen and Bradley 2012, 6).

The Constitution of El Salvador was amended in 1999 to state that human life begins at conception, thus awarding legal status to the fetus (Jelen and Bradley 2012, 6). The government, the Catholic Church, right-wing Catholic groups (including the new Archbishop), deputies from certain right-wing political parties, such as ARENA and the Christian Democratic Party (PDC), and some members of the medical profession participated actively in the campaign to pass the new law (Hitt 2006; Varela 2001, 29).

The legislation on abortion has fourteen years in effect and contrary to its neighbor Nicaragua, El Salvador has approximately 70 women serving time in prison for the crime of abortion (Cruz 2011) and many more are being investigated (Hitt 2006), these women are young, poor and have been accused by the public health system compared to none from the private health sector (Cruz 2011; Gesret 2010).

4. Key Literature –Findings and Discussion

The geographical areas of this research are both located in Central America (CA). Nicaragua is the largest and the poorest country in the region (second poorest after Haiti in the Western Hemisphere); it has a population of almost six million habitants and a median age of 23.4 years. This fairly young population has a total fertility rate of 2.08 children born per woman (CIA 2012). El Salvador is the smallest and most densely populated country in the region with more than six million habitants and is the third largest economy. The population is also young with a median age of 24.7 years and a total fertility rate of 2.04 children per woman (*ibid*).

Both countries share similar political and religious circumstances, from a long dictatorship to a civil war during the eighties to the current left wing politics that led, with the influence of the Church, to a complete ban on abortion. These countries are among the 187 member states that committed their nations to achieve by 2015 the eight UN Millennium Development Goals. In this chapter, the main literature dealing with the research questions will be analyzed, discussed and compared; first there will be an analysis of the maternal mortality before and after the legislation on abortion was modified and then a discussion on the countries achievement of the United Nations MDG Five improve maternal health by 2015. Both nations will be presented separately and then the comparison and discussion will take place.

4.1 Maternal Mortality in Nicaragua and El Salvador

On this segment statistics on maternal mortality for each country will be discussed, first there will be an analysis of the numbers and the causes of death before the legislation on abortion shifted in order to have a base to compare numbers after the law changed. A segment of unsafe abortions for each country will be added, since this burden contributes to maternal mortality. This will provide answer to my first research question: *How has the total ban on therapeutic abortion affected Maternal Mortality in El Salvador and Nicaragua?*

4.1.1 Nicaragua

In this section there will be an analysis of data on maternal mortality prior to the ban on abortion and after, the sources will be official statistics and non-official numbers from human rights associations, multilateral institutions and articles (published and unpublished). The reason was discussed on the methods section, figures from these sources sometimes are different from official statistics; for example the website of the health ministry has data on basic indicators including maternal mortality until 2008 (MINSAs 2012), additionally recognized obstetricians in the country point out that only the government has full access to information because the website's data is imprecise (Escobar 2011).

According to the UNDP, maternal mortality and morbidity is a great public health problem in Nicaragua, affecting mainly poor women living in rural areas where seven out of ten die from maternal causes (UNDP 2005, 10). Data in the country for maternal mortality since 1990 is variable, official statistics from the Nicaraguan Health Ministry (MINSAs) show that between 1992 and 1995 the MMR was 91 to 106 maternal deaths per 100,000 live births; from 1996 to 2000 the numbers went down from 125 to 87; and from 2001 to 2005 it was 107 to 86.5 per 100,000 live births respectively (MINSAs 2007, 18). The health ministry agrees with the UNDP that maternal mortality is a mayor public health problem in the country representing a challenge to the health sector; statistics indicate that for 2006 the MMR was 89.6 per 100,000 live births. From the previous numbers, maternal mortality in adolescents represents 30.2% for 2004, 17.6% in 2005 and 16.8 for 2006 (*ibid*, 14).

In addition, a report by MINSA states that the country has observed a decrease in the maternal mortality ratio among adolescents where for 2004, 2005 and 2006; the MMR's were 74.4, 54.1 and 55.4 for 100,000 live births respectively. Although this represents a reduction of 25% since 2004, there are still areas in the country, mainly rural, that have higher figures (131.4 - 265.3 per 100,000 live births) than the national average -89.6 (*ibid*, 15).

In 2006, ninety percent of the causes of maternal mortality among adolescents were attributed to direct obstetric causes like hypertension and hemorrhage while the other 10% were intoxications -in this case self poisoning (MINSA 2007, 15). Further in 2007 the percentages shifted to 71.4% direct obstetric causes while 28.6% account for suicide among pregnant teenagers. The report points out that between 1996 and 2004, injuries were responsible of a constant number of thirteen percent of deaths with a sustained increase of rape, violence and suicides in the country (*ibid*). The latter among pregnant teenagers is one of the main causes of death but the phenomenon has not been sufficiently researched (*ibid*), therefore it is difficult to learn if these suicides were caused by rape and incest related pregnancies, unwanted pregnancies or for other reasons. In addition, police statistics reveal that for 2005 there were 1,321 cases of rape and 26 cases of incest, where 45% of these cases represent girls aged fourteen years or less (*ibid*, 23).

The impact on young women appears to be particularly severe, a report by the UNHRC (2008) stated that the pattern of pregnancy-related "suicides" among young women and girls is especially troubling in light of the fact that 30% of Nicaraguan pregnancies are teen pregnancies, a large number of which are the result of rape. Doctors have noted with concern that a number of young women have died from pesticides taken intra-vaginally. Although the ministry of health classifies these deaths as suicides, the unusual profile led doctors to believe that these may have been poisonings to attempt abortions (UNHRC 2008, 5).

According to the Health Ministry, the MMR for Nicaraguan women in fertile age (15-49 years) has decreased in the last years (MINSA 2006, 19) but it is the second highest in the region, after Guatemala for the 2005 statistics (UNSD 2012). An analysis of the causes of mortality stated that by 2005 seventy five percent of deaths were attributed to direct obstetric causes where hemorrhage (52%) is the leading cause followed by hypertension (26%) and sepsis (infection) -

19% (MINSA 2006, 19). The report has no detailed description on the causes of hemorrhage (i.e. molar or ectopic pregnancies, miscarriages or abortion for other causes), the weeks of gestation women had when the deaths occurred, or data on abortion as a direct cause of death, when literature reveal that unsafe abortion is one of the main causes of maternal deaths in Central America (WHO 2008c, 2). The government recognizes that the previous numbers might be higher because the magnitude of unsafe abortion is unknown in the country and underreporting of deaths that occur in the household, is a major problem (MINSA 2006, 19).

Data from UNFPA state that the MMR for Nicaragua has decreased by nearly 50% since 1990, but it differs from the official country statistics on the numbers presented; according to the organization, the MMR per 100,000 live births in the country has been 190 for 1990, 170 for 1995, 140 in 2000, 110 for 2005 and 100 for 2010 (UNFPA 2011a, 115).

Since the legislation on abortion shifted in 2006, the government states that maternal mortality has decreased significantly. On a conference held on June 2012, the minister of health pointed out that in 2006 the MMR was 100 per 100,000 live births and 63 in 2012 (the main website has no official numbers for 2012) which represent a decrease of forty percent (MINSA 2012a). Although there was a decrease, a report by Torres (2012) states that the health ministry informed that in the last four years there has been 112 maternal deaths among adolescents aged 15-19, which is equivalent to 22% of all maternal deaths in Nicaragua (Torres 2012).

The Rules and Protocols for the Management of Obstetric Complications in the country (Obstetric Protocols) are a set of guidelines created by the health ministry for physicians treating women that are pregnant. The Protocols recommends practices and procedures that have proven to be the safest, most effective, most efficient and least costly to ensure the reduction of maternal and infant mortality (Amnesty International 2009b, 16-17), but as we will observe next, the Protocols, in some cases, conflict with the new law.

The Protocols outline particular complications that can occur during pregnancy, like an ectopic pregnancy that when ruptures, can cause death without rapid intervention (*ibid*, 17). The Pan-American Health Organization (PAHO) analyzed statistics from the country that showed that

between 1999 and 2005 more than seven thousand women and girls were admitted annually to hospitals in Nicaragua for pregnancy related complications which ended in abortion or miscarriage. During this period some 347 women and girls were admitted each year for ectopic pregnancies and 191 for molar pregnancies; in these cases and when women or girls suffer miscarriages or incomplete unsafe abortion the Protocols recommend manual vacuum aspiration of the uterus (PAHO 2006 as cited in Amnesty International 2009b, 17), a procedure punishable with years of imprisonment. Another cause of maternal death in Nicaragua is hypertension, which in severe cases can lead to preeclampsia and eclampsia; when this condition is left untreated it can lead to convulsions, coma or even death. In these circumstances, the Obstetric Protocols recommend interruption of pregnancy depending on the symptoms and the stage of the pregnancy as one among a range of indicated treatments (Amnesty International 2009b, 17). Twenty women and girls died as a result of this complication in 2007 and fourteen died in 2008 (MINSAL 2007-2008 as cited in *ibid*).

When it comes to rape and incest, the Nicaraguan Forensic Institute (Instituto de Medicina Legal) had 379 cases of rape reported in December 2008; seventy seven per cent of these cases involved girls under the age of seventeen. Additionally, according to this institution and the Women's Police Unit (Comisaría de la Mujer) in more than half of the rape cases reported in Nicaragua, the victims were girls below the age of eighteen (Amnesty International 2009b, 22). Since the country has no data on pregnancy related to rape, Catholics for Choice Nicaragua Section (2008) carried out a survey of the local press to analyze rape cases in the media. The results showed that between 2005 and 2007, more than one thousand girls were reported in newspapers to have been raped or had been victims of incest. Of these crimes, sixteen per cent were reported to have resulted in pregnancy; the majority of the girls made pregnant as a result of rape or incest (172 of 198) were between 10 and 14 years old (as cited in Amnesty International 2009b, 22).

4.1.2 El Salvador

Data in this section will be analyzed prior to the ban on therapeutic abortion (data from the 1990's) and after (data since 2000); the sources will be official statistics from the Health Ministry of El Salvador (MINSAL), the Ministry of Public Health and Social Assistance

(MSPAS) and the FESAL surveys, also figures from other sources like multilateral institutions, human rights associations and newspaper publications will be added to the discussion. The National Family Health Surveys (FESAL) are a series of surveys conducted approximately every five years, and performed by the Salvadoran Demographic Association (ADS) since 1973 that examine trends in fertility and contraceptive use prevalence in El Salvador. Beginning in 1985, major topics related to maternal and child health was incorporated into the survey (FESAL-98 2000, 1).

According to FESAL-93, based on sisterhood surveys, the estimated national MMR was 158 maternal deaths per 100,000 live births, with an interval ranging from 91 to 223 (FESAL-93 as cited in FESAL-98 2000, 200). Further, in FESAL-98 the MMR, still based on the same surveys, went down to 120 deaths per 100,000 live births for the period of 1988-1998, but this ratio should be interpreted as being somewhere between 83 and 157 (FESAL-98 2000, 200). One of the causes of morbidity reported since 1996 are pregnancies resulting in miscarriages or abortion (4.2%), hypertension (5.2%) which suggests the possibility of preeclampsia and 1.6% reported seizures suggesting possible eclampsia (*ibid*, 7-8), the report has no accurate diagnosis of these cases nor other causes of morbidity, nor the stage of the pregnancy when these conditions occurred. Also FESAL-98 reports that almost six percent of all women in fertile age had been forced to have sexual intercourse (*ibid*, 6), but it has no data on pregnancy related to rape and incest.

Further in FESAL 2002/03 the estimated MMR was also based on sisterhood surveys, the report stated that for the period of 1993 to 2002 the real MMR value was between 106 and 239 deaths per 100, 000 live births with an intermediate value of 173 (FESAL-2002/03 2004, 263). The report states that information regarding maternal morbidity was collected since 2000, but this was self reported by women thus making it subjective and inaccurate. The majority of studies with accurate numbers had been performed at the hospital level (FESAL-2002/03 2004, 272). The survey states that of the total pregnancies of women in fertile age in the country, almost five percent ended in abortion but this number is higher (7.7-10.3%) on women aged 30-49 (*ibid*); the report has no data on other causes of maternal mortality or morbidity. When it comes to sexual violence, six percent of women in fertile age reported to have been raped, of this 60 percent

reported that the incident happen before they turned 15 years and fifteen percent before they turned ten (*ibid*, 140), there are no numbers on pregnancy related to rape and incest.

Further on, the report states that due to lack of statistical precision to measure maternal mortality in the country it was impossible to conclude that the MMR has shifted or remains stable; it recommended using a Reproductive Age Mortality Study (RAMOS) to enforce the epidemiological vigilance of the country (FESAL-2002/03 2004, 263). In addition a report by PAHO stated that El Salvador urges a systematic registration system of births and deaths and a vigilance system for maternal mortality with accurate and up to date official data. This situation urged the MINSAL to perform in 2005 a RAMOS in order to identify and investigate the causes of all deaths of women in reproductive age; since then data has been produced using this system (PAHO 2010, 1).

The present FESAL-2008 states that unlike the three previous FESAL (93, 98 and 2002/03), the current issue decided to exclude the maternal mortality ratio (MMR) from the indicators investigated because the prior FESAL (2002/03) confirmed that the methodology used before did not categorize sufficient cases of maternal deaths to attain the statistical precision of the indicator (FESAL 2008, 23). Thereafter a specific study named “Baseline of Maternal Mortality in El Salvador, 2005-2006” was conducted using RAMOS (*ibid*).

According to this study since the year 2000 the MINSAL made reporting of maternal deaths compulsory in the country. From this data the MMR (at the hospital level) was 72 maternal deaths per 100,000 live births in 2000, 63.4 for 2001, 62 for 2002, 70.9 for 2003, 47.8 for 2004 and 48.8 in 2005 (MSPAS 2006, 6), on the year the study was performed the MMR was 71.25 (*ibid*, 23); these figures are variable and different from the ones in FESAL masquerading the magnitude of the problem (*ibid*, 6). During the year the study was conducted, there were 2,468 deaths of women aged 10 to 54 years, 100 of these were pregnancy related, 50 from direct maternal causes, 32 indirect and 18 other causes (*ibid*, 20-21). Direct causes were hypertension (38%) and hemorrhage (38%), which are the main causes of maternal deaths followed by sepsis, ectopic pregnancy and septic abortions. The study points out that 98% of these deaths were entirely preventable (*ibid*, 48-49). The indirect causes of deaths were mainly suicides by

poisoning -40% (*ibid*, 46); the number is similar to another report by MSPAS (2006) where the main cause of death for pregnant adolescents (10-19 years) at the hospital level was suicides by pesticide intake and other non-specified causes; the MMR for this age group was 56.6 deaths per 100,000 live births (MSPAS 2006a, 2).

The health ministry of the country (MINSAL) reported in 2007 that the MMR for 2006-2008 was reduced to 51.7 deaths per 100,000 live births but this number is not comparable to the ones for 1990 and 2000 because of the difference of methodology (as cited in PAHO 2010, 1). This figure is almost half of the one estimated by WHO, UNICEF, UNFPA and the World Bank for the country in 2008, 110 deaths per 100,000 live births (as cited in *ibid*, 2), demonstrating major differences between the sources.

According to a study conducted by the UN (2003) on availability and use of emergency obstetric care services in El Salvador, in approximately sixty percent of maternal deaths, the causes were related to failure in diagnostic criteria, deficient management, procedures performed by inexperienced personnel (surgery and anesthesiology), lack of equipment and materials, and delaying referrals. In addition another 33% of maternal deaths were due to lack of recognition of the complication by the women or the family and delay of seeking medical assistance or a midwife (UN as cited in PAHO 2007a, 325), the report did not say if this delay might have been related to fear of being reported to the Police at the public health system.

4.1.3 Unsafe Abortion in Nicaragua and El Salvador

Amnesty International reveals that after the introduction of the ban in Nicaragua there was an increase of maternal deaths. The organization states that in the first nineteen weeks of 2009, some sixteen percent of all maternal deaths were a consequence of unsafe abortion compared to none in the same period of 2008 (Amnesty International 2010). These numbers are only estimates, since real figures, like in El Salvador, are basically nonexistent.

Further a shadow report by feminists groups and human rights association to the UNHRC states that NGOs in Nicaragua estimate that the year after the ban was in place 2,500 women have obtained abortions out of the country, making an unknown number of other (poor) women to

seek illegal and often unsafe abortions in the country (UNHRC 2008, 5); the ban places some of the most vulnerable women – the young, the poor, and those with existing health conditions—at risk for loss of life due to the performance of this procedure unsafely, and doctors fearing prosecution, deny emergency obstetric care to women (*ibid*, 13).

Unsafe abortion is a mayor public health problem and the second direct cause of maternal mortality in El Salvador. Since abortion is performed clandestinely, the real figures for induced abortions are unknown (Varela 2001, 25). A report on human rights in El Salvador made by the Ministry of Foreign Affairs in Sweden confirmed that the high level of maternal mortality in the country partly depends on unwanted pregnancies in adolescents and illegal abortions (as cited in Ekdahl 2009, 9). In addition, there are no studies of this phenomenon, and those carried out by the government and nongovernmental agencies do not address abortion and its relationship to women’s mortality and morbidity, thus making the situation difficult to ascertain. The only data available are hospital admission statistics compiled by the hospitals and the Ministry of Public Health and Social Assistance –MSPAS (Varela 2001, 25).

MSPAS statistics, which bring together the hospital admissions due to abortion in the health centers under its jurisdiction, show that, in 1998 there were 7,436 abortion-related hospital admissions nationwide compared to the first half of 1999 with 3,766. However, these figures are imprecise and do not reveal the full extent of the induced-abortion problem in El Salvador, as women avoid going to the hospital because they are afraid of being reported to authorities and then persecuted (*ibid*).

According to Ipas (a women’s rights and health organization) it must be emphasized that in order to achieve the MDG five targets of ensuring fewer maternal deaths, lower maternal morbidity and better reproductive health, the elimination of unsafe abortion is necessary, since it is the single cause of maternal mortality that is entirely preventable (Ipas 2011).

4.2 The United Nations MDG Five

The target of MDG five is to improve maternal health through a three quarters reduction of the MMR in twenty five years (1990 to 2015) and a 5.5% reduction of the MMR annually. The

countries on this paper are committed to the goals set by the UN and the deadline is three years away. On this segment there will be an analysis of the progress towards MDG Five on both countries in order to answer my second research question: *How will the total ban on therapeutic abortion influence the achievement of the UN Millennium Development Goals for 2015 in Nicaragua and El Salvador, specifically MDG target number 5 for improving maternal health?* First both countries will be presented separately and then a comparison and discussion will take place.

4.2.1 Nicaragua

In Nicaragua data from the MINSAs states that the MMR in the country for 1992 (starting point) was 91 per 100,000 live births (MINSAs 2007, 18), since available official literature has no data on 1990. This means that the goal by 2015 is to reach a MMR of 22.75 maternal deaths per 100,000 live births. The progress of the country using data from MINSAs is as follows: 87 maternal deaths for 2000 and according to the health minister the MMR went down to 63 on 2012 (MINSAs 2007, 18; MINSAs 2012a). Taking these numbers into account indicate that the maternal mortality has declined, but the country is not near the achievement of three quarters reduction of the MMR.

Data from other sources like UNFPA double the numbers presented by MINSAs. According to this organization the starting point was 190 maternal deaths per 100,000 in 1990; the goal according to this number would be 47.5 per 100,000 live births (UNFPA 2011a, 115). By 2010 the MMR was 100 per 100,000 live births (*ibid*) which demonstrate that little progress has been made on the achievement of this MDG five target.

The Nicaraguan government has recognized that it faces several challenges in reducing the number of maternal deaths. These include a shortage of quality obstetric care, lack of appropriate and accessible services and facilities, and poverty (Amnesty International 2009b, 9). In order to tackle down these issues the government has introduced a number of programs to reduce maternal mortality, but according to a study sponsored by UNICEF (2005-2009) some programs have experienced a yearly reduction of their budget, sometimes up to 74%, thus reflecting the little importance these programs are given in the country (as cited in Labarca 2010).

These programs contribute to improve maternal health but, criminalization of therapeutic abortion, a medical indication well described in the literature as a life saving procedure; can limit the country on the achievement of MDG five (Amnesty International 2009b, 9). In 2007 the health ministry recorded 115 maternal deaths; the government acknowledged that some 90% of these deaths could have been avoided, if prompt and appropriate medical care had been given (MINSA 2007-2008 as cited in *ibid*, 10). Moreover a study by Padilla, a physician and expert in sexual and reproductive health, concluded that of these 115 deaths at least 12 could have been prevented had therapeutic abortion been accessible (Padilla 2008 as cited in *ibid*).

The UNDP acknowledged that maternal mortality is not only a major public health problem, but it also reflects the permanent violation of women's rights in Nicaragua (UNDP 2005, 10). Literature discussed previously debate on how the legislation on abortion constantly violates these rights denying quality medical care to women around the country. Furthermore the UNDP states that maternal mortality affects all social strata, but mainly poor women living in rural communities thus reflecting profound inequities and difficulties when accessing reproductive health services (*ibid*). Within the country there are great disparities when it comes to the MMR, for example the number for Masaya (a city forty minutes away from the capital) is 17 per 100,000 live births (*ibid*), a number that according to the MDG's report of 2012, can be compared to developed nations (UN 2012b, 30); the one for the capital Managua is 37 and the MMR for Rio San Juan (a city that is a plane ride away from the capital) is 322 per 100,000 live births (UNDP 2005, 10), the latter is greater than the one of Southern Asia and slightly lower than the one for Sub-Saharan Africa (UN 2012b, 30).

Finally, according to some authors, Nicaragua will not achieve MDG five for many reasons; the enthusiastic official numbers are different from those of NGO's and other organizations in the country (Silva and Galeano 2011), therefore the real figures and subsequent reduction are unknown; the penalization of abortion leads to more deaths (*ibid*; Tünnermann 2010) although there is no concrete data on how the ban has contributed on maternal mortality; and finally poverty, inequality (Silva and Galeano 2011), poor health services, lack of obstetric emergency care and poor access to these services by women that live in rural areas where the most maternal deaths occur (UNDP 2005, 10).

4.2.2 El Salvador

Data from FESAL on maternal mortality was based on sisterhood surveys, which according to MSPAS (2006) it offers a general vision of the situation of maternal mortality in the country of a 10 year period before the survey was actually conducted; therefore is not enough to measure changes on the maternal mortality ratio. Moreover, only since 2000, the registry of maternal deaths has been mandatory (MSPAS 2006, 6). Since this is the only data available our starting point will be 158 maternal deaths per 100,000 live births that FESAL-93 reports (as cited in FESAL-98 2000, 200). According to this, the target is 39.5 maternal deaths for 2015. FESAL 2002/03 was the last one of these series of surveys to report a MMR of 173 per 100,000 live births (FESAL 2002/03 2004, 272), the number was even more than the one for 93, it can be deduced that no progress was made during these 10 years, and in fact there were more deaths. Since the legislation on abortion changed before the publication of this last survey, it can be argued that the prohibition on therapeutic abortion, among other factors, may have influenced the outcome.

Starting in 2005 the country conducted a RAMOS study, the Baseline of Maternal Mortality in El Salvador (2005-2006), which was done in order to have a starting point to measure maternal mortality and causes for the years to come (MSPAS 2006, 6-7). According to this survey the MMR for 2006 was 71.25 maternal deaths per 100,000 live births (*ibid*, 23). Taking this number into account there was a reduction of more than 50% on maternal deaths, but the “reduction” is because the difference in methodology and not an actual MMR reduction in the country.

Furthermore, according to the health ministry, the MMR for 2008 was 55 deaths per 100,000 live births, a reduction made possible by strategic programs the government implemented in order to reduce maternal mortality (MINSAL 2010). The health ministry stated that the new goal for 2015 after the baseline study, was 53 per 100,000 live births (Villalta 2012), a number that by 2011 reached 50.8 deaths per 100,000 live births (MINSAL 2012, 5); according to the coordinator of the sexual and reproductive health unit at MINSAL, the country reached and over-passed in 2010 the MDG five target of three quarter reduction of the MMR far before the deadline (Villalta 2012).

After the news of the country’s alleged achievement of MDG five were released, there were hard critiques to the statement; Martinez (2012) affirmed that the level of irresponsibility of the

announcement is such, that it can be refuted at least on three levels (Martinez 2011). First, only one of the two MDG five targets was accomplished, the second target of universal access to reproductive health was not, moreover it should include access to specialized obstetric care at the public health system when pregnancy interruption, either voluntary or involuntary, occurs; second, the announcement omitted the link between the reproductive health of the Salvadoran women and the negative effect that the criminalization on abortion has over this right; and finally, there is no word on the statement about the rise in pregnancy and delivery in girls and adolescents over the last years, which according to official data 30% of deliveries attended at the public health system are girls between 10-19 years and one third of the maternal mortality happens on this age group (*ibid*).

On the other hand, by 2010, the Pan-American Health Organization made a press release on MDG five in El Salvador and the challenges it faced two years ago. The report stated that measuring progress in the country had been a difficult task because of lack of reliable data on maternal mortality (PAHO 2010, 1-2). Because of this, the MINSAL estimated a 211.6 MMR for 1990 (based on two information sources: the MMR in hospitals from 1983 to 1986 and the sub-registration level found on the baseline study); the goal accordingly was set to 52.9 per 100,000 live births. PAHO stated that by 2008 the ratio was 110, meaning a reduction of 44% and an annual progress of 3.2% (*ibid*). The figures showed some progress but the goal had not been reached. The recommendations made were to have precise national data on maternal mortality to help the national and international community to do research, allocate resources and perform programs to reduce maternal deaths; improve health services for women; prevent unwanted pregnancies and unsafe abortions; and guarantee a high quality emergency obstetric care service (*ibid*, 3).

4.3 Discussion and Comparison

In this section there will be a brief discussion and a comparison of the data presented, first on maternal mortality before and after the prohibition on abortion and then on the achievement of MDG five.

4.3.1 Maternal Mortality

Initially availability of data in the countries of study is poor and different; Nicaragua has official data on maternal mortality available until 2008 and none for 1990 while El Salvador has the household surveys performed since the 1980's and then a recent RAMOS study since 2005. On both countries official data vary greatly from statistics from other sources like the UNDP, UNICEF and the WB, this burden makes the accurate measure of maternal mortality a complicated task, therefore numbers presented, as it was said before, should be interpreted cautiously.

Before the prohibition on abortion the maternal mortality was higher, according to official data, in El Salvador (158-120) than in Nicaragua (87-106). On both countries high mortality is associated with poverty, young age and living rural areas, but the MMR was higher in the country that is better off than the second poorest of the hemisphere. After the legislation on abortion shifted, Nicaragua experienced a reduction from 100 in 2006 to 63 in 2012 while El Salvador had an increase to 173 in 2003, the latter can be attributed to the new legislation. Then after the methodology to obtain the MMR in El Salvador was changed, the country's number was reduced to 50.8 in 2011 while in Nicaragua it decreased to 63 in 2012, higher than the one of El Salvador. The previous figures are based on official data, unofficial numbers point out that although both countries have experienced reductions, the MMR's are higher than the official ones, Nicaragua had 100 in 2010 while El Salvador 110.

Beside the differences on the MMR, the main disparity between these countries lays in women that are serving prison sentences after the ban on abortion; El Salvador has approximately seventy and even more are being prosecuted while Nicaragua has none.

On the causes of death, official statistics show there are similar on both countries; the leading causes are hemorrhage and hypertension. Although official numbers have no data on unsafe abortions, other sources demonstrate how this burden counts as the second cause of pregnancy related death in El Salvador and an important cause of death among pregnant women in Nicaragua. In addition, suicides by pesticide intake (oral or vaginal) are the leading cause of death among pregnant adolescents on both countries. Pregnancy related to rape and incest has

been poorly investigated, but the high numbers of suicides leads to deduce that they might be related to unwanted pregnancies for this reason.

4.3.2 MDG five

The starting point for both countries on the MMR was different between them and variable depending on the source; for Nicaragua was 91 for 1992 and for El Salvador the estimated number was 158 according to official statistics, unofficial figures show 190 for the former and 211 for the latter. Accordingly the goal set is different in both countries; for Nicaragua is 22 and 47 when in El Salvador is 39.5 and 52.7, official and unofficial respectively.

Some twelve years after the legislation on abortion changed, the Salvadoran government announced that the goal of MDG five was met in 2010, five years before the deadline, while Nicaragua is still far away from meeting the goal, the government announced it was 63 deaths per 100,000 live births in 2012 while the UNDP stated that it was 100. Overall the MMR has decreased on both countries but, it still remains unacceptably high, no women should die from pregnancy. Therefore it is difficult to establish if the legislation on abortion has contributed to maternal deaths, but it can be said that is one among other causes in both countries that contribute to these deaths when unsafe abortions are performed, when adolescents commit suicide for unwanted pregnancies related to rape and incest or other causes, when prompt and appropriate medical interventions are denied to pregnant women when their life is at risk and when women delay or decide not to go to the public health system because of fear of being reported to authorities.

5. Conclusion

The main purpose of this thesis has been an exploration of official and unofficial documents from Nicaragua and El Salvador, followed by a comparison on how the legislation on abortion influenced maternal mortality. For the purpose of the study, however, there was an additional focus on literature dealing with human rights, religion and politics and the legislation on abortion in the neighboring country of Costa Rica.

The study has shown that maternal mortality is influenced by a large array of factors, among them the prohibition of therapeutic abortion, a well known life saving procedure. As the exploration and analysis of documents has demonstrated, Nicaragua and El Salvador have some

differences but the similarities are even greater. The maternal mortality has been reduced, but is still high. Resource allocation, health programs and new policies are needed in order to end the amount of women that are still dying. In addition, the achievement of the UN MDG five on both countries is only a fraction of the commitments countries have to improve maternal health.

Defining and exploring the other targets and indicators of MDG five and on both countries was not a task for this thesis. This can be done by further research.

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