

**TEENAGE PREGNANCY IN NEPAL: CONSEQUENCES,  
CAUSES AND POLICY RECOMMENDATIONS**

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# **TEENAGE PREGNANCY IN NEPAL: CONSEQUENCES, CAUSES AND POLICY RECOMMENDATIONS**

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

By

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Declaration:

Where other people's work has been used (either from a printed source, internet or any other source) this has been carefully acknowledged and referenced in accordance with departmental requirements.

The thesis "Teenage Pregnancy in Nepal: Consequences, Causes and Policy Recommendation" is my own work.



Signature:.....

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## TABLE OF CONTENTS

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List of Figures .....	iii
List of Tables .....	iii
Acknowledgements .....	iv
Abstract .....	v
Glossary .....	viii
Introduction and Organization of the Thesis .....	x
Chapter 1: Background Information of Nepal .....	1
1.1 Geography and Population .....	1
1.2 Socio-Culture .....	1
1.3 Economy .....	1
1.4 Political Divisions .....	1
1.5 Health System .....	2
1.6 Health Situation .....	2
Chapter 2: Problem Statement, Study Objectives, Study Method and Limitations of the Study .....	4
2.1 Problem Statement .....	4
2.2 Objectives of the Study .....	6
2.2.1 Aim of the Study .....	6
2.2.2 Specific Objectives .....	7
2.3 Study Method .....	7
2.3.1 Search Strategy .....	7
2.3.2 Conceptual Framework for the Study .....	7
2.4 Limitations of the Study .....	8
Chapter 3: Magnitude, Trend and Distribution of Teenage Pregnancy .....	10
3.1 Global Picture of Teenage Pregnancy .....	10
3.2 Trends in Teenage Pregnancy and Childbearing .....	11
3.3 Teenage Pregnancy in Nepal .....	11
3.4 Consequences of Teenage Pregnancy Worldwide and in Nepal .....	15
3.4.1 Physical Health of Adolescent Mother .....	15
3.4.2 Infant and Child .....	18
3.4.3 Social Consequences for Adolescent Mother and Child .....	20

Chapter 4: Analysis of the Factors Influencing Teenage Pregnancy in Nepal .....	22
4.1 Contextual Factors.....	22
4.2 Intrapersonal Factors .....	24
4.3 Interpersonal Factors .....	28
4.4 Institutional/Organizational Factors .....	29
4.5 Public Policy Factor .....	32
Chapter 5: Interventions and Best Practices to Reduce Teenage Pregnancy	35
5.1 Review of Evidences: Cochrane, WHO and Others .....	35
5.2 United Nations Educational Scientific and Cultural Organizations’ (UNESCO) Curriculum Guidelines .....	37
5.3 India.....	37
5.4 United States of America .....	38
5.5 Zimbabwe .....	39
Chapter 6: Discussion, Conclusions and Recommendations .....	40
6.1 Discussion .....	40
6.2 Conclusions .....	44
6.3 Recommendations .....	44
References .....	46
Annexes .....	61
Annex 1: Map of Nepal .....	61
Annex 2: Demographic, Economic and Health Profile of Nepal.....	62
Annex 3: Organizational Structure of the Department of Health .....	63
Services, Nepal.....	63
Annex 4: Population and Educational Status of Adolescents in South East Asian Countries .....	64
Annex 5: National Facility Based Abortion Baseline Study 2006 .....	65
Annex 6: Child Marriage Fact Sheet.....	66
Annex 7: Characteristics of Effective Curriculum - based Programme.....	67

## List of Figures

Figure 1: Trends of Fertility in Nepal .....	4
Figure 2 : Adolescent Birth Rate .....	10
Figure 3: Trends of Global Adolescent Fertility Rate .....	11
Figure 4: Trends of Adolescent Fertility Rate, Nepal .....	12
Figure 5: Relative Risk of Adverse Outcome by Maternal Age .....	17

## List of Tables

Table 1: Health Care Facilities under Department of Health Services .....	2
Table 2: Availability of Health Workforce in Nepal .....	3
Table 3: Ecological Perspective Model- Level of Influences .....	8
Table 4: Adolescent Fertility Rate for Selected Asian Countries (15-19 years) .....	12
Table 5: Age specific and total fertility rates, the general fertility rate and the crude birth rate .....	13
Table 6 : Distribution of Teenage Pregnancy .....	14
Table 7: Risks to Adolescent Mother and Baby .....	15
Table 8: Research Result on Complications of Teenage Pregnancy .....	18
Table 9: Research Result on Age of Mother and Neonatal Complications ....	19
Table 10: Social Impacts of Teenage Pregnancy .....	20
Table 11: Research Result on Pregnant Adolescents and Substance Abuse.	26
Table 12: Evidence based strategies suggested by WHO for Teenage Pregnancy Reduction.....	36
Table 13: Characteristics of Clients who had Complications of Induced Abortion: 2006.....	65

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## **Abstract**

**Background:** Nepal is committed to achieve healthy life including sexual and reproductive health of its adolescents. So, since 1994, it adopted different policies and programs focusing on adolescent reproductive health. Despite of all efforts for addressing issues related to adolescents' sexuality, Nepal is not yet meeting the adolescents' need. Additionally, trend of early marriages still exist resulting high adolescent fertility rate.

**Objectives:** The aim of this study is to explore and analyze the factors contributing to teenage pregnancy (TP) and motherhood in Nepal, its consequences, current policy and program responses in order to improve the adolescent reproductive health program.

**Study Method:** Study is carried out doing literature review, articles, published and unpublished literature. The conceptual framework is adapted and modified from Ecological and Health Belief Model.

**Findings:** Worldwide and in Nepal, TP and motherhood of adolescents' girl is threat to the mothers and their new born children with serious impact on health, social life and economy. The main factors are intrapersonal, interpersonal, institutional, structural and public policy. Part of the vulnerability of pregnant teenagers is related to the social determinant that leads to early pregnancy.

**Conclusion:** Despite the government and NGOs having policies and programs recognizing adolescents' issues and trying to solve problems associated with adolescent reproductive health, Nepal is not yet meeting the needs of its adolescents. Therefore, efforts for TP reduction call for addressing these influencing factors collectively through multiple interventions.

**Recommendations:** Retention of girls into school, delivery of effective sexual health education programme for both in and out of school adolescents involving health workers, teachers, and parents. Provision of adolescent friendly reproductive health services following WHO framework.

**Key Words:** Adolescent, Teenage Pregnancy, Causes, Consequences of Teenage Pregnancy, Sexual and Reproductive health, Nepal.

**Word Count:** 11,968

## Abbreviations/Acronyms

<b>ABR</b>	Adolescent Birth Rate
<b>AFHS</b>	Adolescent Friendly Health Services
<b>AFR</b>	Adolescent Fertility Rate
<b>AFRH</b>	Adolescent Friendly Reproductive Health
<b>AH</b>	Adolescent Health
<b>AIDS</b>	Acquired Immuno Deficiency Syndrome
<b>ARH</b>	Adolescent Reproductive Health
<b>ASFR</b>	Age specific fertility rate
<b>ASRH</b>	Adolescent Sexual and Reproductive Health
<b>BHC</b>	Basic Health Care
<b>DALY</b>	Disability Adjusted Life Years
<b>EP</b>	Ecological Perspective
<b>FP</b>	Family Planning
<b>GDP</b>	Gross Domestic Product
<b>GFR</b>	General fertility rate
<b>GoN</b>	Government of Nepal
<b>HFs</b>	Health Facilities
<b>HIV</b>	Human Immuno Deficiency Syndrome
<b>ICPD-PoA</b>	International Conference on Population and Development-Programme of Action
<b>IEC</b>	Information Education and Communication
<b>IMR</b>	Infant Mortality Rate
<b>IPPF</b>	International Planned Parenthood Federation
<b>LBW</b>	Low Birth Weight
<b>MMR</b>	Maternal Mortality Ratio
<b>MoHP</b>	Ministry of Health and Population
<b>NCASC</b>	National Centre for AIDS & STIs Control
<b>NCD</b>	Non Communicable Diseases
<b>NDHS</b>	Nepal Demographic Health Survey
<b>NHP</b>	National Health Policy
<b>PHC</b>	Primary Health Care
<b>PHCC</b>	Primary Health Care Centre
<b>PPH</b>	Post- Partum Hemorrhage
<b>RH</b>	Reproductive Health
<b>SHP</b>	Sub Health Post
<b>SLC</b>	School Leaving Certificate
<b>SLTHP</b>	Second Long Term Health Plan
<b>SRH</b>	Sexual and Reproductive Health
<b>STI</b>	Sexually transmitted Infection
<b>TFR</b>	Total Fertility Rate
<b>THE</b>	Total health Expenditure
<b>TP</b>	Teenage Pregnancy
<b>TPR</b>	Teenage Pregnancy Rate
<b>UNAIDS</b>	United Nations Programme on HIV/AIDS



<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organizations
<b>UNFPA</b>	United Nations Fund for Population Activities
<b>UNICEF</b>	United Nations Children’s Fund
<b>VDC</b>	Village Development Committee
<b>WHO</b>	World Health Organization
<b>YFRH</b>	Youth Friendly Reproductive Health

## Glossary

**Adolescence (or Teenage):** It is the period between the ages of 10-19 years that encompasses time from puberty onset to full legal age (WHO, 2002b). This phase of life spurts physical, mental, emotional and social development where the individual learns about life making major decisions that leads down a career path. During this time teenagers feel a lot of peer pressure. Adolescence is generally a complex period where a number of factors may lead to sexual behaviors and reproductive health (RH) risks. This is due to teenagers being less experienced and less informed on, accessing RH services (Tufail, 2008).

**Teenage Pregnancy (TP):** Pregnancy can occur after menarche which usually occurs around the age of 12 or 13 years. But, it does not signify that the girl's body is ready to give birth. If an adolescent girl becomes pregnant or gives birth before 19 years then it is known as teenage pregnancy. It is high risk situation for both mother and child because of their vulnerability to many health challenges (Singh, 2012).

Although, this thesis is focused on pregnancy, data on fertility are presented due to lack of comprehensive national data on pregnancy and abortion. Understanding of the distinction between fertility and pregnancy is important. Fertility rate refers to pregnancies that have resulted to live births and pregnancy rate includes both live birth and terminated pregnancies.

**Reproductive Health (RH):** "Reproductive health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. This implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so" (Ketting, 2012). Reproductive health services include sex education, family planning, abortion, and post abortion care. (Cherry et. al, 2009).

**Adolescent Birth/Fertility Rate (ABR/AFR):** Is a measure of the annual number of births by women aged between 15-19 years per 1,000 women. It also shows the chance (or risk) of childbearing in these girls (UN, undated)

**Unsafe Abortion (UA):** "Unsafe abortion is a procedure for terminating an unintended pregnancy carried out either by persons lacking necessary skills or in an environment that does not conform to minimal medical standards, or both".

**Maternal Mortality:** It is the death of women while pregnant or within 42 days following pregnancy, related to or aggravated by the pregnancy or its management.

**Teenage Pregnancy Rate (TPR):** It includes the number of stillborns, induced and spontaneous abortions.

**Age Specific Fertility Rate (ASFR):** Incidence of live births per female population of a given age group per year. It is measured per 1,000 women.

**Total Fertility Rate (TFR):** It is defined as the mean number of children a woman would have by the end of childbearing years if she were to pass through these years bearing children at the age specific fertility rates.

**General Fertility Rate (GFR):** It is the birth rate of women of child bearing age. It is expressed per 1,000 women. Births to women less than 15 or more than 44 are included in general fertility rate, the population for those are not.

**Spontaneous Abortion (SA):** This is also called 'miscarriage'. It is an end of pregnancy where the fetus is not capable of surviving independently. It is most common complication of early pregnancy.

**Induced Abortion (IA):** Abortion done by medication or instrumentation.

# **Introduction and Organization of the Thesis**

## **Introduction**

“Pregnancy and childbirth are the number one killer of 15-19 years old” (Girleffect, 2012). The WHO (World Health Organization) defines adolescent as individuals within the age group of 10-19 years. During this time most adolescents start exploring of sexuality and some young couples may start sexual relationships (Oringanje, 2010). Adolescents who are less informed, may not access the appropriate reproductive health (RH) services and are therefore at greater risk of contracting sexually transmitted infections (STIs). They are also more likely to become pregnant due to lack of knowledge of appropriate contraceptives.

In Nepal, tradition has allowed Nepalese women to begin childbearing in their teens. Evidence shows that pregnancy after 18 years of age is in itself not a problem because biologically, a woman is most fertile at age of 18-22 years. However, childbearing at adolescent can be problematic due to social and health consequences (Voeten, 1995). The focus is now on teenage pregnancy (TP) because of the belief that if we can change the behavior pattern in the new generation of adolescents, the negative consequences resulting from current adolescent behaviors may be reduced. Many adolescents are exposing themselves to risky behaviors like unprotected sexual activities leading to TP, unsafe abortion, or STIs. This issue of TP however, does not only affect women, it can have effects that lead to economic loss within the country due to unemployment, dependency and poverty.

In order to overcome this problem and to address the associated issues in Nepal, a clear understanding of culture, economy, gender issues, the availability of adolescent friendly reproductive health services (AFRHS), its quality, management and barriers for service utilization by adolescents, and a knowledge of the adolescent viewpoint is required. Therefore, in this thesis, all the factors that contribute to teenage pregnancy and its consequences will be discussed with evidence from supporting literature. Recommendations will be provided for policy makers, adolescent reproductive health (ARH) service providers, health workers (HW), and the community. Recommendations about strategies for targeting parents and teachers to change their perceptions regarding ARH issues will also be developed.

As a Public Health Officer, I worked in rural communities of Nepal since 2008 in areas related to adolescent and women’s reproductive health. Through this thesis, I am systematically exploring the questions that I and colleagues

have encountered during the course of our work in the field in Nepal. Further investigation will be undertaken after returning to Nepal.

### **Organization of the Thesis**

**Chapter One** gives background information on Nepal. **Chapter Two** introduces the problem briefly, and arrives at the objectives of the thesis; it also explains the methodology used for the literature review and presents the conceptual framework. **Chapter Three** discusses the magnitude and trends of teenage pregnancy globally and in Nepal and focuses on its consequences. **Chapter Four** analyses the factors contributing to the occurrence of teenage pregnancy in Nepal. **Chapter Five** explores evidence that worked in preventing teenage pregnancy worldwide and in other culturally similar countries to Nepal. **Chapter Six** brings the findings of this thesis together and tries to attempt to make some conclusions and finally recommendations are put forward.

## **Chapter 1: Background Information of Nepal**

### **1.1 Geography and Population**

Nepal is a landlocked country with India to the south, east and west and China to the north. It has total area 147,181 sq. km with three geographical regions: Mountain, Hill and *Terai* (NDHS, 2011). The population of the country is nearly 26.6 million with the population growth rate 2.25% per annum (CBS, 2011). The rural to urban distribution of population is 85.8% and 14.2% respectively. Nearly, 39.3% of the population are under the age of 15 and 6.5% are over 60 (WHO, 2001).

### **1.2 Socio-Culture**

Nepal has a variety of religions, cultures, languages and castes. The majority (81%) of the population follows Hinduism. The official language is Nepali but there are 103 recognized ethnic groups some of which speak regional dialects (CBS, 2002). Nepal has a patriarchal society with high gender inequality resulting in women having less power in regards to access of resources, information, education, property, decision making and even their autonomy (ADB, 1999). This results in domestic and sexual violence against women, the trafficking of women, early marriages and child birth and multiple pregnancies (UN, 2011). However, some improvement from the government on gender equality can be seen e.g., inheritance of parental property for daughters in some cases and the legalization of abortion (FWLD, 2002).

### **1.3 Economy**

Gross Domestic Product (GDP) per capita in 2009 was 435.9 (UN, 2009). There is a significant gap between the rich and the poor. Agriculture is the main occupation for the majority of Nepalese and almost 65.7% are employed in the agricultural sector with only 13.4% in the industrial sector (UN, 2009).

### **1.4 Political Divisions**

Nepal has multiparty democracy system. The National Council and House of Representatives are legislative bodies and the Council of Ministers has executive power. It has five development regions, 14 zones and 75 administrative districts. Each district is further divided into small village development committees (VDC) and municipalities on the basis of urban-rural scenario. The authority is devolved to DDCs, municipalities and VDCs, under the Local Self Governance act of 1999.

## 1.5 Health System

Nepal has a comprehensive framework in regards to health policies, strategies and plans such as National Health Policies (NHP), Second long term health plan (SLTHP). After signing the Alma Ata Declaration in 1978, Nepal committed to the provision of basic health care (BHC), adopting the primary health care (PHC) approach for achieving health for all. The major aim of the NHP is the extension of the PHC system to the rural population focusing on the health infrastructure, local resource mobilization, multi-sectorial coordination, and decentralized planning and management. Similarly, the target of the SLTHP is the improvement of the health status of the poor, rural, unprivileged and marginalized population through the provision of essential health care services (WHO, 2007c).

**Table 1: Health Care Facilities under Department of Health Services**

Health Facility Type	Number
Central Hospital	8
Regional Hospital	3
Zonal Hospital	10
District Hospital	64
Primary Health Care Center(PHCC)	209
Health Post (HP)	676
Sub Health Post (SHP)	3,129

**Source: DoHS, 2011**

The Department of Health Services under the Ministry of Health and Population (MoHP) is responsible for delivering preventive, promotive and curative health services. SHP in the VDC are the first point of contact for health services. They are the referral centers of volunteer cadres and the venue for community based activities. The network of health services then goes from HP to PHCC to district, zonal, regional and finally to tertiary hospitals (DoHS, 2011). Unfortunately, only 52% of the populations are within 30 minute walking distance of health facilities (NHSPiP, 2010).

The total expenditure on health (THE) per capita (PPP US\$) is \$69. The expenditure of the government on health as percentage of total expenditure is 5.5% (World Bank, 2011). Expenditure on health remains 5.3% of GDP and per capita health expenditure is US\$ 18.09. More than 55% of THE is financed by out of pocket payments (NHSPiP, 2010).

## 1.6 Health Situation

Nepal is ranked as a country struggling to provide BHC to its population. Since 1951, the government of Nepal (GoN) formulating policies to achieve

the health needs of its population. In 1991, it implemented the NHP which focused mostly on the prevention and control of infectious diseases (Dixit, 1998). Unfortunately, the disease pattern continues to change due to epidemiological transitions creating new challenges for the health system. Although, today Nepal experiences steady improvement in health outcomes (NHSP, 2010), the burden of communicable diseases as well as maternal and child health issues are still high (NHRC, 2009).

**Table 2: Availability of Health Workforce in Nepal**

<b>Health Workforce</b>	<b>Number</b>
Physicians	3,944
Nursing and Midwifery	4,315
Health Assistants	5,295
Village Health Worker	3,985
Female Community health Volunteers	62,546

**Source: WHO, 2007f**

In addition, the emergence of non communicable diseases is responsible for 60% burden of the disease within country (Vaidya, 2009). Health indicators like the maternal mortality ratio (MMR) is improving, but is still high at 281 per 100,000 live births (NHSP, 2010). The infant mortality rate (IMR) is 43 per 1,000, and under-five mortality rate is 55 per 1,000 (WHS, 2011). Life expectancy at birth is 62 and 63 years for male and female respectively. The contraceptive prevalence rate is 43.56% (DoHS, 2011). Abortion is legalized in some circumstances but still more than 50% of induced abortions are performed under unsafe conditions (Dhital, 2006). Antenatal coverage for the recommended four visits is 29% and only 44% of pregnant women makes even one visit to a healthcare professional. Skilled healthcare attendance at birth is a mere 36% (NDHS, 2011).

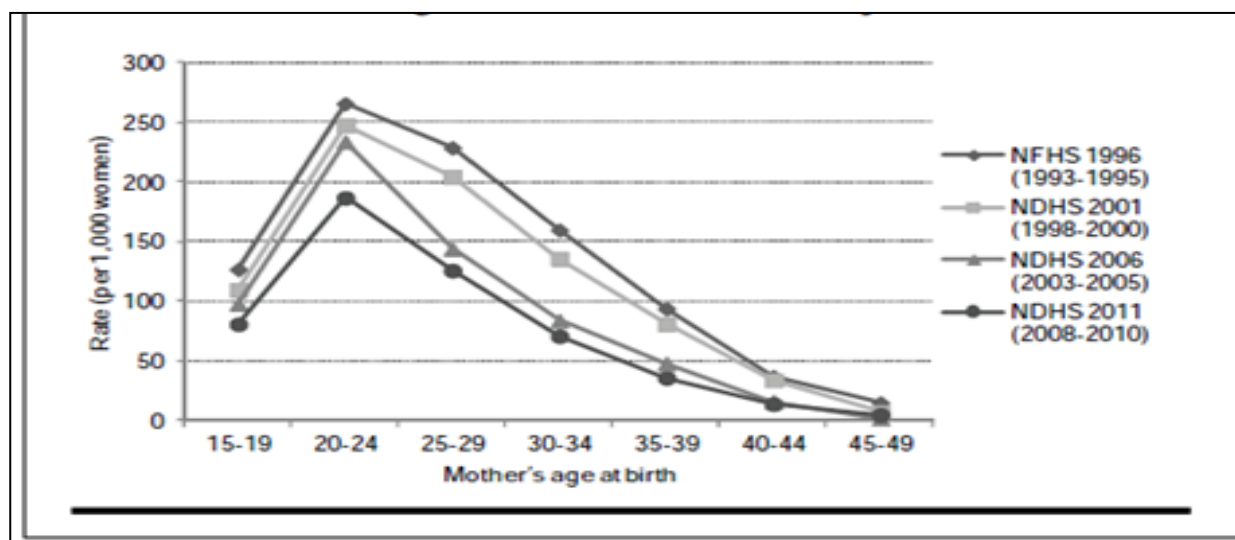


## Chapter 2: Problem Statement, Study Objectives, Study Method and Limitations of the Study

### 2.1 Problem Statement

Teenage pregnancy is a rising public health issue being faced by many countries globally; Nepal is not alone in this fact. Adolescents make up about 23% of the population in Nepal (UNICEF, 2003). Current population momentum predicts that this population will continue to grow for a further twenty years (NAHDS, 2000). But adolescent sexual and reproductive health (SRH) issues have been inadequately focused upon.

**Figure 1: Trends of Fertility in Nepal**



**Source: NDHS, 2011**

Early marriage is the norm in Nepalese society (Pachauri & Santhya, 2002). Cultural and social norms in certain communities within Nepal still prefer early marriages. This is particularly true for rural communities, where some people still practice child marriages. This in turn leads to an increase in the likelihood of sexual activities starting at a young age (UNAIDS, UNICEF, 2001; Mathur, 2001).

NDHS (2011) reported that 17% of teenage girls had already given birth or were pregnant with their first child. This percentage is increasing rapidly from 1% among those aged 15 to 39% in those aged 19. So, adolescent fertility rate (AFR) in Nepal is 81 per 1,000 girls (NDHS, 2011) which is the second highest (51%) among Southeast Asian countries after Bangladesh (64%) (Pachauri and Santhya, 2002; UNFPA, 2007a). Similarly, it is

reported that every four hours, 11 newborn babies die in Nepal, and most of these deaths occur when the mother is an adolescent (DoHS, 2011).

The health and social risk of childbearing magnifies at early ages (WHO, 2008b). Girls who engage in sexual activities from a younger age may experience an array of problems, ranging from increased risk of unwanted pregnancies, maternal morbidity and mortality, sexually transmitted infections (STIs) and HIV/AIDS, or difficulty in prolonging education. Having a child as a teenager may also have consequences for the child.

The Guttmacher Institute reported that early childbearing may limit educational attainment, reduce quality of life, and restrict access to proper paid jobs (Mensch *et.al.*, 1998). Pregnant teenagers are also more likely to seek unsafe abortion (UA) and have a higher risk of becoming infertile. In addition, teenage women are more vulnerable to coerced sexual intercourse due to power imbalances with partners who tend to be older (Gubhaju, 2002).

Dr. Wasim Zaman, regional Director of UNFPA elaborated the situation saying "Many girls are married at an age when they don't even know the functions of different organs of their bodies and many pregnant girls are totally unaware of reproductive health"(Source: ACR,2003).

Age specific fertility rate for adolescents aged 15-19 has declined in the last five years (from 2006) by 10%, however the figures is still high compared to other developing countries. This issue is almost twice as common in rural areas than in urban areas (NDHS, 2011). Studies indicate that a significant proportion of adolescents are engaging in sexual activities at younger ages. UNICEF and UNAIDS (2001) says one in five male and one in ten female teenagers have experienced sex in adolescence. This may lead to early unwanted pregnancy. Being pregnant at young age may have its risk. Apart from that, the culture may consider sex at a young age without marriage as undesirable behavior. This may hinder them to seek health care and family planning (FP) services. Acharya (2009) carried out research in three districts, and reported 20% adolescents being sexually active and 16% having multiple partners. Similarly, a study among college students in Kathmandu showed nearly 40% adolescents were engaging in premarital sex (Regmi, 2010a).

In the same vein, 12% of unmarried teenage girls aged 14-19 years experienced sexual intercourse and the majority of were unprotected. Premarital sexual intercourse in teenagers is more commonly seen in Kathmandu (FHD, 2005). Adolescents are putting themselves at the risk of coercive, unsafe sex since they cannot easily access condoms. Even though

sex before marriage is prohibited, these activities still occur increasing the problem further.

Nepal has MMR 281 per 100, 000 live births where 30% maternal deaths are of adolescent mothers (NHSP, 2010). Similarly, the incidence of spontaneous abortions is high in women below 20 years of age. The statistics from the central hospital in 2003 shows that of all the adolescents who visited, only 4% came for induced abortion (IA) and 16% utilized post abortion care due to abortion complications (WHO, 2007a). This figure reveals that IA is largely being performed by unskilled people. Other consequences of TP in Nepal are school dropouts, unemployment, UA, suicides, anemia etc. UNICEF and UNAIDS (2001) dual research on Nepal reported that of all adolescent girls who have unprotected sex, 22% teenage boys and 13% girls reported of being infected with STIs. Unfortunately, teenagers prefer to seek advice from a traditional healer or do nothing rather than visiting the doctor for any RH issues (UNICEF & UNAIDS, 2001).

Although, Nepal is committed to achieving a healthy life of adolescent girls and avoiding teenage pregnancy with its complications, the issue is not under control. Many governmental and nongovernmental organizations (NGOs) are working in areas like ARH service provision, AFR is not decreasing rapidly. To overcome these issues on adolescents' health the reason why teenagers are engaging in unprotected sexual activities and protecting them from consequences like pregnancy and abortion should be explored. In spite of efforts to address this issue of adolescents getting pregnant and preventing complications, government and NGOs are not succeeding fully. Therefore, a review of the current literature, factors influencing TP and its major consequences, the barriers in adolescent friendly reproductive health (AFRH) service provision and its contribution towards teenage pregnancy will be discussed. A thorough understanding of the factors contributing to TP, its consequences and the current program response will help expose the policy and program gaps and this in turn can help develop a more effective policy and program response.

## **2.2 Objectives of the Study**

### **2.2.1 Aim of the Study**

The aim of this study is to explore and analyze the factors contributing to TP and motherhood in Nepal, its consequences, the current policy and program responses in order to improve the adolescent reproductive health (ARH) programme.

## **2.2.2 Specific Objectives**

- To describe the trends and distribution of teenage pregnancy and critically analyze its consequences globally and in Nepal;
- To explore the intrapersonal, interpersonal, institutional and structural factors influencing TP in Nepal;
- To analyze the situation of governmental and nongovernmental health facilities providing ARH services in terms of availability, quality, accessibility and acceptability;
- To identify and critically analyze evidence of interventions that worked for reducing TP;
- To analyze the current policy on AH effectiveness in order to make recommendations to policy makers for designing well-functioning, adolescent-friendly reproductive health services (AFRHS) for reducing TP in Nepal.

## **2.3 Study Method**

### **2.3.1 Search Strategy**

This study is based on literature review of both published and unpublished literature on TP available in the Internet and KIT library. The databases from the internet include Pubmed, Scopus, Cochrane library and Google scholars were also used.

The Guttmacher Institute, UNFPA, WHO, IPPF, UNAIDS, UNICEF, and government of Nepal web sites were used for articles and books on TP. Key words used are: adolescent/teenage pregnancy, adolescent sexuality, factors affecting adolescent pregnancy, reducing adolescent pregnancy, teenage pregnancy and its causes Nepal etc. The national data from Nepal including strategic plans regarding AH were analyzed.

### **2.3.2 Conceptual Framework for the Study**

The literature suggests that a variety of inter-related and complex association of factors determines sexual behavior in turn teenage pregnancy. The framework in this thesis is influenced and modified from Health Belief (HB) and Ecological Perspective (EP) models. HB deals with health perception and behavior and EP recognize multiple factors influencing health behavior. EP conceptualizes the following:

- Individual behavior affects and is affected by 'multiple levels of influence';
- 'Is shaped by the social environment in which individual behavior is nested.'

The major five levels of influences on health behavior according to EP are: intrapersonal, interpersonal, institutional, community and public policy factors (National Cancer Institute, 2005). These levels can be linked to multiple factors influencing unprotected sexual behavior resulting teenage pregnancy. Some modification was done on the basis of literature reviews. During the discussion consequences and influencing factors of it, this model has been used and an open approach is applied when required.

**Table 3: Ecological Perspective Model- Level of Influences**

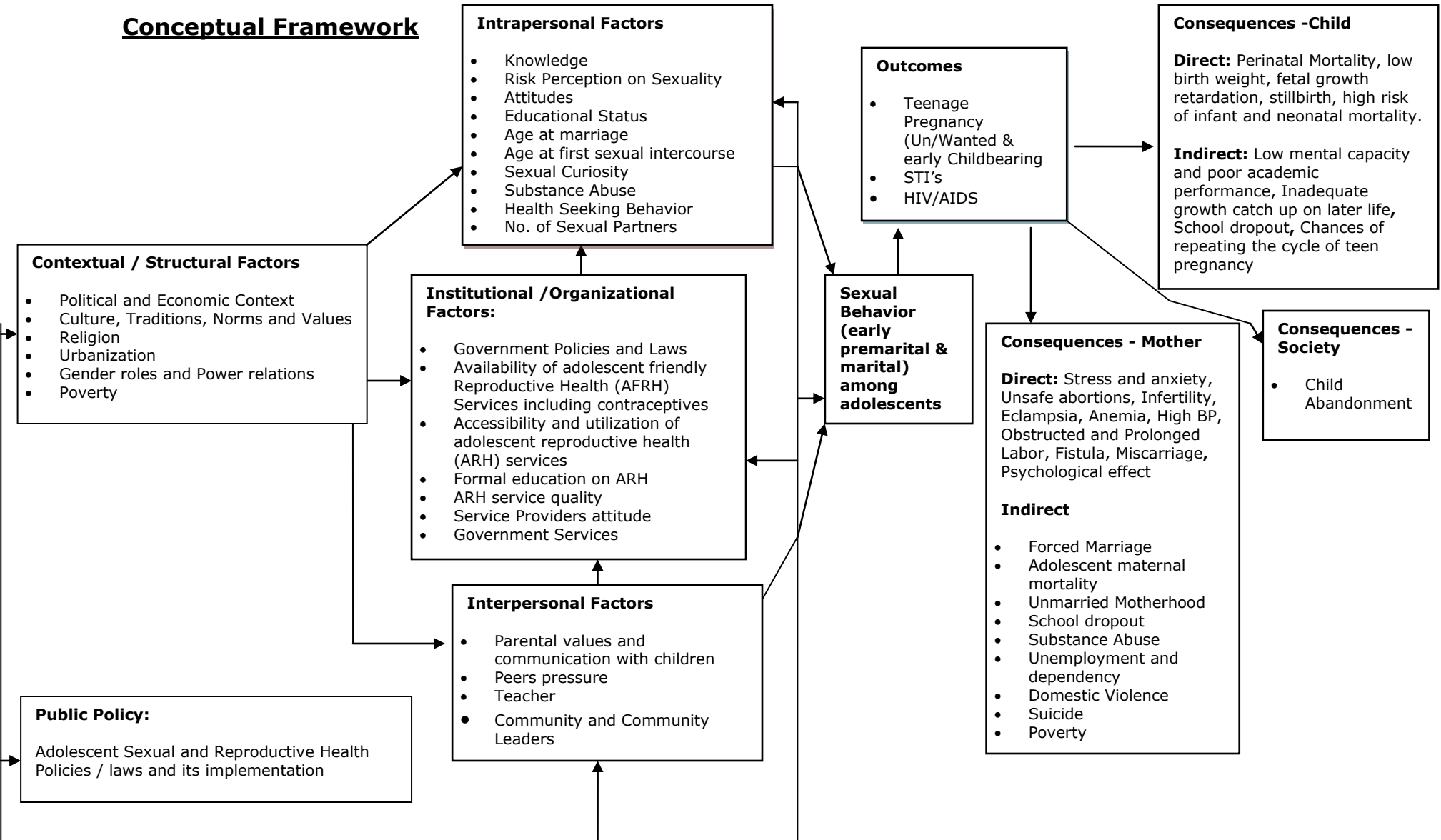
<b>Factors</b>	<b>Definitions</b>
Intrapersonal	Characteristics influencing individual behavior such as knowledge, attitudes, personality traits and beliefs
Interpersonal	Family, friends, peers providing social identity and support with role definition
Institutional/ Organizational	Rules and regulations, policies, informal structures, that may promote or constrain recommended behavior
Structural	Socioeconomic conditions, cultural context of society enabling or serving as a barrier for healthy behavior
Public Policy	National laws which regulates or support proper actions and practices for prevention, early detection, treatment, care and support

**Source: National Cancer Institute, 2005**

## **2.4 Limitations of the Study**

The literature used in this thesis is a review of peer reviewed publications and unpublished literature. Very few studies about TP have been done in Nepal. Additionally, the recent data on TP and motherhood is available in the Nepal Demographic Health Survey (NDHS) only and there was no opportunity for primary data collection and analysis while working on this thesis.

# Conceptual Framework

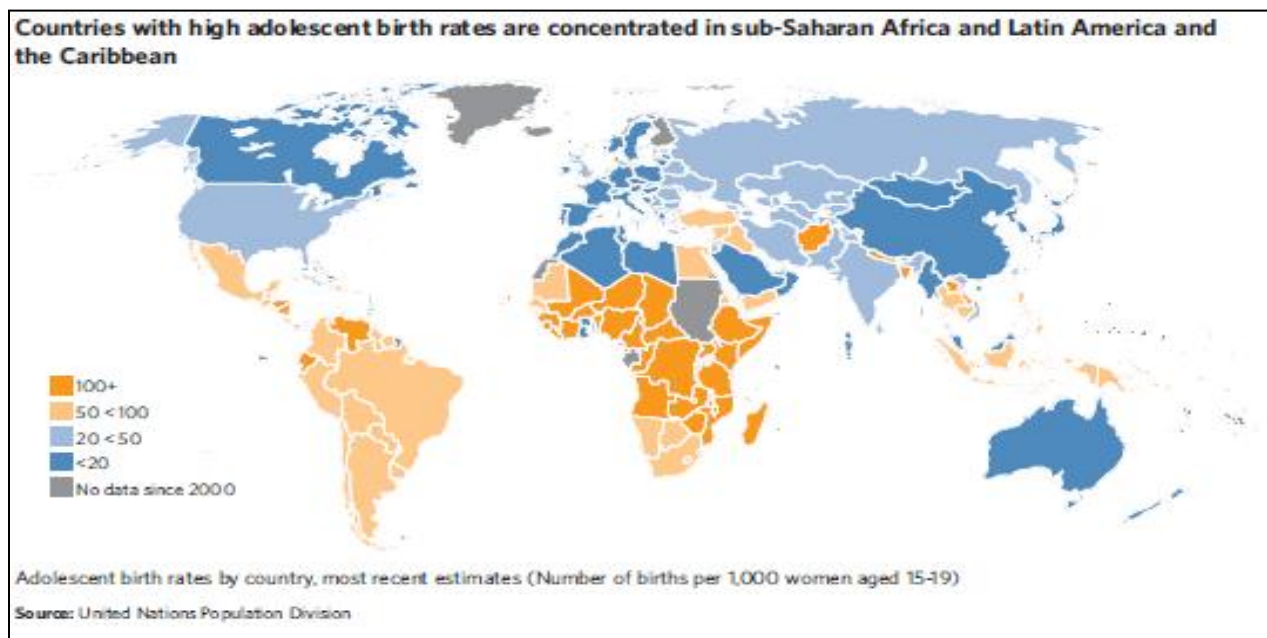


## Chapter 3: Magnitude, Trend and Distribution of Teenage Pregnancy

### 3.1 Global Picture of Teenage Pregnancy

Globally, 16 million adolescents give birth each year covering 11% of births worldwide. Ninety five percent of these births occur in low and middle income countries (WHO, 2008b). The data from 51 countries (from mid 1990s to early 2000) indicated that 10% girls are already mothers by the age of 16. This figure is higher in Sub-Saharan Africa. The seven countries where TP and high birthrate are most prevalent are: Bangladesh, Brazil, Congo, Ethiopia, India, Nigeria and the United States (WHO, 2008b). Worldwide survey on 10,000 teenagers signified, many adolescent girls loosed their virginity in 15 years. Fifty two percent of surveyed teen girls reported they had unprotected sex, and 24% of adolescent having STIs reported of still having unprotected sex (Coffey, 2008).

**Figure 2 : Adolescent Birth Rate**



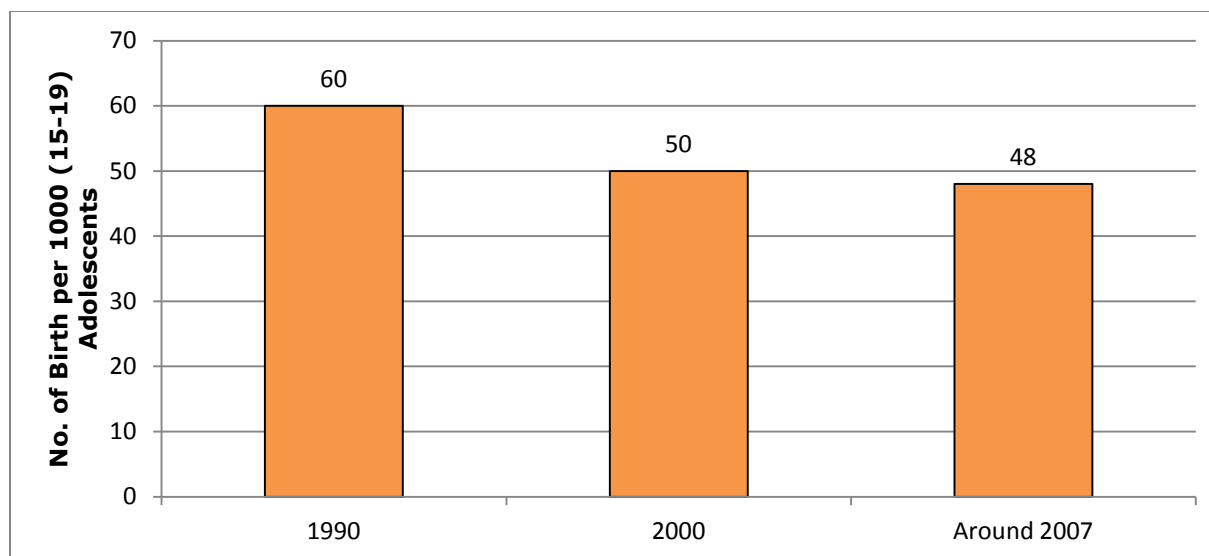
**Source: UNFPA, 2010**

This map shows the global distribution of number of births per 1000 women aged 15-19).

### 3.2 Trends in Teenage Pregnancy and Childbearing

In 2007, global average adolescent birth rate (ABR) was 48 births per 1,000 adolescents. Similarly, the ABR in developing and developed countries are 52 and 23 per 1,000 adolescents' girls respectively. The decline in ABR slowed down dramatically between 2000 and 2007 especially in South Eastern Europe and transition countries (UNFPA, 2010).

**Figure 3: Trends of Global Adolescent Fertility Rate**



**Source: UNFPA, 2010**

In countries like North Africa, Eastern Asia, Oceania, the progress on reducing ABR stalled between 2000 to 2007. The least developed countries have highest ABR. Slight decrease in ABR has been seen between 1990 to 2000 i.e. from 133 to 117 but this again increased to 121 in 2007. Regions like Western Asia and South Eastern Asia have shown danger of reversal where rates increased from 52 to 53 and 39 to 44 respectively from 2000 and 2007. Sub Saharan Africa contributes highest ABR and has shown slow progress on reducing the ABR since 1990s. A significant decline in the birth rate in Latin America and Caribbean (from 80 to 74 and 77 to 68 between 2000 and 2007) and Southern Asia showed a decrease in birth rate (from 59 to 53 between 2000 to 2007)(UNFPA, 2010).

### 3.3 Teenage Pregnancy in Nepal

In Nepal, 17% adolescent girls are already mothers or are pregnant with their first child (NDHS, 2011). More than two in five adolescent girl are already married (Pachauri and Santhya, 2002). The percentage of adolescents who have started childbearing increases rapidly with the age

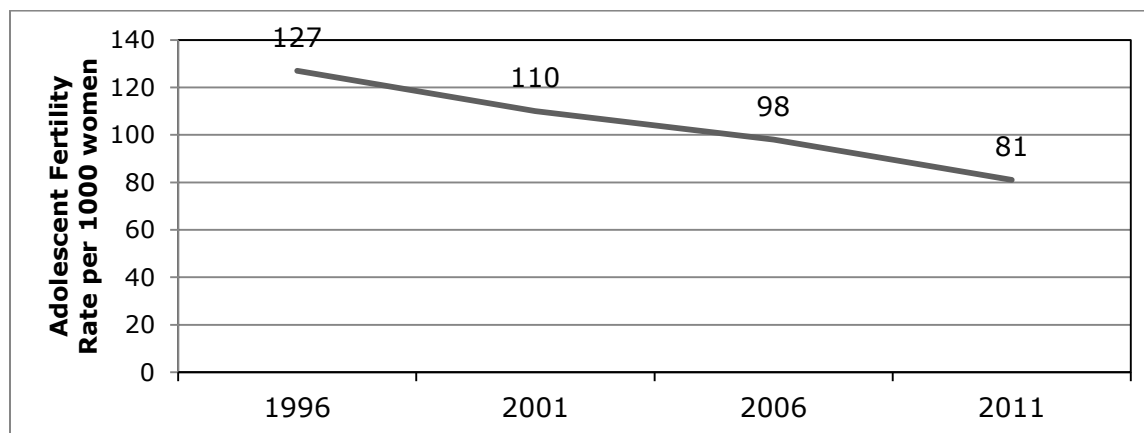


from 1% in 15years to 39% for 19 years olds (NDHS, 2011). Nineteen percent of adolescent girls have an unwanted pregnancy (UN, 2011).

### Trend of Adolescent Fertility Rate (AFR)

Ethnicity wise, the mean age at which an adolescent *Brahmin* marries is 13.5 compared to the *Tamang* caste which have an average age of marriage of 17.5 years, although the legal age for marriage is 18years (Kafle, 2010). Adolescent fertility rate (AFR) is decreasing but in slow pace and still high compared to other Asian countries like Japan, Thailand. Pregnancy outside of marriage is considered taboo and often not reported due to stigma (Slater, 2004).

**Figure 4: Trends of Adolescent Fertility Rate, Nepal**



**Source: NDHS, 2011**

**Note: The target for 2015 is 70 per 1,000 ABR.**

**Table 4: Adolescent Fertility Rate for Selected Asian Countries (15-19 years)**

Country	Pregnancy Rate	Abortion Rate	Birth Rate	Maternal Mortality Rate
India	70	25	45	450 in 100,000
Japan	9.6	6	3.6	45 in 100000

**Source: Cherry et. al., 2009**

Teenage pregnancy is double the number in rural areas compared to urban areas. In the hill region 16% of pregnancies are in adolescents compared to terai (18%). The Mid-western development region has high prevalence of TP (NDHS, 2011).

**Table 5: Age specific and total fertility rates, the general fertility rate and the crude birth rate**

Age Group	Residence		Total
	Urban	Rural	
15-19	42	87	81
20-24	135	197	187
25-29	82	134	136
30-34	38	78	71
35-39	16	39	36
40-44	0	16	14
45-49	2	5	5
Total Fertility Rate	1.6	2.8	2.6
General Fertility Rate	60	102	96
Crude Birth Rate	16.6	25.5	24.3

**Source: NDHS, 2011**

Note: Rates for age group 45-49 may be slightly biased due to truncation. Rates are for the period 1-36 month prior to the interview.

**Table 6 : Distribution of Teenage Pregnancy**

<b>Table 5.11 Teenage pregnancy and motherhood</b>				
Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child, and percentage who have begun childbearing, by background characteristics, Nepal 2011				
Background characteristic	Percentage of women age 15-19 who:		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
<b>Age</b>				
15	0.1	0.8	0.9	550
16	2.1	2.8	4.9	531
17	6.3	4.2	10.5	574
18	19.9	8.5	28.4	558
19	32.3	6.5	38.8	540
<b>Residence</b>				
Urban	6.1	3.2	9.3	367
Rural	13.0	4.8	17.8	2,386
<b>Ecological zone</b>				
Mountain	12.6	4.6	17.1	182
Hill	10.5	5.0	15.5	1,086
Terai	13.2	4.3	17.5	1,485
<b>Development region</b>				
Eastern	11.3	4.6	15.9	672
Central	12.3	4.7	16.9	896
Western	12.3	3.9	16.2	573
Mid-western	13.7	6.5	20.2	333
Far-western	11.3	3.3	14.5	279
<b>Subregion</b>				
Eastern mountain	11.5	2.5	14.0	54
Central mountain	9.4	1.3	10.7	63
Western mountain	16.5	9.4	26.0	65
Eastern hill	9.5	5.5	15.0	224
Central hill	8.5	4.6	13.0	305
Western hill	12.6	5.2	17.8	324
Mid-western hill	10.5	5.9	16.3	140
Far-western hill	12.0	3.2	15.2	93
Eastern terai	12.3	4.4	16.6	394
Central terai	14.8	5.1	19.9	528
Western terai	11.9	2.2	14.1	248
Mid-western terai	15.7	5.6	21.3	159
Far-western terai	10.1	3.0	13.1	156
<b>Education</b>				
No education	24.1	7.5	31.6	327
Primary	20.4	7.4	27.8	456
Some secondary	9.5	3.8	13.2	1,368
SLC and above	5.3	2.7	8.0	602
<b>Wealth quintile</b>				
Lowest	12.6	5.8	18.4	492
Second	15.7	5.0	20.6	574
Middle	15.6	6.5	22.1	597
Fourth	10.5	3.9	14.4	588
Highest	5.3	1.3	6.7	502
<b>Total</b>	<b>12.1</b>	<b>4.6</b>	<b>16.7</b>	<b>2,753</b>

SLC = School Leaving Certificate

**Source: NDHS, 2011**

MoHP revealed that abortion is high and increasing. There were 95,000 cases reported in 2010/11 where 25% were teenagers but this is only the tip of the iceberg (Parakhi, 2012a). Despite the legalisation of abortion, many women risk their health in unsafe and illegal abortions (Trustlaw, 2012).

### 3.4 Consequences of Teenage Pregnancy Worldwide and in Nepal

'Adolescent pregnancy brings lost potential' (UNFPA,2007a). Furthermore, it may bring many negative health and social effects for both mother and child. UNFPA (2007a) suggests that when girl aged 15-19 years becomes pregnant, they are twice and adolescent under 15 are five times more likely of dying during pregnancy or childbirth compared to woman over 20 years. School dropout, premature infant deaths, unhealthy children and more children in a shorter period of time can be seen (Acharya, 2010; Glasier, 2006; Plourde, 2012).

**Table 7: Risks to Adolescent Mother and Baby**

- "Pregnant adolescents are more likely of having preterm, low birth weight babies;
- Girls under 15 years are at greatest risk;
- Young first time mothers being more likely to die during childbirth;
- Babies born to adolescent mothers have high rate of neonatal mortality."

**Source: WHO, UNFPA, 2006**

#### 3.4.1 Physical Health of Adolescent Mother

An unmarried teenager who has become pregnant has very few options. Most common options involve anxiety, seeking an unsafe abortion, continuing the pregnancy which may have complications, and delivering an unwanted child that may face hardship, or finally abandoning the child. They are more likely to die during childbirth compared to mature mother. Nearly 90% of maternal mortalities occur in developing countries (Yayla, 2003) and the majority of these deaths are preventable. In addition, nearly two million adolescent girls suffer from birth- related chronic illnesses and disabilities bringing lifelong suffering causing 15% of the global disease burden (WHO, UNFPA, 2006).

**Increased Maternal Mortality:** Adolescent gives 11% of all births each year worldwide, contributing to 13% of maternal deaths (WHO, 2008b; UNFPA, 2006). It signifies only a slightly increased risk for maternal mortality, but one should take into account that pregnancy among adolescent is likely more frequent in lower socioeconomic status adolescents. A study from Latin America indicates that adolescent mother under 16 had four times higher maternal deaths than women aged 20 (WHO, 2008b).

In Nepal, TP and childbearing contribute 18.9% of maternal deaths (WHO, 2007a). Large proportion of adolescents is still away from health facility consultation. So, wide variation on institutional delivery without skilled birth

attendant on the basis of residence is seen (NDHS, 2011). For instance only 13% of rural adolescent seek institutional delivery compared to 70% for urban adolescent women (WHO, 2007d). This may be due to inaccessibility, unawareness, low value placed on pregnancy and its consequences among adolescent girls.

**Unsafe Abortions (UA):** Abortions are the indicator of unprotected sex and unwanted pregnancy. It is reported that every year 2.2-4 million adolescents resorts unsafe abortion causing high maternal deaths (UNFPA,2007a) and nearly 78,000 of them die (UNFPA, 2003). The younger the adolescent, the greater the likelihood of having sepsis (Mensch et. al. 1998).

**'Up to four million adolescents a year have unsafe abortions. If there are complications, they are more likely to delay seeking care.'** (Source: WHO, UNFPA, 2006)

It is one of the largest global contributors of preventable maternal deaths (IPPF, 2006). Of all UAs carried out in low and middle income countries, 14% are in adolescents (WHO, 2012a). Often these abortions are carried out late in the pregnancy and are not performed by trained professionals or in sterile environments. Even in the countries where abortion is legal, adolescents may be reluctant to admit their pregnancy because of fear of what other may think of them, therefore many seek abortion too late and may not access the appropriate services.

Teenage abortion in Nepal is also on the rise (Bhattarai, 2012). Everyday at least 65 teenagers seek for abortion services in hospitals. This figure has increased two fold compared to previous years (from 2010). However, the figure may be an underestimate as many pregnant teenagers may not seek abortion care in formal hospital (Nepal Matribhumi Khabar, 2012).

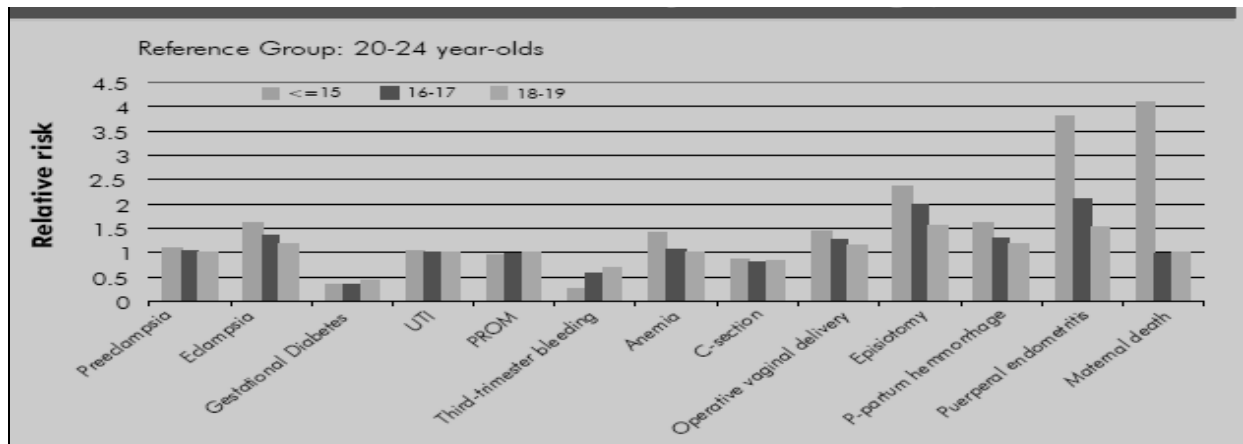
The following quote from one of the respondents of the survey conducted by Parakhi amongst adolescents who had had an unsafe abortion sums up the situation on the ground: "I didn't know where to go for an abortion," says *Rai*, who has studied up until 10th grade but wasn't aware abortion was legal in Nepal. "I did it in a rush and am suffering now." (Parakhi, 2012; Trustlaw, 2012). This signifies the unawareness about abortion legalization and conduction of abortion by unsafe hand, therefore, getting complications.

Additionally, the Health service division under the MoHP revealed that 95,000 abortions were carried out in 2010/11 where 25% of those were in teenagers (Nepal Matribhumi Khabar, 2012). The government hospitals offering abortion complication service lacks manpower, equipment, beds

whereas services from private practitioners have high fees and is urban located (GoN, WHO & CREHPA, 2006).

**Other Health Consequences:** Evidence indicates that becoming a mother during teenage years may pose many health risks such as anemia<sup>1</sup>, tearing of the vagina, fistula, mental disorders, puerperal sepsis, unsafe abortions and complications, pregnancy induced hypertension and many more due to physiological and psychological immaturity (WHO, 2008a).

**Figure 5: Relative Risk of Adverse Outcome by Maternal Age**



**Source: WHO, 2008b**

Nearly two million young women worldwide are living with untreated obstetric fistulas that are making an adverse effect on their physical and social lives (WHO, 2006). Additionally, adolescent girls are more likely to be undernourished and have high rate of STIs due to inadequate knowledge of SRH. Problems such as uterine rupture, obstructed labor are more common in adolescents (Braine, 2009).

In Nepal, problems such as anemia, pregnancy induced hypertension and unsafe abortions are being encountered. Additionally, risk of miscarriage is seen as high and consistent in girls under 15years, intermediate in 15-17years and lowest in higher ages (Katz, 2008; Christian, 2008). Still birth and preterm delivery was higher in teenage deliveries compared to births in mature mothers (Shrestha, 2002).

<sup>1</sup> Anaemia during pregnancy is hemoglobin concentration less than 11g/dL.

**Table 8: Research Result on Complications of Teenage Pregnancy**

Complication	Number	Percentage
Anemia	102	56.67
Preterm Delivery	20	11.11
Abortion	58	32.22

**Source: Kafle, 2010**

Unsafe sexual behavior not only leads to TP but is also major risk for STIs and HIV/AIDS.

**STIs<sup>2</sup> and HIV/AIDS:** Globally, every year an estimated 340 million people get STIs like syphilis, gonorrhea, chlamydia or trichomonas and at least one out of twenty adolescents gets infected with curable STIs (Glasier,2006, WHO,1997). WHO indicates that an estimated 20-30% of pregnant adolescents were infected with HIV in Southeast and Central Africa and this is spreading to Southeast Asia (WHO, 2012).

In Nepal, the prevalence of STIs is 3% among adolescents (WHO, 2007a). One study shows that one in ten surveyed adolescent girls having sex contracted STIs (UNAIDS, UNICEF, 2001). Similarly, of all HIV cases, 13% are seen in adolescent aged 14-19years (NAHDS, 2000). Regmi (2010a) documented that a knowledge and awareness regarding SRH particularly around STIs and the use of condoms among teenagers is inadequate. But, the situation is better in urban teenage males compared to females and rural adolescents. Knowledge about HIV/AIDS among surveyed adolescents is comparatively higher (65.66%) than about STIs (Regmi, 2010a). Although knowledge on HIV/AIDS is higher; safe sex is not guaranteed. National Centre for AIDS and STIs Control indicates that out of 4,993 HIV- positive cases reported in 2005, 54% (2,682) occurred in adolescents and young adults aged 10-29years (FHD, 2005).

### **3.4.2 Infant and Child**

Babies born from adolescent mothers are at 50% higher risk of stillbirth, being premature, and dying during the first month compared to babies from mature mother (WHO, 2008a). They are at high risk of dying even in the peri-natal period even if they are born with a normal birth weight. WHO (2000) suggest that children born from adolescent mother face multiple societal implications such as early school dropout, and low intellectual capacity compared to children from mature mothers. Newborns from TP suffer from many independent adverse effects (fetal distress, birth asphyxia,

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<sup>2</sup> "Girls have large exposed mucosal surface area for infection and underdeveloped mucosal defense systems, the cells lining the opening of cervix are more susceptible to Chlamydia, gonorrhea and HIV than mature women"(WHO,2003)

low birth weight (LBW) even after controlling other contributing factors (e.g., diet) (March of Dimes, 2012). These increase the likelihood of future health problems and the risk of death of baby (WHO, 2004). LBW makes a child vulnerable to many diseases (e.g. diabetes, heart disease in near future) and more susceptible to death within one month. Additionally, it can lead to poor health in the future (Bellamy, 2000). Evidence showed that babies from adolescent mothers surveyed later at age 14 showed disturbed psychological behavior, poor reading ability and school performance compared to mature mother children (Shaw, 2006).

**Prematurity, Morbidity and Mortality:** A child born from adolescent mother is twice as likely to have LBW and has thrice the risk of neonatal death (Dangal, 2005). One in ten babies born worldwide in 2010 were premature i.e., 15 million which is the biggest cause of neonatal death (Africa Health, 2012).

In Nepal, studies show that one in ten babies delivered by adolescent mothers is preterm and died before reaching their first birthday (Ghubaju, 2002). A retrospective cohort study in 790 adolescent mothers showed that out of the babies born 84 were preterm, 83 were LBW, 19 babies were still born and neonatal death occurred in six of the births (Yadav et. al., 2008). The table shows that newborn with adolescent mothers have higher (17.2% vs. 16.7% respectively) risk of complications than with mature mother (Pun, 2011). Another hospital based study reported that the peri-natal mortality rate among children of adolescent is twice (40.5 vs. 18 per 1000 birth) than of mature mothers' children (WHO, 2003).

**Table 9: Research Result on Age of Mother and Neonatal Complications**

<b>Neonatal Complications</b>	<b>15-19 years ( n=168)</b>	<b>20-24 years (n= 401)</b>	<b>Total (n=569)</b>
Birth Asphyxia	1(0.6)	1 (0.2)	2 (0.4)
Still Birth	1(0.6)	3(0.7)	4 (0.7)
Neonatal Death	1(0.6)	5(1.2)	6(1.1)
Intrauterine Death	4(2.4)	8(2)	12(2.1)
Respiratory Distress	1(0.6)	1(0.2)	2(0.1)
Neonatal Sepsis	5(3)	8(2)	13(2.3)
Jaundice	1(0.6)	1(0.2)	2(0.4)
Faetal Distress	5(3)	23(5.7)	28(4.9)
Meconium Aspiration	3(1.8)	2(0.5)	5(0.9)
Poor Cry and Sucking	7(4)	12(3)	19(3.3)
Others	-	3(0.7)	3(0.5)
None	139(82.7)	334(83.3)	473 (83.1)
<b>Total</b>	<b>168(17.2)</b>	<b>401(16.7)</b>	<b>569(16.9)</b>

**Source: Pun, 2011**



### 3.4.3 Social Consequences for Adolescent Mother and Child

Teenage pregnancy can bring various social consequences for both mother and child.

#### For Adolescent Mother

**School Dropout:** Child rearing responsibility and inadequate parental support for adolescent mother may leads to high dropout rate (DR).

**Table 10: Social Impacts of Teenage Pregnancy**

Social Impacts	Number of Respondents	Percentage
School Dropout	33	28.4
Bearing the health risk	29	25
Handicapped in Getting job	21	18.1
Polygamy Marriage	16	13.8
Separation	6	5.2
Divorces	2	1.7
Widowed	1	0.9
Infertility	8	6.9
Total	116	100

**Source: Kafle, 2010**

In Nepal, the DR in females aged 10-14 in grade 1-5 is higher (86%) than to males of same age and grade (67%). DR in rural areas are higher than urban areas. The main reasons reported for dropouts are economic hardship, family problems, lack of interest, exam failure, work, marriage (NAYS, 2011). Research from Kathmandu valley shows that 28.4% (33) of dropouts from school due to TP (Kafle et. al, 2010).

**Domestic Violence (DV) and Suicide:** Evidences suggests that unwanted TP is associated with violence and sexual coercion (Glasier, 2006). This is due to economical vulnerability and male reliance (UNFPA, 2007). It is estimated that one out of five pregnant adolescent is suffering from physical abuse worldwide (WHO, 2006; UNFPA, 2007).

Adolescent girls in Nepal face severe DV from males, parents, husband or others but they are less likely to seek care and support compared to adult women (WHO, 2012). One study revealed that three in a five women including teenagers becomes physically forced for having sex when they do not have desire but some do with the fear of husband (Tamang, 2009).

- **“Adolescent pregnancy is linked with social deprivation and stigma,**
- **Pregnant adolescents are likely to be excluded from education,**
- **Many are at risk of violence” (Source: WHO, UNFPA, 2010).**

In Nepal, 27.5% of suicides among adolescents are related to marriage, family and relationships (WHO, 2003).

**Economic Deprivation:** Pregnant adolescents are more likely to interrupt education leading less job opportunities (WHO, 2008a). The major reasons of interruption to education include the heavy responsibilities of motherhood, a lack of partner, and family support. Inadequate qualifications create difficulties of entering into labor markets and well-paid jobs. Therefore, TP can lead to economic vulnerability. Most of the adolescent mothers in Nepal are living with a high degree of dependence.

### **For Child**

**Low mental capacity and poor academic performance:** Evidence suggests that premature babies who survive after preterm delivery have a higher chance of facing permanent disability such as learning, visual or hearing impairments (March of Dimes, 2012). No study from Nepal is available till date.

**Negative attitudes from Parents:** It is reported that adolescent mothers are “impatient and intolerant” with the child as they are likely to be unprepared developmentally to take on the responsibilities of parenthood. They may not have correct information on child development and parenting skills and may not be well equipped in many aspects such as organization of the child care environment, provision of play materials and they tend to show poor maternal involvement and sufficient stimulation compared to mature mothers (King and Fullard, 1982). These factors can lead to an intergenerational effect on the child.

**Child abandonment:** Worldwide about 60 million children are abandoned (Alvarez, 2010). This is a major issue because the abandoned children either ends up in street or an orphanage or become victims of child trafficking. In Nepal, problems like poverty are forcing parents to abandon their children where teenage parents may also contribute into it. Here, almost 2.6 million children are involved in child and 40,000 in bonded labor. Approximately, 5,000 children live and work on the streets. This problem is also directly or indirectly the result of TP (ACR, 2003).

Therefore, teenage pregnancy possesses a multiple consequences.

## Chapter 4: Analysis of the Factors Influencing Teenage Pregnancy in Nepal

Many factors contribute to teenage pregnancy. Gender inequality, cultural norms, religion, peer pressure, alcoholism are some of the leading factors (IPPF, 2006). It is more prevalent among poor, less educated and rural populations (March of Dimes, 2012). Due to culture and religion SRH issues are rarely discussed in Nepal. Below is a detailed discussion of the factors that lead to unprotected early sexual behavior and in turn TP following the conceptual framework presented at Chapter 2.

### 4.1 Contextual Factors

**Culture, Norms and Values:** These shape the sexual behavior and fertility of adolescents. Cultural norms in Nepal impose barriers for discussing about sexual matters. Even mentioning the word 'sex' can imply the sexual experience and promiscuity that may damage reputation. Hence, many adolescent girls ignore sexual issues discussion in order to preserve their reputation (Marston and King, 2006).

Another social norm is early marriages. Girls are married off early because they are viewed as 'someone else's wealth' and even a liability to be got rid of as soon as possible. In addition early marriages are in practice because of the social norm which deems that fathers have to pay higher dowry for older girls. Some parents also think that if they marry their daughter earlier then they can reduce the expenditure of food and education (Sharma, 2002).

Safe World for women reported the thinking of parents in Nepal. Parents think that "The younger the bride is, the cheaper the dowry," (Source: SWFW, undated)

**Religion:** Religion shapes attitude and behavior regarding sexuality. In Nepal, Hindu religion does not allow to have premarital sex and sexual behavior. Ironically, a higher proportion (40%) of teenage Hindu men is involving into premarital sex compared to other religions (20%) (Adhikari & Tamang, 2009).

**Gender Roles (GR):** Gender roles play a significant role in molding sexual behaviors of adolescents in turn TP. In Nepal, girls' sexual and gender roles (e.g. married, widow) are clearly defined on the basis of their relationship with men. Girls are not considered to be human saying 'nothing was born' when a girl child is born (Francoeur, 2004).

Adolescents are generally married to older man with an average six years difference, so husbands have more control on decision making, conception

and pregnancy (Mensch *et. al.*, 1998; WHO 2007d). Boys are generally valued more than girls and are given more power. Girls when married are expected to remain faithful to their husband. It is reported that adolescent men who have had sexual intercourse had it with sex workers (Gubhaju, 2002). The females usually do not have social power so she cannot either question their husband in any area or engage in protective behavior (Francoeur, 2004). Therefore, they are expected to accept any form of sexual activity from their husband and have less control over own body. A study in the sexual experience of adolescent females mentioned that they tended to have sex when their partner wanted even if they do not want to (UNAIDS, UNICEF, 2001).

The following quote from one of the female adolescent respondent of FGD in a WHO study shows the power among men and women due to gender role: "if a woman does not feel like having sex, she has to do it anyhow if the man feels like it" (WHO,2003)

**Political and Economic Context:** Political instability (PI) leads to poor economic situations and causes desperation, low negotiation power in women. In the same way, PI leads to poor economy resulting low tax collection leading to lack of resources and their allocation. These things result in high unmet need in promotive, preventive and curative services.

According to Sharma (2010), the basic underlying problem in health service is that the government is unable to implement the strategy envisioned on paper. There has been no provision of youth- friendly RH (YFRH) guidelines and services to date. HW are not trained enough for dealing with adolescent sexual health issues.

Cost has been proved to be a major barrier for adolescent girl form seeking RH services (Bloom *et. al.*, 1999; Ghubaju, 2002). Obstacles such as paying user fees and travel costs may cause them to delay seeking it (WHO, 2007d). Adolescent girls may be sexually exploited if they have to meet their own needs and of their families. Evidence from Nepal shows that adolescents from the highest wealth quartile begin sexual intercourse at least two years later than lowest quartile (19.3yrs and 17.1yrs resp.) (NDHS, 2011).

The rise in poverty could create vicious cycles as adolescents become unable to afford a good education and livelihoods for their children, leading to their children following the same footstep as their parents. Additionally, research shows that economic constraints act as a barrier for use of sexual health services for both rural and urban teenagers (Regmi, 2010b).

**Urbanization:** This may be responsible for disrupting the culture and tradition in either positive or negative ways. The influence in Nepal is in the form of an increase in premarital sex and unwanted pregnancy. Young teenagers are migrating to the capital and India for studies and employment opportunities. This new -found independence can lead to girls participating in sexual activities. The main source of exposure is to media (global network of TV, internet, films) and peers. Nepalese culture does not permit exposure of adolescent girls to boys but due to urban and western influences it has become more acceptable for young girls and boys to mix (Regmi, 2010c). This in turn has led to an increase in sexual activities amongst unmarried teenagers therefore TP becoming more frequent.

**Sexual Exploitation:** Unprotected sexual activities due to coercion may cause unwanted early pregnancy in addition to STIs and HIV (WHO, 2007d). In Nepal, study reported that 18% (4,000) of adolescents have experienced severe sexual abuse (molestation or rape) even if they are not a high risk group (UN, 2011). Adolescent girls are vulnerable to trafficking, forced beggary, early marriage and exposure to sex trade and in turn to TP. United Nations study (2011) showed that adolescent girls living on the street suffer from sexual exploitation, drug abuse, HIV/AIDS and STIs leading to TP in Nepal.

A adolescent female respondents from a study by Puri and Cleland (undated) on sexual coercion among young female factory worker said about sexual exploitation that: "We took a normal photograph which is later changed to snap with big hug between us. Later he blackmailed saying he would stick those pictures if I do not accept sex with him and finally he raped me forcefully". This phrase shows the exploitation by male and misuse of power.

## 4.2 Intrapersonal Factors

**Knowledge:** Knowledge plays a vital role in decision making that influences health and development. One study in Nepal, shows that in general, adolescent knowledge of sexual health issues and reproductive physiology is low (Stone, 2003; Mathur, 2001). Sexual experimentation begins quite early i.e. nearly 15years (FHD, 2005). UNICEF and UNIAIDS, 2001 report that teenagers do not know about safe sex, process of conception, or ways of avoiding it. They have little knowledge on the dangers of unplanned pregnancy. The main source of information on sexual matters is peers and the media (Regmi, 2010c). Interestingly, 99% of surveyed adolescents have heard about STIs and HIV/AIDS, but only 15% knows how these diseases are transmitted. Many teenagers who contract STIs, do nothing or consult a traditional healer (UNAIDS, UNICEF, 2001).

**Educational Status:** Education plays crucial role in guiding and bringing change in adolescents' behavior. Higher educational attainment, also results in the greater use of SRH services, awareness levels. It develops self-confidence and decision making power in adolescent girls and develops knowledge, attitude, beliefs and values on sexuality (Acharya et. al., 2009) helping to delay sexual activities and age of marriages. Educated women can plan for the future, use contraceptives properly, and develop self-esteem.

NDHS (2011) shows that women with SLC or higher education on average begin sexual intercourse four years later than those with no education. Similarly, fertility is also inversely proportional to education level i.e. 3.7 births among those with no education and 1.7 births among women with SLC or higher.

**Attitude and risk perception on sexuality:** Adolescent girls may perceive agreeing to have sex as a way of holding on to their boyfriends, so they avoid refusing sex (Marston and King, 2006). Additionally they may perceive themselves as invulnerable to diseases (Regmi, 2010a). Even though some are aware of the risks when practicing unprotected sex, they may still continue. One study from Nepal found that there is a wide gap in the attitude of teenagers about premarital sex. Thirty two percent of surveyed teenage boys think sex before marriage is acceptable while only seven percent teenage girls thought so (UNAIDS, UNICEF, 2001).

Similarly, adolescent do not choose to use a condom with the partners whom they perceive 'clean' because use of it implies a lack of trust and even they do not feel at risk. It could also be interpreted as a sign of having a disease (Martson & King, 2006). Adhikari and Tamang (2009) reported that college students who have more than one sexual partner, having sex with sex workers (SW), only 49% of them used a condom. A study in the border area of Nepal shows that less than 65% of adolescent men used condom when having sex with a non-regular partner, SW. They perceive that they are free from STIs as they have chosen disease free women as partners (Ghubaju, 2002)

**Age at Marriage:** Women marrying early are more likely to contribute to high fertility and research found that they are not much knowledgeable about sexuality (NDHS, 2011; Mensch et. al., 1998). In some countries, girls are expected to marry and conceive in their adolescence, before physical and mental maturity. It is similar in Nepal (Smith, 2002). The legal age of marriage for female is 18yrs. But an estimated 29% of 15-19 year old women are already married (NDHS, 2011). Parents are under the pressure of social norms; tradition and the financial hardship hence marry their adolescent daughters to an older man without their consent (Sharma, 2002;

WHO, 2007d). This makes adolescent girl unable to negotiate for sexual relations and decision making power.

One of the adolescent girl, respondent of FGD on Mathur study said “One of the problems faced by girls is early marriage or, better said, premature marriage. It is a problem for all of us. In spite of our desire to continue our studies; our parents arrange early marriage for us. As a result, we become pregnant soon” (Mathur, 2001). This situation signifies how powerless the daughters are.

**Age at First Sexual Intercourse:** Adolescents may become sexually active before marriage exposing them to pregnancy. In Nepal, for men the average age for sexual intercourse was 16.7 years and women of same age is 17.7 years. So, men start sexual intercourse one year earlier than women indicating premarital sex (NDHS, 2011).

**Substance Abuse:** Alcohol consumption, drug use could be the factors influencing of sexual behavior and TP. Evidence showed the close correlation between being drunk and having sexual intercourse (Limmer, 2008). Teenagers who drink are 2-3 times more likely to be sexually active compared to non drinkers (NIE, 2001).

A study in Nepal reported that 8.9% of pregnant teenagers abused alcohol whilst pregnant (Kafle, 2010). Studies suggests that alcohol consumption and unprotected sex are strongly associated.

**Table 11: Research Result on Pregnant Adolescents and Substance Abuse**

Substance	Number( n=180)	Percentage
No addiction	91	50.6
Cigarette	60	33.3
Alcohol	16	8.9
<b>Total</b>	<b>180</b>	<b>100</b>

**Source: Kafle, 2010**

One of the adolescent boys in the FGD done by Regmi (2010b) said that “We did not use a condom. We could not even remember it. I do not know what happened as I know about safe sex but I could not even remember since we were drunk”. Similarly one of the adolescents in the study done by WHO said: “Without a drink, I feel ashamed to talk to a girl. But after drinking, I can do anything in mood” (WHO, 2003). These phrases signifies that how alcohol influence the sexual behavior and use of contraceptives among adolescents.



**Sexual Curiosity and Pleasure:** These are the main factors that encourage sexual activities. A study in Nepal reported that adolescents are interested in experiencing sex. Additionally, they perceive sex is more pleasurable than other activities.

An adolescent boy in study done by WHO (2003) said: "There is no enjoyment in using condoms. Someday a man has to die, so why not enjoy and die?" It signifies the pleasure adolescent seek in sexual activities and ignorance on safety.

Some adolescents expressed that the strict attitudes of society and being unable to discuss sex with family and others creates more curiosity (Regmi, 2010c).

**Number of Sexual Partner and their Behavior:** The gap in age and behavior of sexual partner determines the incidence of STIs and TP (Mensch *et. al*, 1998). In Nepal a study done in Makwanpur district reported that one in ten unmarried adolescent boys are sexually active with multiple partners (Kolencherry, 2004). Another study from border area of Nepal reported that 41% of surveyed unmarried adolescent boys were being sexually active with non regular sexual partners. Ironically, first sexual partners are SW among one in ten adolescent boys and half of them do not perceive themselves as being at risk of contracting STIs and HIV (Kolencherry, 2004). Regmi (2010c) showed that adolescent boys initiate sexual intercourse and girls follow them because of desire of friendship and closeness.

One of the adolescent girl in focus group discussion (FGD) in school said that "If I didn't have unprotected sex with them, they would get mad at me and I still wanted that closeness with them." So, "I was afraid if I didn't do what they wanted, they wouldn't be my friend." This shows the behavior of adolescent according to partner's desire (Coffey, 2008).

**Contraceptive Use:** In Nepal, the unmet need is 41% in sexually active adolescents (NDHS, 2011). Contraceptive use among married adolescent girls is 12%. Francoeur (2004) suggests that most teenagers reported that they know about condoms and ways of accessing them. However, only two thirds reported using them. Similarly, a study in young factory worker reported 95% of respondent knowing about at least one contraceptive but use is unsatisfactory (WHO, 2007a). Not feeling pleasurable, unavailability or partners who are not willing to use them may be the main reasons for not using it. Ironically, one in ten unmarried and one in six married adolescents know the benefit of wearing a condom (Stone, 2003). Similarly, only 64% of



surveyed adolescent college girls heard about emergency contraception<sup>3</sup> (Adhikari, 2009).

### 4.3 Interpersonal Factors

**Parental values and Communication with Children:** Consistent parental values are the vital factor that influences sexual debut (Beglas, 2003; Miller *et.al.*, 2001). Studies show that parents who have good communication, openness with their children and increased maternal education is associated with later sexual activities in adolescents (Anteghini *et. al.*, 2001). In Nepal, only one in ten parents discuss about sexuality with their children (Francoeur, 2004). They perceive that sex education spoils their daughters' innocence and may prevent her finding a good husband (Acharya, 2009).

Study indicate that majority of adolescent girls i.e., 82% in rural and 63% in urban areas got married according to their parents' wish and many were unaware about sexuality at the time of marriage (Choe, *et.al.*,2004).

**Teachers:** It has been reported in Nepal that teachers are reluctant to discuss sexual health issues or may be shy, or have misconception about sexual health issues. School teachers hardly mention the terms related to sex. They believe that sexuality is a private issue and is unpleasant to discuss. Therefore, they leave it to the students to learn. Students commented that there is poor communication between teachers and students whilst delivering lectures on RH (Pokharel, 2006; RHEPAS, 2009).

The following quote from teachers and students of the survey conducted by Pokharel (2006) regarding sex education in school sums up the situation on the ground:

**Teacher:** 'I say to them it is very easy, read it by yourself and only ask me if there is any difficulty.'

**Student:** 'Teachers comes to the class, write the lecture title on the blackboard, and then leave the classroom.'

**Peer Influence:** Peers plays a vital role in changing personality, attitude and behavior that may lead to unprotected sexual behavior and TP. It is reported that a person having close unmarried friend with sexual experience is eight times more likely to become involved in premarital sex than those with friends with no sexual experience (60% vs. 15%) (Adhikari & Tamang, 2009).

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<sup>3</sup> *Emergency Contraception is a method that can be used after unprotected sex, method failure or incorrect use of contraceptives.*

The quote from adolescent male in the survey conducted by Regmi (2010c) shows how the peers influence on involving into sexual behavior: "Our friends always shares sex-related experiences." They say "I had sex with that girl and really had fun and so on; after hearing such message, feeling of lagging behind appears. So want to do the same. All these activities happen with friends support". This signifies peers are strong influencing factors on starting sexual activities in early ages.

**Community and Community Leaders:** Community belief on SRH influences an individual's attitude and behavior with regards to sexual activities (Greenwell, 1996). A community can also influence in the accessibility of health care services and social support systems. The community leaders such as parliament, religious leaders, organization chiefs, and traditional advisors can have influence in reducing unsafe sexual practices by designing, implementing and involving people into TP reduction programme as discussed earlier.

#### **4.4 Institutional/Organizational Factors**

The RH services targeted towards adolescents in Nepal have various obstacles. Many teenagers reported that the services provided are not adolescent-friendly, insufficient and HWs do not keep their problems confidential so they rarely seek sexual health service (Regmi, 2010a).

**Availability of ARH Services including Contraceptives:** Availability of quality, confidential health services from skilled HW without judgment makes adolescent use ARH services (WHO, 2002b). In Nepal, adolescents need to consult the same health facility designed for the general population when accessing RH services. The health facility where services are available, there is often no female HW and adolescent girls feel uncomfortable sharing their health related problems with male HW (Regmi, 2010a). Some even reported that they had been maltreated and had experienced misbehavior by HW. There is inadequacy of services especially in rural health facilities (Regmi, 2010a). One adolescent in survey reported that even HW are reluctant to discuss on sexuality issues and has poor counseling skills with adolescents (WHO, 2007d).

Government provides adolescent health services through 'Adolescent friendly<sup>4</sup> clinics' in only two tertiary hospitals and in some other districts. Some NGOs are running the programs including IEC, prevention of unwanted

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<sup>4</sup> Adolescent Friendly: "having characteristics like special hours & setting for adolescents, convenient access, without the structure like clinic, affordable fees, drop-in hours, polite, trustworthy, knowledgeable, non judgmental, HWs, services geared towards adolescents need and interest"(WHO,2003)

pregnancies, contraception use, and advocacy. Unfortunately, these services are very small in scale and are focused on urban and semi-urban areas only (FHD, 2005).

**Accessibility and Utilization of Reproductive Health Services:**

Affordable cost, convenient opening times without long queue attracts adolescents to utilize ARH services (WHO, 2002b). Lack of understanding of the need and gender issues from HW hinder the accessibility of care (Sharma, 2004). It is still difficult for unmarried adolescents to access FP services despite the liberalized policy due to social norms and values on premarital sex and discomfort when talking about sexual health issues. The health facilities start their service at the same opening time of school hours and closes before school day ends. Adolescents who need to access RH services are compelled to skip school.

The following quote from one of the adolescent male respondent of the survey conducted by Regmi illustrates the barriers on seeking ARH services including geographical accessibility, stigma: "We only have one health post there which is too far. Doctors working there know almost everybody. We know we can get condoms over there but we do not visit as we know them very well...additionally they always have condom out of stock"; Another male respondent in the same survey illustrates the attitude of HW saying: "Once, I had a pain in my *younanga* [penis]. My friend advised me for visiting HP. When I dared to share my problem, the service provider shouted at me" (Regmi, 2010b). This shows the accessibility and challenges for seeking ARH services and attitude of HWs.

Similarly, the HW providing abortion services are themselves against providing abortion services to unmarried adolescents although the laws favor it.

A health worker working in one of the health facility providing abortion services says; "Our society supports abortion by only married women, not unmarried girls. We ourselves do not support abortion by unmarried girls. If we come to learn about this (an unmarried girl seeking abortion service) we will strongly oppose her" (GoV, WHO, CREPHA, 2006)

**Government Services:** The Nepali government introduced free primary and secondary education in government schools. The literacy rate for primary girls and boys is now over 90%. But as age and grade increases the dropout rate for adolescent girls also increases (22%) compared to boys (16%) (NAYS, 2011). Adolescent girls are taken out from school and put into the workplace. Not much has been done in order to retain girls into school. No

measures are being taken against parents who withdraw their daughters from school. Although legal age of marriage is stipulated by the government, people do not follow it.

**Formal Education on Adolescent Reproductive Health:** In Nepal, basic sex education is incorporated in the subject of Health, Population and Environment, but the provision of effective sex education is lacking (Pokharel, 2006). The current curriculum does not address RH issues (RHEPAS, 2009). Major gaps are seen on receiving information, skills and services on SRH issues not only in enrolling school adolescents but also in out of school adolescents (Regmi, 2008). The topics dealing with sexuality are not being covered (WHO, 2007a), resulting ignorance, myth and misconception on sexuality. This ultimately leads to unhealthy sexual practices leading STIs, TP, and unsafe abortions. Teachers are excluding sex education and FP topics. Additionally, they themselves perceive unqualified for teaching ARH.

The quote from one of the teacher responsible for teaching HE and RH in the survey conducted by Pokherel (2006) expressed the self incompetency on subject areas with certain demands and perceptions: "It would be more informative if the school arranges guest lecturers from HW for this subject or students to visit health centers. HW could explain this material more comfortably than teachers." Additionally, "There is no enough audiovisual material for learning about RH and sexuality. It is only the textbook that we have. I feel very shy so ask them to read it."

The life skills<sup>5</sup> education that enables teenagers to think, communicate, and make responsible decisions on life and health is lacking. Very few NGOs initiated life skills based education focusing on teenagers' SRH (Regmi, 2008).

**Exposure to Media:** Media can be an influencing factor for information or misinformation on sexual initiation (Collins *et. al.*, 2004). Teenagers could be bombarded with the conflicting messages from the media which could be beneficial or the other way around. If adolescents lack proper information about RH then it might be disastrous (UNAIDS, 2004). One survey in Nepal shows that males are more often exposed to media than females, so they have heard, seen or read about HIV/AIDS and STIs than females (WHO, 2007d). Additionally, another survey reported that the media like glossy magazines, TV and porn CDs, are easily accessible and it encourages sexual activities in adolescents (Regmi, 2010c).

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<sup>5</sup> WHO defines life skills as "abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life"

**Adolescent Health Seeking Behavior:** Teenagers tend to be ignorant about their body, safe sexual practices and issues related to RH. ICPD Cairo says “How can you possibly prevent pregnancy if you do not even know how fertilization takes place?” (Adjase, 1997). Teenagers may not disclose their problems to parents instead they consult peers who may provide ill advice. Additionally, many adolescent who become pregnant may not know about abortion legalization. This leads to the reluctance and fear, delay on seeking safe abortion services. Furthermore, private clinics may be acceptable for RH but may be unaffordable.

In Nepal, research shows that adolescent girls who have SRH problems do not seek medical services. When infected with STI, 25% of adolescent girls and 50% of adolescent boys treated themselves. Ironically, many girls consult a traditional healer (WHO, 2007).

#### **4.5 Public Policy Factor**

**Government Policies and Laws on Adolescent Reproductive Health:** Government of Nepal expressed its willingness for implementing ICPD-POA (International Conference on Population Development Programme of Action) in 1994 including FP (ICPD, 2000). Identification of ARH needs and strategy development and integration into a national RH package was done after this conference. In 1995, it participated in the Fourth International Conference on Women in Beijing and committed to “protect and promote the rights of adolescent’s access to sexual and reproductive health (SRH) information and services”. The FP programme was adopted in 1976 (NNFPP, 2006) and in 2002 access to contraceptives were made available for unmarried adolescents. A Regional Strategy for Adolescent Health (AH) and Development was developed. Special emphasis was given for developing programs related to RH focusing on adolescents through long term health plans like Ninth Five year plan and SLTHP. The National Reproductive Health Strategy was developed in 1998 in which the needs of ARH were identified and included into the RH package (NAHDS, 2000). Again the “Adolescent Health and Development strategy, 2000” and “Young People Development Programs, 2002” were formulated and then integrated RH into formal education (MOPE, 2002).

MoHP is the leading provider of RH and FP services. It is responsible for planning, implementation, monitoring, and supervision of all RH programs. In the same vein, it coordinates with donor support for implementation of RH programs and other activities like establishment of “Adolescent friendly clinics”, development of “The National Medical Standard for Reproductive Health”, “Adolescent Sub Committee Programs”, IEC/BCC programs, and the school curriculum. A comprehensive national adolescent health and development strategy was developed in order to address the issues related

to adolescents, providing health information and services with a safe and supportive environment. Similarly, intersectorial collaboration and gender perspective is emphasized to help programme succeed (NAHDS, 2000).

### **Programme Response:**

The Family Health Division (FHD) developed National Adolescent Health Development Strategy (NAHDS) with an objective of increasing accessibility and availability of AH information, and counseling services for adolescents for improving their legal and social status and building skills and opportunities for service providers. It coordinated with NGOs to create supportive environment for ARH and sensitizing teachers, parents, social leaders on AH. The need for linkage with HFs, and schools, was recognized and provision of AFHS and information were taken into considerations. Intersectorial collaboration, research on AH and gender issues were outlined (FHD, 2005).

An adolescent- friendly clinic (AFC) is established in one tertiary hospital and a few districts and orientation is given to HW of tertiary hospital. Training on ARH and counseling is provided for teachers, NGOs and school adolescents in the clinic vicinity. A health education (HE) program for adolescents of grade 6-10 on SRH is initiated in 55 districts covering 165 interaction sessions. Flip charts were developed and distributed to health facilities, NGOs and a radio program on ARH is launched. Six episodes of telefilms are produced were ARH issue. A curriculum focusing AH for 6-10 grade students were implemented (FHD, 2005). A project called "Sunaulo Pariwar" focusing on avoiding unwanted pregnancy is implemented in four districts of Nepal. Mobile clinics were set up. A project for improving adolescent girls' RH knowledge was implemented in one district. Literacy classes for out of school adolescent girls for six month were conducted by the same project for improving their decision making. Another project called "World Education" conducted a nine month education programme for out of school girls aged 10-14 years. This programme taught about early pregnancy, unsafe sex, and life skills. Similarly, AFHS is provided in 24 health facility in 1999 through a Save the Children project in which HW are trained. Similarly, termination of unwanted pregnancies is allowed for adolescents under certain circumstances.

### **Private and NGOs Contribution**

A number of NGOs recognizing the need of adolescents have emerged. Most of them are providing sexuality education. The main organizations are RH Initiatives for Youth in Asia (RHIYA), BP Memorial Health Foundation (BPMHF), Family Planning Associations Nepal (FPAN), Public Health Concern Trust-NEPAL (pfect-NEPAL), Sunaulo Pariwar Nepal (SPN) etc. Similarly, 108

private abortion sites are available for first trimester and two sites for second trimester (AHDN, 2005).

RHIYA is providing SRH for adolescents working on health seeking behavior in collaboration with MOHP. Partnership with BPMHF, Aama Milan Kendra, FPAN, phect- NEPAL, SPN. This project is implemented into 19 districts. It also worked for HW capacity building, peer education, and counseling to school teachers. It planned for establishing an AFHS delivery point and adolescent information centre. FPAN is providing FP services to adolescents in only five districts of Nepal and will be available for only certain periods as it is a project.

Nepal had a society called Nepal Medical Student's Society that implemented RH Education project for Adolescent in School (RHEPAS) where information related to RH is delivered through medical students. Medical students have the ability to deliver knowledge for adolescents without reluctance and shyness. Adolescents also listen intently to them and are not afraid to ask questions. The project was also involved in designing the curriculum. It was implemented in five districts of the *Bagmati* zone (RHEPAS, 2009).

Despite all these efforts in recognizing and solving problems associated with ARH, the country is not yet meeting the needs of its adolescents. The progress is slow. It is reported that the strategy still requires operationalization (FHD, 2005). The policy has not been implemented as it is envisioned in the government paper. No guidelines or proper budget allocation has been done to providing AFRH services and its integration into the health system. Adolescent health service centres for preventive and curative services are mostly allocated to urban tertiary hospitals. Even HW (working in higher and peripheral level) are not adequately trained for dealing with SRH issues of adolescents and teachers are reluctant to discuss SRH (FHD, 2005). The national plan of action on ASRH is not formulated (Sharma, 2010). In the same vein, there is no specific programme from the government for reducing early marriages and TP. Evidence shows that the country still has high TP and early childbearing. The implemented programs are focused on only specific districts rather than to the whole country, and the programs which were implemented in early 90s were not revised yet. Monitoring and evaluation of existing programs is not done. Public private coordination is very weak.

## **Chapter 5: Interventions and Best Practices to Reduce Teenage Pregnancy**

This chapter presents some examples of the main interventions that have worked for reducing TP. Reviews of the Cochrane and best practices guidelines from WHO are looked upon. For school curriculum UNESCO guidelines were analyzed. Further some specific countries experiences like India and USA that has been successful for TP prevention and reduction is put forward. Preference is given to programs implemented in recent years that have had an impact evaluation, and evidence from which Nepal could learn from. India is chosen as it has similar culture to Nepal and United States of America (USA) as they are having high TP rate among developed countries. But USA has experience on controlling this problem through varieties of programs to specific target group that has proved to be effective to some minority groups in evaluation. Nepal could learn from those program applied by USA.

### **5.1 Review of Evidences: Cochrane, WHO and Others**

WHO suggested some evidence based strategies for preventing TP in developing countries targeting policy makers, individuals, families and health system. These strategies are put forward in table at page 36.

The Cochrane reviews show, of 41 randomised controlled trial studies that enrolled 95,662 adolescents for intervention in preventing unintended pregnancies showed effective result when multifaceted approaches are applied. The intervention should focus both on sexual and non sexual factors like skill training and personal development. Pregnant teens, health sectors, parents and schools should work together for devising the culturally acceptable, evidence based programs. The main reviewed interventions that had been reported effective are:

- Sex and HIV education curricula,
- One –on- One clinician patient protocols in health care settings,
- In service learning programs
- Intensive youth development programme
- Skill building and contraception promotion (Oringanje *et. al.*,2010)

Community based peer education programme conducted in Cameroon for promoting contraceptive use, reduction of STI/HIV prevalence and unintended pregnancies among adolescents are also proved to be effective (Spieizer *et. al* 2003).



**Table 12: Evidence based strategies suggested by WHO for Teenage Pregnancy Reduction**

<b>Strategies</b>	<b>Policy Makers</b>	<b>Individuals, Families and Communities</b>	<b>Health System/NGOs</b>
A. Reduction in marriage before 18years	<ul style="list-style-type: none"> <li>• Early marriage (before 18yrs) prohibition</li> </ul>	<ul style="list-style-type: none"> <li>• Keeping/retaining girls in school</li> <li>• Community leaders including related stakeholders should change the norms that enforce early marriages.</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing life skills, autonomy, self esteem, mobility, sex education and decision making abilities.</li> </ul>
B. Creating support for adolescent pregnancy reduction	<ul style="list-style-type: none"> <li>• Supporting pregnancy prevention programs for adolescents</li> </ul>	<ul style="list-style-type: none"> <li>• Sex education for adolescent girls and boys,</li> <li>• Building community support for early pregnancy prevention,</li> <li>• Involving mothers in law for ensuring support and utilization of adolescent services.</li> </ul>	<ul style="list-style-type: none"> <li>• Providing special information, contraceptives and fulfilling psychological need of adolescent girls (married and unmarried) seeking health care</li> </ul>
C. Increasing Use of Contraception	<ul style="list-style-type: none"> <li>• Making contraceptive related information and services accessible to adolescents (married and unmarried).</li> <li>• Reducing the cost of contraceptive for adolescents for overcoming the teenage pregnancy and other consequences.</li> </ul>	<ul style="list-style-type: none"> <li>• Educating adolescents regarding use of contraceptives.</li> <li>• Building community support on contraceptive provision to adolescents</li> </ul>	<ul style="list-style-type: none"> <li>• Enabling adolescents for obtaining contraceptive by providing responsive and adolescent friendly services from health workers.</li> </ul>
D. Reduction of coerced sex	<ul style="list-style-type: none"> <li>• Enforcing law against coerced sex and punishing perpetrators.</li> <li>• Provision of safe and supportive service for victims seeking justice.</li> </ul>	<ul style="list-style-type: none"> <li>• Empowering adolescent girls to resist coerced sex and for seeking effective assistance.</li> <li>• Developing and implementing programs for building self esteem, life skills and improving social networks that helps girls in refusing unwanted sex.</li> <li>• Changing norms (esp. gender) that condone coerced sex.</li> <li>• Engaging men for critically analyzing negative effects of gender based violence and coercion on adolescent girls for changing their attitude and behaviors.</li> </ul>	<ul style="list-style-type: none"> <li>• Designing and implementing programs for empowering girls for dealing with domestic violence.</li> </ul>
E. Proper documentation of teenage pregnancy, abortion statistics and its complications			

**Source: WHO, 2012b**

## **5.2 United Nations Educational Scientific and Cultural Organizations' (UNESCO) Curriculum Guidelines**

UNESCO sets out the major characteristics of curriculum that are evaluated and proved to be effective for improving sexual behaviors of adolescents throughout the world. They argued that the curriculum should have following content:

- Clear goals for preventing unintended pregnancy providing evidence on the risk of having unprotected sexual activities and methods of protection,
- Focusing on risky sexual and protective behavior addressing situations that can lead to unwanted pregnancies and are amenable to change through curriculum based programs;
- Clear messages on STIs, pregnancy reduction and participatory teaching method with educationally sound activities targeting risk perception (engaging in sexual activities, having multiple partners) and risky behavior reduction;
- Address individual and peer norms and skills regarding contraception use;
- Logical sequence of topics.

The following steps should be undertaken for designing an effective curriculum:

- Involving experts on human sexuality research, behavior change and pedagogical theory;
- Assessment of RH needs and behavior of adolescents for developing logical model specifying health goals, risk and protective factors and required activities for changing those behaviors;
- Designing activities sensitive to the values of the community and consistent with available resources;
- Planning for pre-testing the program and regular monitoring and feedback collection on fulfilling the target (UNESCO, 2009a).

## **5.3 India**

India has similar cultures, norms and values to Nepal. Therefore, Nepal can learn from India. India ran a comprehensive programme for preventing maternal deaths focusing preventing early pregnancies, unsafe abortions etc. India took three measures:

- Health service reorientation for making health services accessible for adolescents during their need;

- Communication strengthening in order to generate demand from adolescents on health service and gain support from community for service provision;
- Strengthening Health Management Information System in order to gather, report indicators of adolescent SRH for program sharpening.

In order to make AFHS national standards and guidelines were developed to train HW specifying the services that need to be provided through respective providers at certain delivery points. Criteria for making information adolescent-friendly were set and adopted. The major criteria are: training of at least one service provider for AFHS and operating clinic at least once a week with regular supplies of medicines and maintenance of records (WHO, 2008c).

Another program called the "Better life Option" targeted for out of school women aged 12-20 years residing in rural areas and peri-urban slums was implemented. It provided informal education linking with formal education, health education, vocational skills, RH service accessibility and empowerment through awareness and advocacy. Evaluation shows that girls participating were more likely to delay marriage, use contraception, have few children, have greater self esteem, and tended to employ and utilizes health services. This program also focuses on developmental needs of adolescent girls by promoting social changes targeting parents, families, the community, and community leaders through education programs (WHO 2007d).

#### **5.4 United States of America**

**Safer Choice:** It is a high school adolescent focused program dealing with HIV/STIs and pregnancy. The program has components like: school organization, curriculum development, staff training, peer education, school environment, parental education and school-community linkages. The programme established a "School Health Promotional Council" involving parents, teachers, students' community representatives, administrators, for planning and conducting programme activities. Regular publication of newsletter consisting of tips on talking about HIV/STIs and focusing parents is done. Assignments on gathering information outside of school on support services and local resources for enhancing school and community linkage is carried out (ACOG, 2007).

**Teen Health Centre Program and Young Women Clinic:** These are clinics targeted for adolescent services provided by social workers and nurses. The program has six components: three taking place in school, and the remaining in the clinic. Activities for school include presentations, discussion on sexual activities, pregnancy and contraceptives, and

counseling (one-to-one). Group discussions are carried out in health suite where related books and games are available for adolescents. Health facilities provide RH services, contraceptives counseling and provision (ACOG, 2007).

## **5.5 Zimbabwe**

A program review by Speizer *et. al.*, (2003) revealed that mass media could help in promoting message on RH. The 'Youth Responsibility Project' is carried out in Zimbabwe targeting both individuals and communities. It provided a multimedia campaign for youth covering areas on RH topics that created discussion between youth and parents, and amongst youth. Training in interpersonal communication and youth counseling skills for service providers is provided. Evaluation findings showed that the program is reached broadly in rural areas. It is found that abstinence from sex, having fewer sexual partners, use of contraceptives and service of clinics increased significantly. Health seeking behaviors of groups who are less likely of seek services also increased.

## Chapter 6: Discussion, Conclusions and Recommendations

### 6.1 Discussion

The literature review showed that TP is not a random event but is influenced by various interrelated factors causing varieties of consequences. Nepal, though having sufficient **policies** for working on adolescent reproductive health (ARH), these are **not implemented as envisioned into the document**. The cultural practices such as **early marriages** contribute to adolescents engaging into early sexual activities resulting high adolescent birth rate (ABR) with consequences such as school dropout, unsafe abortion and other health consequences. Nepal has law prohibiting marriage before 18, but is not being enforced properly. Guidelines against punishing people who violate the law and an integrated effort from different sectors overcoming this situation are under considered. Girls are undervalued therefore resources are also unequally distributed between sons and daughters. The government lacks policies for overcoming this restrictive gender role.

**National policies and legislation on social protection** is not adequately ensured on the rights of adolescent girls (UN, 2011). Provision of education differs, and removing daughters from education when they reach secondary level so they can engage in economic activity or marry earlier is high. Though, government has a minimum education policy (nearly free) up to secondary level, a huge gap on educational attainment exists between girls and boys (NAYS, 2011; UNESCO and IIEP, 2009). Furthermore, only 15% of total budget is allocated to education (UNESCO and IIEP, 2009). This minimum payment requirement is also contributing to taking out girls from school as families do not want to invest in girls.

The **reluctance on communication between parents and children, teacher and students** about sexual issues, adolescent and health workers, peer pressure are also indirectly uplifting increased sexual behaviors or unsafe sexual practices among adolescents. Parents believe that discussion about sexuality creates curiosity in adolescents which will make them more likely to engage in sexual behavior. But research from WHO showed that adolescents who gained sex education delayed sexual debut.

Although the GoN has a well-documented **adolescent health policy and strategy**, the system is not articulated well and is not adolescent-friendly. Clear guidelines for providing AFHS on RH and information are lacking. For sexuality education; teachers are not trained enough and are reluctant to discuss RH issues with students and HW are even not cooperative for providing services including contraceptive. The ARH services are

incorporated into the general health services but the opening times of both school and the health facilities is same. Although, teenagers having a good knowledge on HIV/AIDS and STIs and know about at least one contraceptive method, problem like engaging in unsafe sexual behavior and seeking unsafe abortion service is high. Health related programme targeted for adolescent and youth through media has also inadequate coverage (NDHS, 2011).

Convention on Right of Child stated "Adolescent girls must have **access on information** regarding negative impact of early marriage and early pregnancy and those who become pregnant should have access to health services sensitive to their particularities". But in Nepal access to these both areas are inadequate. For e.g. wide variation in institutional deliveries among adolescents on the basis of residence is seen. Only 13% rural adolescent experience institutional delivery comparing to 70% among urban (WHO, 2007d). The coordination among the MoHP, Ministry of Education (MoE), Ministry of Justice (MoJ), Ministry of Labour (MoL) and other agency dealing with issues of adolescent girls is lacking. Sustainable and powerful adolescent SRH initiatives implementation plan is also lacking.

The **projects targeted at adolescent health** are running only in few specific districts and not expanded within the country. The working span of these projects is short ranging from six month to maximum two years. The programs which are very effective like 'World Education' and 'RHEPAS' are implemented until only for certain duration without continuation. Furthermore, monitoring, impact evaluation is not carried out in some AH programme. Therefore, some gaps and bottlenecks on addressing ARH issues by Nepal government is seen. Unawareness about sexuality and the unavailability of ARH services are the major one.

For controlling the high risk, a **Cochrane review** suggests concurrent use of multiple interventions such as sex education, provision of AFHS, skill building, contraceptive promotion (Oringanje *et. al.*, 2010). First of all, Nepal needs to monitor the age of marriage of adolescents girls and publicize the existing laws. The harmful taboos of the society should be targeted for change. Because cultural and social norms and values plays a vital role in molding and guiding adolescents' behavior. The GoN should support for retaining girls at school and provide opportunity for employment after education completion (WHO, 2007d). Each adolescent must be informed about their right to access of health care services.

**Early marriages are compounded by many social factors:** Adolescent married girls in Nepal are likely to receive extremely limited food, becoming least important member in family, having too little education, too little employment opportunities and finally too little choices for everything (Smith,

2002). This should be overcome by designing multi sectorial programme for protecting right of adolescent girl, designing girls retention strategies in school, providing life and income generating skills in coordination with MoHP, MoJ, MoL, MoE, NGOs as in India. Because TP is a complex problem and could not be solved only by health and education sector. It requires comprehensive programme designing and implementation. The consequences of early marriages must be publicized through schools, local youth forum, mass media, and community and satellite clinics. As mass media is accessible for 90% of Nepalese people (WHO, 2007e), a regular programme on unprotected sexual behaviors and its consequences on adolescents like in Zimbabwe should be initiated. The contraceptives information and services should be made widely available for both married and unmarried adolescents.

**Adolescents who are unable to recognise their sexual and reproductive health needs** delays seeking care for AHS. Therefore, awareness on varieties of ARH issues should be delivered to adolescents vigorously through, school, media. Participatory method should be applied for discussing issues on sexuality. Training and refresher training for teachers, local leaders, headmasters, HW, on dealing with adolescents should be conducted regularly in cooperation with government, NGOs (USAID, 2004; Speizer, Magnani & Colvin, 2003). Nepal has high female adolescent dropout rate so the "Best life skill programme" of India should be implemented (Speizer et.al., 2003).

As a woman in developing country might face **death risk up to 250 times greater by seeking unsafe abortion service** from unskilled, untrained abortionist than those of having access to skilled provider in hygienic condition, safe abortion services should be made accessible (GoN, WHO, CREHPA, 2006). Negative perception on abortion to unmarried adolescent girls by HW, even though legalized, is also a challenge that results in them seeking unsafe abortion and ending up in hospital due to severe complications. So, abortion service could be provided as in Netherlands like pregnancy examination and counseling from a general practitioner without parental consent and then referral to a midwife or abortion clinic as required. This can help in early decision making on continuing or terminating pregnancy (WHO, 2007d). In the case of Nepal which is different from The Netherlands, first line service could be provided by PHCCs and then referral to the abortion clinics. Barriers like cost could be leveraged by coordinating with government, private providers and donors. The coordination between private health institutions could be done for service provision. Contraceptive services should be made available to unmarried adolescents free of cost within their gathering areas and facilitate for them to use it.

**Service providers working at all levels required to be trained in ARH** issues and dealing with adolescents for reducing their reluctance. They should be made aware on national policies on ARH and adolescents' right to receive AFHS. Integrating ARH programs with school and HF like in USA should be implemented for improving knowledge, attitude and skills on sexual behaviors and regular gynecological examination and conseling (Speizer, Magnani & Colvin 2003). The available health services should be more friendly, gender sensitive for adolescents ensuring confidentiality. Schedule for adolescent service could be maintained and confidential access to family planning could be made available.

Similarly, the **programmes related to changing negative attitudes** of adolescent boys regarding condoms should be implemented. Peer health education program covering areas like safer sex skills and the appropriate age of first being sexually active should be implemented as in Cameroon. Gender relations should be improved and changed and equity must be promoted through redefining social systems (UNAIDS,2004) because literature suggests that females are facing coerced sex due to unequal power relations. Girls should be taught problem solving, decision making and negotiation skill in order to make them able to have clear vision for their future. Scholarships for girls even in secondary education that covers costs for fees, uniforms, and books should be provided (Mensch *et. al*, 1998). For out of school adolescents program involving adolescents themselves covering integrated issues relevant to their lives in partnership with community organizations, cultural and religious groups, and families should be implemented (SIECCAN, undated). Existing health services focused on ARH should be improved by linking with schools and training for service provision focusing gender sensitivity. Workplace based ASRH programs focusing on RH activities like condom distribution in brothels, and providing educational and motivational videos for SW, should be implemented for reaching out of school adolescents.

The **strengthening of National Health sector response** to adolescents' health and development could be done through application of following WHO's systematic strategy (Source: WHO, 2009).

<b><u>National Level</u></b>	<b><u>District Level</u></b>	<b><u>Health Facility Level</u></b>
Situation Analysis/ Rapid Programme Review  Health Sector strategy development within a multi sectorial strategy  National Quality Standards development  Approved national standards dissemination to the regional/ district level  National plan development and national scale up plan	Orientation of district leaders  Orientation of district health management team  District level mapping exercise  Development of district scale up plan  Orientation of health facility mangers	Orientation of Health facility staff  (Self-) assessment of quality to identify areas where quality is low  Development of plan to improve quality



## **6.2 Conclusions**

Therefore Nepal demands a special focus on ARH as Nepalese adolescents are involving in high risk behaviors resulting in problems like TP and unsafe abortion. Adolescents are in urgent need of support and guidance to avoid high risk behaviors. Hence, universal access to information, skills for enabling them makes informed choices is required.

The best intervention strategy to address SRH need of adolescent is providing comprehensive sexuality education with broad range of topics and accessible, affordable, acceptable AFHS with sexuality counseling targeting married, soon to be married and unmarried adolescents. For reduction of TP, a comprehensive school, home, health facility, society's interventions at large is required. Because most direct determinant for sexual behavior in adolescent is determined by environment he/she raised upon. Prevention should be evidence based education programs supported by interventions among parents, partners, peers, societies and health system as discussed in Chapter 6. Some of the programs like providing health services timely in school and gynecological check-ups for out of school adolescents is also possible. Therefore, Nepal needs to decide on mix of interventions and move forward to control the issue of teenage pregnancy.

## **6.3 Recommendations**

### **For Policy Makers and Ministry of Health and Population**

Collaboration intensively with Ministry of education, Ministry of Justice, Ministry of labor for developing and implementing programs related to girls education retention, prohibition of early marriages and gender based violence. Media should be use for generating awareness by designing related programs such as drama, focus group discussions. Development of Information Education Communication (IEC) materials including flyers could be made in coordination with National Health Education Information Communication Centre.

Availability of AFHS in school and health services and outreach programme for out of school adolescents for awareness, counseling and gynecological checkups in coordination with media and health facilities. Making contraceptives available to youth in gathering areas. Provision of awareness on abortion legalization and services on safe abortion in coordination with private partners.

Regular provision of training to peripheral health workers on dealing with ARH problem and counseling skills as they are the first line of contact in coordination with National Training Centre (NTC).

## **Family and Community**

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Involving particularly men and mothers' in law for ensuring their acceptance and support for adolescent reproductive health service utilization with the help of media. Dissemination of information about teenage pregnancy, its complications to pregnant adolescents and community for avoiding early marriages through media, public discussion.

Provision of life skills and sexuality education for increasing decision making power, autonomy to adolescent girls. Newly wed adolescent should be targeted for delaying their first pregnancy.

## **Health Workers**

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Ensuring availability of contraceptives in easily approachable areas and minimizing the barriers for accessibility.

## **Ministry of Education**

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Provision of adolescent reproductive health (ARH) lesson in school through health workers like doctors or nurse who can talk about sexuality topics for delivering the ARH. This should be done in coordination with Ministry of health and Population (MoHP).

Revision of curriculum following guideline of UNESCO. Capacity building and regular training of teachers on dealing adolescent sexual and reproductive health issues who will handle the subject matter in absence of HWs in coordination NTC and MoHP. Designing and incorporation of importance of female education in order to retain girls in school.

## References

- Acharya, D. R., Bhattarai, R., Poobalan, A., van, T. E. R, Chapman G., (2010). Factors associated with teenage pregnancy in South Asia: a systematic review. *Health Science Journal* Vol.4 Issue 1. [online]. Available from: <http://www.hsj.gr/volume4/issue1/402.pdf> (Accessed January 12,2012).
- Acharya, D.R., Teijlingen, E.R.V., Simkhada, P. (2009). Opportunities and Challenges in school based sex and sexual health education in Nepal, *Kathmandu University Medical Journal*, Vol. 7, Issue 28, 445-453.
- Adhikari, R., (2009). Factors affecting awareness of emergency contraception among college students in Kathmandu, Nepal. *BMC Women's Health* 9:27. (Online). Available from: <http://www.biomedcentral.com/1472-6874/9/27> (Assessed March 12,2012).
- Adhikari, R., Tamang, J., (2009). Premarital Sexual Behavior among male college students of Kathmandu, Nepal, *BMC Public Health* 2009,9:24.
- Adjase, E.T., (1997) *Teenage sexuality, unwanted pregnancy and the consequences of unsafe abortion in Sunyani District, Ghana* Health Care training, Royal Tropical Institute.
- Adolescent Fertility: Socio Cultural Issues (1998). *SD dimensions* Sustainable Development Department (SD), Food and Agriculture Association of the United Nations (FAO). [online]. Available from: <http://www.fao.org/SD/WPdirect/WPan0024.htm> (Assessed June 25, 2012).
- Adolescent Nutrition: A review of situation in selected south-east Asian Countries* .[online]. Available from: [http://www.searo.who.int/LinkFiles/Nutrition for Health and Development 3-General Information About Adolescents.pdf](http://www.searo.who.int/LinkFiles/Nutrition%20for%20Health%20and%20Development%203-General%20Information%20About%20Adolescents.pdf) (Assessed July 20, 2012).
- Africa Health (2012). Premature birth rates in most of the world.[online]. Available from: [http://www.africahealth.com/articles/july\\_2012/Newsdesk.pdf](http://www.africahealth.com/articles/july_2012/Newsdesk.pdf) (Assessed, August 1,2012).
- Alvaraez, B.C (2010). *CHILD ABANDONMENT DISCRIPTIONS* .[Online]. Available from: <http://www.livestrong.com/article/160816-child-abandonment-description/> (Assessed, July 30, 2012).
- Anteghini, M., Fonseca, H., Ireland, M., Blum, R.W., (2001). Health Risk behaviours and associated risk and protective factors among Brazilian adolescents in Santos, Brazil. *Journal of Adolescent Health*, 28, pp.295-302.

Asia Child right (2003). *NEPAL: Young Nepali Girls Haunted by Death at Child Birth [Feature]*. *Asia Child Rights: A comprehensive Portal on Child Rights in Asia from AHRC News letter*, Vol.2, No.43. [online]. Available from: <http://acr.hrschool.org/mainfile.php/0150/229/> (Assessed June 15, 2012).

Asian Development Bank (1999). Country briefing paper: Women in Nepal. Kathmandu: ADB.

Bellamy,C., (2000). The progress of nations 2000. *The United Nations Childrens Fund (UNICEF)*. [Online]. Available from: [http://www.unicef.org/publications/files/pub\\_pon2000\\_en.pdf](http://www.unicef.org/publications/files/pub_pon2000_en.pdf)

Berglas,N., Brindis,C., Cohen,J.,(2003). Adolescent Pregnancy and Childbearing in California. California: California Research Bureau.

*Best practices in Teen Pregnancy Prevention, Practioner Handbook* (2004). University of California Agriculture and Natural Resources .[Online]. Available from: <http://ucce.ucdavis.edu/files/filelibrary/5074/15899.pdf> (Assessed April 2,2012).

Bhattarai, T. (2012). "Unsafe, Illegal Abortion Persists in Nepal despite Legalization" *GLOBAL PRESS INSTITUTE*, 27<sup>th</sup> June 2012:p1.[online] .Available from: (<http://www.globalpressinstitute.org/global-news/asia/nepal/unsafe-illegal-abortion-persists-nepal-despite-legalization>) (Assessed June10, 2012).

Braine, T. (2009). Adolescent Pregnancy: a culturally complex issue, *Bulletin of World Health Organization*. [Online]. Available from: <http://www.who.int/bulletin/volumes/87/6/09-020609/en/index.html> (Assessed July 9, 2012).

Bloom\_S.S., Lippeveld, T., Wypij, D.,(1999) Does antenatal care make a difference to safe delivery? A study in urban Uttar Pradesh, India. *Health Policy and Planning*,14(1):38-48.

Central Bureau of Statistics (2002) Population Census 2001.Kathmandu.CBS.

Central Bureau of Statistics (2011) National Census 2011.Kathmandu.CBS.

Cherry, A. L., Byers, L., & Dillon, M. (2009). A Global Perspective on Teenage Pregnancy . *Maternal and Child Health*. (J. Ehiri, Ed.)*Security*, 375-397. Boston, MA: Springer US. doi:10.1007/b106524.

Christian. P., (2008). Miscarriage but not stillbirth rates are higher among younger nulliparas in rural Southern Nepal. *J Adolesc Health*. Jun;42(6):587-95. Epub 2008 Mar 4.

Choe, M.K., Thapa, S., Mishra, V., (2004). Early marriage and early motherhood in Nepal. *Journal of Biosocial Science*.00,1-20. (Online).

Available from:

<http://www.eastwestcenter.org/research/pophealth/mishrav/Docs/Recentpubs/MarriageNepalOnlineJBS.pdf> (Assessed April 12,2012).

Coffey, L.T., (2008). "Survey: Unprotected sex common among teens", *TODAY Parenting*, 19<sup>th</sup> November, 2008. [Online]. Available from:

[http://today.msnbc.msn.com/id/27706917/?GT1=43001#.T\\_l8DaZ\\_PmZ](http://today.msnbc.msn.com/id/27706917/?GT1=43001#.T_l8DaZ_PmZ) (Assessed June 12, 2012).

Collins, R.L., Willott, M.N., Berry, S.H., Kanouse, D.E., Kunkel, D., Hunter, S.B., Milu, A., (2004). Watching sex on television predicts adolescent initiation of sexual behavior, *Pediatrics*,114(3), pp e280-e289. [online].

Available from: <http://www.pediatricsdigest.mobi/content/114/3/e280.full> (Assessed March 12, 2012).

Dangal, G (2005). An Update on Teenage Pregnancy, *The Internet Journal of Gynecology and Obstetrics*, ISSN: 1528-8439 .[Online]. Available from:

<http://www.ispub.com/journal/the-internet-journal-of-gynecology-and-obstetrics/volume-5-number-1/an-update-on-teenage-pregnancy.html> (Assessed June 1, 2012).

Dhital, M. (2006). Nepalese still receive unsafe abortion, lack of access and information limits effectiveness of legalization. *Ohmy News International*, January 31 .[online]. Available at:

[http://english.ohmynews.com/articleview/article\\_view.asp?article\\_class=3&no=271833&rel\\_no=1](http://english.ohmynews.com/articleview/article_view.asp?article_class=3&no=271833&rel_no=1) (Assessed June 6,2012).

Dixit, H.(1998) Nepal's Quest for Health. 2<sup>nd</sup> ed. Jamal: Educational Book Publishing (P) Ltd. [Online]. Available at:

<http://www.hdixit.org.np/quest/quest.htm> (Assessed January 3,2012).

Family Health Division (2000). Department of Health Services. Ministry of Health. Government of Nepal. *National Adolescent Health and Development Strategy*.

Family Health Division (2005). Adolescent, Health and Development in Nepal; Status, issues, Programmes and Challenges, a Country Profile. Government of Nepal, Department of Health Services, Family Health Division.

Family Health International (2004). Maternal Health Care among Adolescents: Pregnant adolescents need appropriate services to prevent death and disability. *YouthLens on Reproductive Health and HIV/AIDS*. No 11 in series .[online]. Available from: (<http://www.fhi360.org/NR/rdonlyres/e4pv7pspysf7w2hzjllfi24ubggfdsajbp3gdnj7w4cwefzpjibr4dwn2sscbscik2xhtuzapkooyhl/YL11e.pdf>) (Assessed\_June 4,2012).

Forum for Women Law and Development (2002). Reforms incorporated in the Country Code (Eleventh amendment) Law. [online]. Available at <http://www.fwld.org.np/11amend.html> (Assessed January, 2, 2012).

Francoeur,R, T.,Noonan, R,J., (2004). *The Continuum Complete International Encyclopedia of Sexuality: Updated with more countries*. [online]. Available from: <http://www.kinseyinstitute.org/ccies/pdf/ccies-nepal.pdf> (Assessed June 3,2012).

Girl Effect (2012). The Girl Effect Data:Why should we pay attention to Girls? .[online]. Available from: [http://www.girleffect.org/uploads/documents/1/Girl\\_Effect\\_Fact\\_Sheet.pdf](http://www.girleffect.org/uploads/documents/1/Girl_Effect_Fact_Sheet.pdf)( Assessed August 1, 2012).

Glasier,A., Glomezogh, A.M., Schmid, G.P., Moreno, C.G., Van, P.F.A.L., (2006). Sexual and Reproductive Health: A matter of life and death, *Lancet* 2006 Nov 4;368(9547):1595-607.

Global Press institute (2012). "Unsafe, illegal Abortions Persists in Nepal Despite Legalization" *TrustLaw A THOMSON REUTERS FOUNDATION SERVICE*, 27 February,2012.

Government of Nepal (GoN), World Health Organization (WHO),Centre for Research on Environment Health and Population Activities Nepal (2006) Unsafe Abortion: Nepal Country Profile.

Grady, W.R., Klepinger, D.H., Billy, J.O.G., (1993). The influence of community characteristics on the practice of effective contraception. *Family Planning Perspective* 25(1):4-11.

Greenwell. K.F., (1996). Contraceptive method mix menu: providing health choices for women. *World health statistics quarterly* 42(2):88-93.

Gubhaju,B.B.,(2002). Adolescent Reproductive Health in Asia, *Asia –Pacific Population Journal*, Vol.17,No. 4.[online]. Available from: <http://www.iussp.org/Bangkok2002/S30Gubhaju.pdf> (Assessed June 15,2012).

International Planned Parenthood Federation (2000). IPPF Charter on Sexual and Reproductive Rights. ISBN 0860891097. A Banson production, p52.

International Planned Parenthood Federation (2006). Death and Denial: Unsafe Abortion and Poverty. UK. [online]. Available from: [http://www.ippfwhr.org/sites/default/files/files/Death\\_Denial\\_EN.pdf](http://www.ippfwhr.org/sites/default/files/files/Death_Denial_EN.pdf) (Assessed June 3, 2012).

Kafle, P.P., Pakuryal, P.N., Regmi, R. R., Luintel, S., (2010). Health problems and social consequences in teenage pregnancy in rural Kathmandu Valley *Nepal Med Coll J*, 12(1): 42-44.

Ketting, E., (2012). Sexual and Reproductive Rights and Sexual Health [Handout] Sexual and Reproductive Health, Royal Tropical Institute, Amsterdam, 16<sup>th</sup> May.

Karki, C., (2004). Study of young people attending an adolescent friendly centre. *Kathmandu University Medical Journal (KUMJ)*. 2(4): pp.324-330.

Katz, J., Khatry, S.K., LeClerq, S.C., Shrestha, S.R., West, K.P. J.r., Christian, P., (2008). Miscarriage but Not Stillbirth Rates are Higher among Younger Nulliparas in Rural Southern Nepal, *Journal of Adolescent Health* 42(2008) 587-595. [online]. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/18486868> (Assessed January 12, 20112).

King, T., Fullard, W., (1982). Teenage mothers and their infants: new findings on the home environment, *Journal of Adolescence* Vol.5, Issue 4, pg 333-346.

Kolencherry, S., (2004). *Sexual and Reproductive Needs of Young People: A study examining the fit between needs and current programming responses in India*. Doctor of Public Health, University of Bielefeld. [online]. Available from: [http://www.researchgate.net/publication/36448922\\_Sexual\\_and\\_reproductive\\_health\\_needs\\_of\\_young\\_people\\_a\\_study\\_examining\\_the\\_fit\\_between\\_needs\\_and\\_current\\_programming\\_responses\\_in\\_India](http://www.researchgate.net/publication/36448922_Sexual_and_reproductive_health_needs_of_young_people_a_study_examining_the_fit_between_needs_and_current_programming_responses_in_India) (Assessed June 16, 2012).

Lilly Memory Banda-Maliro (2001). Factors influencing adolescent pregnancy in Malawi; implications for the adolescent reproductive health programme. Royal Tropical Institute: Amsterdam.

Limmer, M., (2008). Addressing young people's sex and alcohol use: Its about aspiration not information. *Education and Health*, 26, 38-39.

March of Dimes, PMNCH, Save the Children, WHO. Born Too Soon: The Global Action Report on Preterm Birth. Eds CP Howson, MV Kinney, JE Lawn. World Health Organization (2012) Geneva , IBSN 978 92 4 150343 3. [online]. Available from: [http://www.who.int/pmnch/media/news/2012/preterm\\_birth\\_report/en/index.html](http://www.who.int/pmnch/media/news/2012/preterm_birth_report/en/index.html) (Assessed July 2, 2012).

Marston, C., King, E., (2006). Factors that shape young people's sexual behavior: a systematic review. *Lancet*. Nov 4; 368 (9547):1581-6.

Mathur,S., Malhotra,A., Mehta,M.,(2001). Adolescent girls' life aspiration and reproductive health in Nepal. *Reproductive health Matters*, Vol. 9,No.7.

Mazur, L. A. High Stakes (1997). The United States, global populations and our common future. New York: The Rockefeller foundation.

Mensch,B.S., Bruce,J., Greene,M.E.,(1998). The Uncharted Passage: Girls adolescence in the Developing World. *Population Council*.

Ministry of Health and Population (2000). National Adolescent Health And Development Strategy. Family Health Division.Department of Health Service.Kathmandu. MoHP.

Ministry of Health and Population (2005). Adolescent Health and Development in Nepal: Status, Issues, Programmes, and Challenge, A country profile. Department of Health Service, Family Health Division.Kathmandu: MoHP.

Ministry of Health and Population (2011). Nepal Adolescent and Youth Survey: Highlights. Population division. Government of Nepal. Kathmandu: MoHP.

Miller,B.C., Benson,B., Galbraith,K.A.,(2001). Family relationships and adolescent pregnancy risk: A research synthesis. *Developmental Review*,21,1-38.

Ministry of Population and Environment (2002). Country Report. *Fifth Asian and Pacific Population Conference*, Bangkok, Thailand.

Millennium Development Goals Indicators [no date] The official United Nations site for the MDG Indicators.[online]. Available from: (<http://mdgs.un.org/unsd/mdg/Metadata.aspx?IndicatorId=0&SeriesId=761>) (Assessed February 3,2012).

NAYA (2011) Nepal Adolescent and Youth Survey (2010/2011) Highlights, Government of Nepal, Department of Health Services, Ministry of Health.



Nepal. Department of Health Services (2011). *Annual Report*. Ministry of Health and Population, Government of Nepal. [Online]. Available from: [http://dohs.gov.np/sites/default/files/1/files/Annual\\_Report\\_2066\\_67.pdf](http://dohs.gov.np/sites/default/files/1/files/Annual_Report_2066_67.pdf) (Assessed date: 2009/2010).

Nepal. Nepal Health Research Council (2009). Epidemiological Study on Injury and Violence in Nepal. [Online]. Available from: <http://www.nhrc.org.np/reports/Injury%20and%20Violence.pdf> (Accessed January 1, 2011).

Nepal. Ministry of Health and Population (2010). *NEPAL HEALTH SECTOR PROGRAMME IMPLEMENTATION PLAN II (NHSP -IP 2) 2010 – 2015*. Government of Nepal. [Online]. Available from: [http://www.unfpa.org/sowmy/resources/docs/library/R090\\_MOHNepal\\_2010\\_NHSP-IP-II\\_Final\\_Apr2010.pdf](http://www.unfpa.org/sowmy/resources/docs/library/R090_MOHNepal_2010_NHSP-IP-II_Final_Apr2010.pdf) (Assessed December 2,2011).

“NEPAL: The hidden costs of early marriage”, *Safe world for women (SWFW)*. [online]. Available from: <http://www.asafeworldforwomen.org/children/c-central-and-south-asia/ch-nepal/2686-nepal-hidden-costs-of-early-marriage.html> (Assessed June 15,2012).

Nepal National Family Planning Programme. (2006). Reposting Family planning, strategic review of the Nepal National Family planning Programmes, National Report. Kathmandu, Nepal.

New Era and Government of Nepal, Nepal (2011) Nepal Demographic Health Survey, Nepal: New ERA/MoHP.

Nepal: Rising number of abandoned children (2003). *Asia Child Rights Weekly Newsletter* Vol. 2, No. 10. [online]. Available from: <http://acr.hrschool.org/mainfile.php/0117/86/> (Assessed June 2, 2012).

Nepal Matribhumi Khabar.Com (2012). *65 Teenagers a day go for abortions in Nepal*. [Online]. Available from: <http://www.nmkhabar.com/index.php/en/health/594-65-teenagers-a-day-go-for-abortions-in-nepal> (Assessed July 2, 2012).

Neupane,S., Nichols,D., (2002). HIV/AIDS and Other Sexually transmitted Infections in Nepal: Knowledge and Beliefs among Urban Youth, NAYA report series No.14 (Kathmandu, Family Health International).

NIE, Erie times News (2001). *Substance Abuse and teen Pregnancy (undated)*. [online]. Available from: <http://www.goerie.com/substanceabuse/index.html> (Assessed June 2, 2012).

Obermeyer, C. M., (1993). Culture, maternal health care and women's status: a comparison of Morocco and Tunisia. *Studies in family planning* 24(6):354-365.

Oringanje, C., Meremikwu, M.M., Eko, H., Esu, E., Meremikwu, A., Ehiri, J.E., (2010). Interventions for preventing unintended pregnancies among adolescents (Review). *THE COCHRANE COLLABORATIONS*. Wiley Publication.

Parakhi (2012a). "Health survey reveals 65 teen abortions a day", *PARAKHI( Knowledge You Can Trust)*, 8 Jan 2012 .[Online]. Available from: (<http://www.parakhi.com/news/2012/01/08/health-survey-reveals-65-teen-abortions-a-day>) (Assessed March 2, 2012).

Parakhi (2012b). "Legal abortions increase in Nepal", *PARAKHI( Knowledge You Can Trust)*, 4 Feb 2012. [online]. Available from: <http://www.parakhi.com/news/2012/02/04/legal-abortions-increase-in-nepal> (Assessed May 2, 2012).

Pachauri, S., Santhya, K.G., (2002). Reproductive Choices for Asian Adolescents: A focus on Contraceptive Behavior, *International Family Planning Perspectives* Vol.28, No. 4.

Parajuli, K. (2011). "Nepal: record in abortions among teenagers. Proposal to revise law" *AsiaNews.it (Asia, our common task for the Third Millennium)*, 19<sup>th</sup> July 2011. [Online]. Available from: <http://www.asianews.it/news-en/Nepal:-record-in-abortions-among-teenagers.-Proposal-to-revise-law-22135.html> (Assessed May 5, 2012).

Peckham, S (1993). Preventing Unintended Teenage Pregnancies. *Public Health* 107, 125-133.

Plourde, K. (2012). "The Stories Behind the Statistics: Adolescent Pregnancy" *Impatient Optimists (BILL and Melinda GATES foundation)*, 15<sup>th</sup> June, 2012: p.1. [online]. Available from: (<http://www.impatientoptimists.org/Posts/2012/06/The-Stories-Behind-the-Statistics-Adolescent-Pregnancy?>) (Assessed August 3, 2012).

Pokharel, S., Kulozycki, A., Shakya, S., (2006). School Based Sex Education in Western Nepal: Uncomfortable for both Teachers and students. *Reproductive Health Matters* (2006) 14(28): 151-161.

Population Reference Bureau (2000) .Meeting Young Women's Reproductive and Sexual Health Need. MEASURE Communication. [online]. Available from: ([http://www.prb.org/pdf/MeetingReproNeeds\\_Eng.pdf](http://www.prb.org/pdf/MeetingReproNeeds_Eng.pdf)) (Assessed June 10, 2012).

- Pun,K.D., Chauhan,M.,(2011). Outcomes Of Adolescent Pregnancy at Kathmandu University Hospital, Dhulikhel, Kavre. *Kathmandu Univ Med J* 2011;33(1)50-3. [online]. Available from: <http://www.nepjol.info/index.php/KUMJ/article/view/6263/5107> (Assessed July 2,2012).
- Puri,M., Ingham,R., Matthews,Z.,(2007). Factors Affecting Abortion Decisions among Young Couples in Nepal, *Journal of Adolescent Health* 40(2007) 535-542. [online]. Available from: <http://www.sciencedirect.com/science/article/pii/S1054139X0700016X> (Assessed January 12, 2012).
- Puri,M., Cleland,J (undated). Extent of sexual coercion among young female migrant carpet and garment factory workers in Nepal. *S<sup>3</sup>RI Applications Working Paper A04/11*. [online]. Available from: <http://eprints.soton.ac.uk/7807/1/7807-01.pdf> (Assessed March 15, 2012).
- Regmi,P., Simkhada,P., Teijlingen,E.V., (2008). Sexual and reproductive health status among young people in Nepal: opportunities and barriers for sexual health education and services utilization. *Kathmandu University Medical Journal (KUMJ)*,6(22),pp248-256.
- Regmi,P.R., Teijlingen,E.V., Simkhada,P., Acharya,D.R., (2010a). Barriers to sexual health services for young people in Nepal. *J Health Popul Nutr* 28(6), pp619-627.
- Regmi,P.R., Simkhada,P.P., Teijlingen,E.R.V.,(2010b). Boys Remain Prestigious, Girls Become Prostitue”:Socio-Cultural Context of Relationships and Sex among Young People in Nepal. *Global Journal of Health Science* Vol.2,No 1.
- Regmi,P,R., Simkhada,P., Van,T,E., ( 2010c). “There are too many naked pictures found in papers and on the net”:Factors encouraging premarital sex among young people of Nepal. *Health Science Journal*, Vol.4, Issue:3.
- Reproductive Health Education Projects for Adolescents in School (RHEPAS) (2009). [online]. Available from: <http://www.ifmsa.net/public/projectarchive.php?id=79> (Assessed June 10, 2012).
- Rutenberg, N., Watkins, S. C., (1997). The Buzz outside the clinic: Conversation and Contraception in Nyanza province, Kenya. *Studies in family planning* 28(4):290-307. [online]. Available from: <http://www.malawi.pop.upenn.edu/Level%203/Papers/PDF-files/rutenberg-watkins-1997.pdf> (Assessed February 2, 2012).

Sarantaki, A.R.M., Koutelekos, R.N.,(Undated). Teenage Pregnancy. *Health Science Journal* Issue:2

Sato,M.,(2005). *Social context of Teenage Pregnancy in the Departamento de Granada, Nicaragua*. California Institute of Integral Studies. San Francisco, CA.

Sharma,A.K., Verma,K., Khatri,S., KAnnan,A.T., (2002). Determinants of Pregnancy in Adolescent in Nepal. *Indian Journal of Pediatrics*, Vol 69.

Sharma,S.,(2004). Reproductive Rights of Nepalese Women: Current Status and Future Directions. *Kathmandu University Medical Journal (2004)* Vol. 2, No. 1 pp. 52-54.

Sharma,I.,(2010). Realizing MDG 5B.In Nepal for young people.A youth shadow report on universal access to reproductive health, pp 34-35.

Shaw, M., Lawlor, D.A., & Najman, J.M., (2006). Teenage children of teenage mothers: psychological, behavioral, and health outcomes from an Australian prospective longitudinal study', *Social Science and Medicine*, no. 62, pp. 2526-2539,.

Shrestha, S., (2002). Socio-cultural factors influencing adolescent pregnancy in rural Nepal. *International Journal of Adolescent Medicine & Health* 14:101-109.

SIECCAN (Undated). Teen Pregnancy Prevention: Exploring Out of School Approaches. Update Report on Teen Pregnancy Prevention. Canada. [online].Available from: [http://www.beststart.org/resources/rep\\_health/pdf/teen\\_pregnancy\\_08\\_5.pdf](http://www.beststart.org/resources/rep_health/pdf/teen_pregnancy_08_5.pdf) (Assessed July 6, 2012).

Singh,A.,(2012). *Understanding TEEN Pregnancy*. [online]. Available from: <http://www.ekantipur.com/2012/06/11/health-and-living/understanding-teen-pregnancy/355391.html> (Assessed July 10, 2012).

Slater,J.J., (2004). Teen Life in Asia. [online]. Available from: (<http://www.ios.sinica.edu.tw/ios/people/personal/wupaper/2004e1.pdf>) (Assessed 9 June, 2012).

Smith, S., (2002). Too much too young? In Nepal more a case of too little, too young. *International Journal of Epidemiology* 2002:31:557-558

Speizer,S.I., Magnani,R.J., Colvin,C.E., (2003). The Effectiveness of Adolescent Reproductive Health Interventions in Developing Countries: A Review of the Evidence. *Journal of Adolescent Health* 33:324-348

Stone, N., Ingham, R., and Simkhada, P., (2003). Knowledge of sexual health issues among unmarried young people in Nepal. *Asia-Pacific Population Journal*, 18, (2), 33-54.

*Strategies for Adolescent Pregnancy prevention* (2007). The American College of Obstetricians and Gynecologist, Women Health Care Physicians. [online]. Available from: <https://www.acog.org/~media/Departments/Adolescent%20Health%20Care/StrategiesForAdolescentPregnancyPrevention.pdf> (Assessed June 1, 2012)

Sundby, J. (2006). Young Peoples sexual and reproductive health rights, *Best Practices and Research Clinical Obstetrics and Gynecology*, Vol. 20, No.3, pp 355-368

Tamang, J., (2009). *Domestic Violence in Nepal*. Social Inclusion Research Fund Thaitae, S., Thato, R., (2011). Obstetric and Perinatal Outcomes of Teenage Pregnancies in Thailand. *North American Society for Paediatric and Adolescent Gynecology*.

*Theory at a Glance: A Guide For Health Promotion Practice* (2005). National Cancer Institute, U.S. Department of Health and Human Services; National Institutes of Health

Trust law (2012). *Unsafe Illegal Abortion Persists in Nepal Despite Legalisation*. [online]. Available from: <http://www.trust.org/trustlaw/news/unsafe-illegal-abortion-persists-in-nepal-despite-legalization> (Assessed June 14, 2012)

Tufail, A., Hashmi, H.A., (2008). Maternal and Perinatal Outcome in Teenage Pregnancy in a community based Hospital, *Pakistan Journal of Surgery* Vol.24, Issue 2, . [online]. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2963772/> (Assessed March 15, 2012).

United Nations Statistics Division (2009). World Statistics Pocketbook: Nepal. [Online]. Available from: <http://data.un.org/CountryProfile.aspx?crName=Nepal> (Assessed August 2, 2012)

UNESCO (2009). International Technical Guidance on Sexuality Education, An evidence – informed approach for schools, teachers and health educators. The rationale for sexuality education, Volume 1. [online]. Available from: (<http://unesdoc.unesco.org/images/0018/001832/183281e.pdf>) (Assessed January 15, 2012).

UNESCO, IIFP (2009). Education Budgeting in Bangladesh, Nepal and Srilanka: Resource Management for prioritization and control.[online]. Available from:  
<http://unesdoc.unesco.org/images/0018/001871/187180e.pdf> (Assessed August 10, 2012).

UNFPA (2005). Child Marriage Fact Sheet. [Online]. Available from:  
[http://www.unfpa.org/swp/2005/presskit/factsheets/facts\\_child\\_marriage.htm](http://www.unfpa.org/swp/2005/presskit/factsheets/facts_child_marriage.htm) (Assessed August 2, 2012).

UNFPA, (2007). Nepal project document: regional workshop on models for scaling up youth friendly services for SRH & HIV prevention in South Asia, 12-13 September, Kathmandu: UNFPA, CST for South and West Asia.

UNFPA (2007). Giving Girls Today and Tomorrow: Breaking the Cycle of Adolescent Pregnancy. New York: UNFPA. [Online]. Available from:  
[http://www.unfpa.org/webdav/site/global/shared/documents/publications/2007/giving\\_girls.pdf](http://www.unfpa.org/webdav/site/global/shared/documents/publications/2007/giving_girls.pdf) (Assessed June 15, 2012).

UNFPA (2010). How Universal is Access to Reproductive Health? A review of the evidence [online] Available from:  
[http://www.unfpa.org/webdav/site/global/shared/documents/publications/2010/universal\\_rh.pdf](http://www.unfpa.org/webdav/site/global/shared/documents/publications/2010/universal_rh.pdf) (Assessed July 12, 2012).

UNICEF (2008). Preventing HIV: What Works Vivian Lopez. *Unite for Children. Unite against AIDS*. [Online]. Available from:  
<http://www.scribd.com/doc/52592269/Preventing-AIDS-What-Works-Vivian-M-Lopez> (Assessed on June 16, 2012).

United Nations, Country team in Nepal (2011). A Country Analysis with a Human Face. [Online]. Available from:  
<http://www.un.org.np/reports/country-analysis-2011> (Assessed on June 1, 2012).

USAID, NFHP, UNFPA, Ministry of Health (2006). Repositioning Family Planning, Strategic Review of the National Family Planning Programme, Outcomes of National Consultative Meetings, Nepal.

USAID (2004). Adolescent and Youth Reproductive Health in the Asia and Near East Region: Status, Issues, Policies, and Programs. [online]. Available from: [http://pdf.usaid.gov/pdf\\_docs/Pnacx530.pdf](http://pdf.usaid.gov/pdf_docs/Pnacx530.pdf) (Assessed May 15, 2012).

Government of Nepal, WHO, Centre for Research on Environment Health and Population Activities (CREHPA) (2006). Unsafe Abortion: Nepal Country Profile. [online]. Available from:  
[http://www.crehpa.org.np/download/unsafe\\_abortion\\_nepal\\_country\\_profile\\_2006.pdf](http://www.crehpa.org.np/download/unsafe_abortion_nepal_country_profile_2006.pdf) (Assessed July 15, 2012).



UNAIDS, UNICEF (2001). A survey of Teenagers in Nepal: for life skills development & HIV/AIDS prevention, Nepal.

UNICEF (2003). Statistics Nepal. [online]. Available from: [http://www.unicef.org/infobycountry/nepal\\_nepal\\_statistics.html](http://www.unicef.org/infobycountry/nepal_nepal_statistics.html) (Assessed July 25, 2012).

UNICEF (2009). Teenage Pregnancy in South Africa: With special focus on school going adolescents. South Africa: Human Sciences Research Councils. [Online]. Available from: <http://www.info.gov.za/view/DownloadFileAction?id=122470> (Assessed May 6, 2012).

Vaidhya A., Pokherel PK., Nagesh S, Karki P, Kumar S., Majhi S., (2009). Prevalence of coronary heart disease in the urban adult males of eastern Nepal: a population-based analytical cross-sectional study. *Indian Heart J.* 61(4):341-7.

Voeten, H., (1995). *Teenage Pregnancy in Namibia: problems, Causes and Policy Recommendations* University of Utrecht. The Netherlands.

WHO (1997). Coming of Age- From Facts to Action for Adolescent Sexual and Reproductive Health: WHO. Adolescent Health and Development programs.

WHO (2000). The WHO study group on young people and Health for all by the year 2000. Young people's health challenges for society. Geneva. WHO technical report Series No.731 1986.

WHO (2001). Country Health System Profile: Nepal. [Online]. Available from: [http://www.searo.who.int/en/Section313/Section1523\\_6870.htm](http://www.searo.who.int/en/Section313/Section1523_6870.htm) (Assessed March 5, 2012).

WHO, (2002) *The Impact of Chronic Diseases in Nepal*. [Online]. Available from: [http://www.who.int/chp/chronic\\_disease\\_report/media/impact/nepal.pdf](http://www.who.int/chp/chronic_disease_report/media/impact/nepal.pdf) (Assessed, May10, 2012).

WHO (2002). Adolescent friendly Health Services: An Agenda for Change. Geneva: World Health Organization.

WHO (2003). Towards adulthood: exploring the sexual and reproductive health of adolescents in South Asia, Department of Reproductive Health and Research. ISBN 9241562501. [Online]. Available from: <http://whqlibdoc.who.int/publications/2003/9241562501.pdf> (Assessed March 6, 2012).

WHO, (2004). Sexual Health- a new focus for WHO. Progress in Reproductive Health Research. No 67. Geneva: WHO. [Online]. Available from: ([http://www.who.int/maternal\\_child\\_adolescent/topics/maternal/adolescent\\_pregnancy/en/index.html](http://www.who.int/maternal_child_adolescent/topics/maternal/adolescent_pregnancy/en/index.html)) (Assessed May 5, 2012).

WHO, UNFPA (2006). Pregnant Adolescents: Delivering on Global Promises of Hope, IBSN 92 41593784. [Online]. Available from: [http://whqlibdoc.who.int/publications/2006/9241593784\\_eng.pdf](http://whqlibdoc.who.int/publications/2006/9241593784_eng.pdf) (Assessed July 6,2012).

WHO (2006). Obstetric Fistula, Guiding principles for clinical management and programme development. Geneva. WHO. IBSN 9241593679,\_WHO reference number: WP 180 2006OB. [Online]. Available from: [http://www.who.int/maternal\\_child\\_adolescent/documents/9241593679/en/index.html](http://www.who.int/maternal_child_adolescent/documents/9241593679/en/index.html) (Assessed May 2, 2012).

WHO (2007a). Adolescent Health Fact Sheet Nepal. Adolescent health and Development (AHD) Unit, Department of Family and Community Health, Regional Office for South East Asia. World Health House. India.

WHO (2007b). Pocket book of hospital cares for children: guidelines of the management of common illnesses with limited resources. Geneva: World Health Organization.

WHO (2007c). Health System in Nepal: Challenges and Strategic Options. IBSN 978-92-9022-266-8. [Online]. Available from: [http://www.nep.searo.who.int/LinkFiles/Health\\_Information\\_HSC.pdf](http://www.nep.searo.who.int/LinkFiles/Health_Information_HSC.pdf) (Assessed January 3,2012).

WHO (2007d). Adolescent pregnancy-Unmet needs and undone deeds: A review of the literature and programmes: Issues in Adolescent Health and Development.

WHO (2007e). Country Health System Profile Nepal. [Online]. Available from: [http://www.searo.who.int/en/Section313/Section1523\\_6867.htm](http://www.searo.who.int/en/Section313/Section1523_6867.htm) (Assessed June 3,2012).

WHO (2007f). Country Health System Profile Nepal: Health Resources. [Online]. Available from: [http://www.searo.who.int/en/Section313/Section1523\\_6865.htm](http://www.searo.who.int/en/Section313/Section1523_6865.htm) (Assessed August 3, 2012).

WHO (2008a). Why is giving special attention to adolescent important for achieving Millennium Development Goal? Fact sheet. [Online]. Available form: <http://aecid.lac.unfpa.org/webdav/site/AECID/shared/files/Adolescent%20pregnancy%20fact%20sheet.pdf> (Assessed July 3, 2012).



WHO (2008b). Adolescent Pregnancy. MPS Notes, Department of Making Pregnancy safer, Vol 1. No.1. [Online]. Available from: [http://www.who.int/maternal\\_child\\_adolescent/documents/mpsnnotes\\_2\\_lr.pdf](http://www.who.int/maternal_child_adolescent/documents/mpsnnotes_2_lr.pdf) (Assessed July 2, 2012)

WHO (2008c). Making Pregnancy Safer. Reducing Maternal Mortality by improving care of pregnant adolescents. A Newsletter of Worldwide Activity, Issue 6, Geneva. [Online]. Available from: [http://www.who.int/maternal\\_child\\_adolescent/documents/newsletter/mps\\_newsletter\\_issue6.pdf](http://www.who.int/maternal_child_adolescent/documents/newsletter/mps_newsletter_issue6.pdf) (Assessed May 3, 2012).

WHO (2011). Preventing early pregnancy and poor reproductive outcomes among adolescents in developing countries: what the evidence says. Report of Department of Maternal, child and adolescent health, Geneva. [online]. Available from: ([http://whqlibdoc.who.int/hq/2012/WHO\\_FWC\\_MCA\\_12\\_02.pdf](http://whqlibdoc.who.int/hq/2012/WHO_FWC_MCA_12_02.pdf)) (Assessed June 2,2012).

WHO (2012a). Adolescent pregnancy. Maternal, newborn and adolescent health. [online]. Available from: ([http://www.who.int/maternal\\_child\\_adolescent/topics/maternal/adolescent\\_pregnancy/en/index.html](http://www.who.int/maternal_child_adolescent/topics/maternal/adolescent_pregnancy/en/index.html)). (Assessed July 16, 2012).

WHO (2012b). Preventing Early Pregnancy and Poor Reproductive Outcomes Among Adolescents In Developing Countries: What the Evidence Says. [Online]. Available from: [http://whqlibdoc.who.int/hq/2012/WHO\\_FWC\\_MCA\\_12\\_02.pdf](http://whqlibdoc.who.int/hq/2012/WHO_FWC_MCA_12_02.pdf) (Assessed August 2, 2012).

World Bank (2011). Health Expenditure ,total (% of GDP). [online]. Available from: <http://data.worldbank.org/indicator/SH.XPD.TOTL.ZS> (Assessed June 8, 2012).

World Health Statistics (2011). World Health Organization, ISBN 978 92 4 156419 9 [online]. Available from: [http://www.who.int/whosis/whostat/EN\\_WHS2011\\_Full.pdf](http://www.who.int/whosis/whostat/EN_WHS2011_Full.pdf) (Assessed May 12, 2012).

Yadav, S., Choudhary, D., KC, N., Mandal, R. K., Sharma, A., Chauhan, S. S., Agrawal, P.,(2008). Adverse Reproductive Outcomes Associated with Teenage Pregnancy. *McGill Journal of Medicine* PMID: PMC2582661 11(2): 141-144.

Yayala,M (2003). Maternal mortality in developing countries. *J Perinat Med* 2003;31(5)386-91.

# Annexes

## Annex 1: Map of Nepal

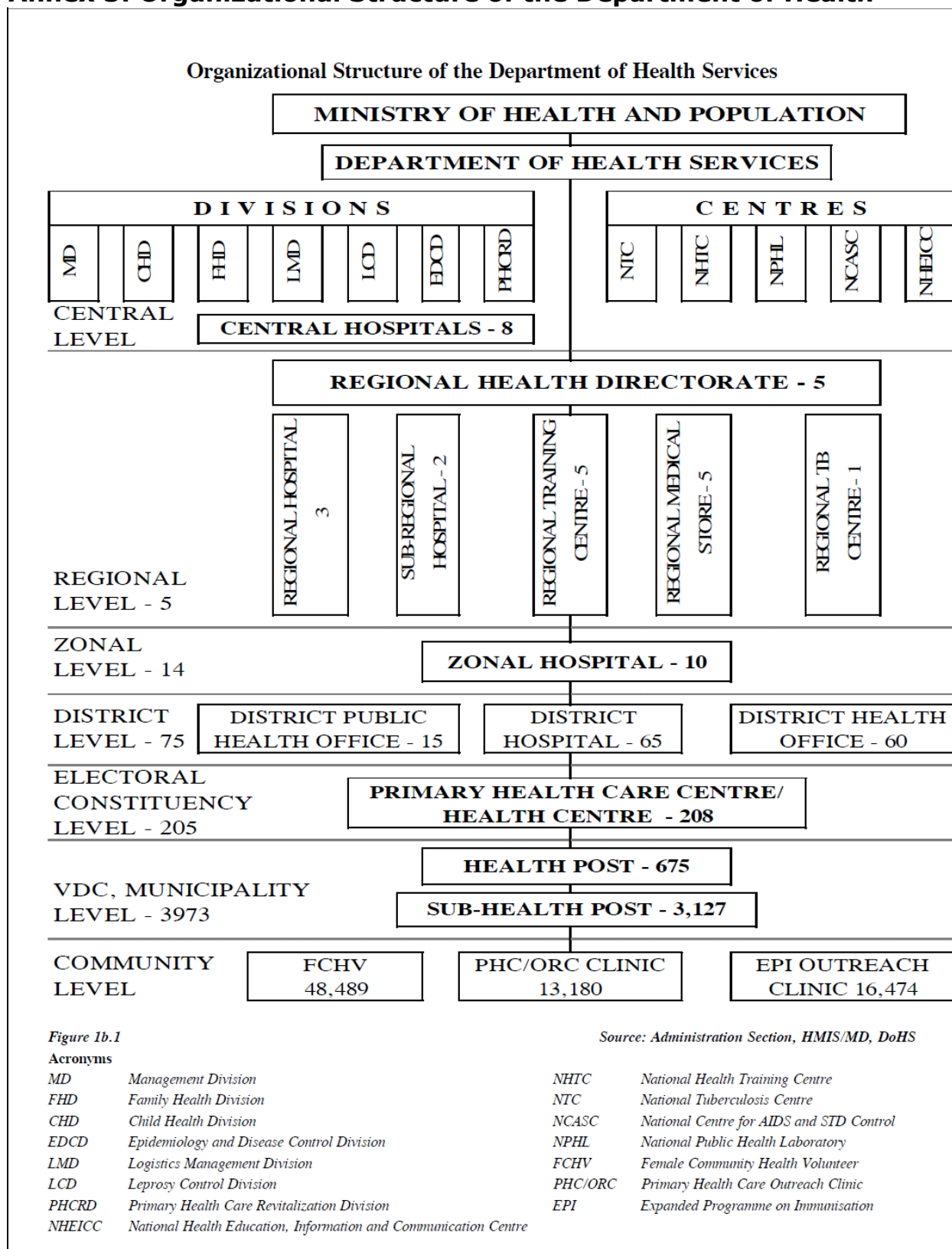


Source: <http://www.mapsofworld.com/nepal/nepal-district-map.html>

## Annex 2: Demographic, Economic and Health Profile of Nepal

Category	Indicators	Remark	Source
<b>Population</b>	Total (millions)	28	World Health Organization, 2010
	Rural (%)	81	
	Age under 15(%)	40	
	Old (Over 60 years)	6	
	Adult Literacy Rate (%)	57.9	
<b>Economy</b>	GNI per capita (PPP US\$)	1200	
	PPP GNI per capita	69	
	Poverty (%<US\$1.25 PPP)	51	
<b>Health Indicators</b>	Crude birth rates	24	Nepal Health Sector Implementation Plan ,2010, Annual Report,2011, <a href="http://www.unicef.org/infobycountry/nepal_nepal_statistics.html">http://www.unicef.org/infobycountry/nepal_nepal_statistics.html</a>
	Infant mortality rate (per 1,000 live births)	41	
	Neonatal Mortality rate	28	
	Contraceptive Prevalence Rate	43.5	
	Life expectancy at birth	67	
	Total Fertility Rate	2.6	
	Annual no. of births(1000) in 2010	724	
	Annual no. of under-5 deaths (thousands), 2010	35	
	Percentage of underweight children	39.7	
	Crude death rate	6	
<b>Health Financing</b>	Total expenditure on health (% GDP)	5.3	Health Care Financing, Nepal 2010
	Public % of total	24	
	Out of Pocket Expenditure on Health (%)	55	
Adolescent indicators	Adolescent population (aged 10-19), Adolescents as proportion of total population (%), 2010	23	<a href="http://www.unicef.org/infobycountry/nepal_nepal_statistics.html">http://www.unicef.org/infobycountry/nepal_nepal_statistics.html</a>
	Adolescent population (aged 10-19), Total (thousands), 2010	6935	
	Marital status, Adolescents aged 15-19 who are currently married/in union (2000-2010*) %, male	10	
	Marital status, Adolescents aged 15-19 who are currently married/in union (2000-2010*) %, female	32	
	Age at first birth , Women aged 20-24 who gave birth before age 18 (%), 2000-2010*	23	
	Adolescent birth rate, Number of births per 1,000 girls aged 15-19, 2000-2010*	106	
	Others	35	
	Secondary school participation, Net attendance ratio (%), 2005-2010*, female	46	

### Annex 3: Organizational Structure of the Department of Health



Source: DoHS, 2011

## Annex 4: Population and Educational Status of Adolescents in South East Asian Countries

**Table 1:** Adolescent population in countries of the South-East Asia Region

Country	10-14 years				15-19 years				Total (%)
	Male		Female		Male		Female		
	(thousands)	(%)	(thousands)	(%)	(thousands)	(%)	(thousands)	(%)	
Bangladesh	9252	6.0	8785	5.8	8431	5.5	7964	5.2	22.5
Bhutan	149	6.2	143	6.0	136	5.7	131	5.5	23.4
DPRK	N.A.		N.A.		N.A.		N.A.		N.A.
India	59526	5.4	55451	5.1	56672	5.2	52563	4.8	20.5
Indonesia	10965	4.9	10610	4.7	11012	4.9	10697	4.7	19.2
Maldives	21	6.2	20	5.9	20	5.9	19	5.6	23.6
Myanmar	2670	5.3	2620	5.2	2493	4.9	2463	4.9	20.3
Nepal	1629	6.2	1518	5.8	1454	5.5	1347	5.1	22.6
Sri Lanka	819	4.2	795	4.1	852	4.4	825	4.2	17..0
Thailand	2677	4.2	2620	4.1	2745	4.3	2702	4.2	16.8

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2002 Revision and World Urbanization Prospects: The 2001 Revision*

**Table 2:** Education of adolescents

Country	Percent of adolescents aged 15-19 who are illiterate		Literacy rate (age 15+) (%)		Primary school enrolment, 2000, % of school-age adolescents enrolled		Secondary school enrolment, 1993-1997, % of school-age adolescents enrolled	
	F	M	F	M	F	M	F	M
Bangladesh	71	58	30	52	NA	NA	13	25
Bhutan	NA	NA	34	61	22	19	NA	NA
DPR Korea	NA	NA	NA	NA	NA	NA	NA	NA
India	44	20	45	68	109	92	39	59
Indonesia	3	2	82	92	110	106	48	55
Maldives			96	96	133	134	71	67
Myanmar	18	12	81	89	91	91	30	29
Nepal	51	26	24	59	140	112	33	51
Sri Lanka	10	9	89	94	—	—	78	72
Thailand	2	1	94	97	96	91	37	38

Source: Population Reference Bureau (2000) *The World Youth 2000*. Washington, DC, Population Reference Bureau, Measure Communication.

Source: Adolescent Nutrition

## Annex 5: National Facility Based Abortion Baseline Study 2006

It reports 20% (103) diagnosed as induced abortion complications.30% of girls were under age of 24.

**Table 13: Characteristics of Clients who had Complications of Induced Abortion: 2006**

Characteristics	Government	NGOs	Total
<b>Age</b>			
15-24	24.1	38.6	30.6
25-34	46.3	52.3	49.9
35+	29.6	9.1	20.4
Median Age	28.5	26	27
<b>Marital Status</b>			
Unmarried	-	4.5	2
Married Living with husband	92.6	86.4	89.8
Married(Husband living outside	7.4	9.1	8.2
<b>Education Level</b>			
Never been to school	48.2	27.3	38.7
Primary(I-V) grade	18.5	18.2	18.4
Secondary(VI-X) grade	29.7	40.9	34.7
H.S and above	3.7	13.6	8.2
<b>No. of Children</b>			
None	11.1	18.2	14.3
One	14.8	18.2	16.3
Two	20.4	38.6	28.6
Three and more	53.7	25	40.8
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>N</b>	<b>54</b>	<b>44</b>	<b>99</b>

Source: GoN, WHO, CREHPA, 2006

## **Annex 6: Child Marriage Fact Sheet**

UNFPA (2004) states that married adolescents had been neglected from global adolescent RH agenda because of the incorrect assumption that marriages ensure them of having passage to safe adulthood.

### **Married adolescents are typified by:**

- Large spousal age gap
- Limited education attainment and no schooling option
- Intense pressure to become pregnant
- Lack of skills to be viable to the labor market
- Increased risk of MMR and IMR
- Limited social support from social isolation -Increased vulnerability to STIs ,HIV
- Restricted social mobility (Source: UNFPA,2004)

## Annex 7: Characteristics of Effective Curriculum - based Programme

Table 16: Characteristics of effective curriculum-based programmes

Process of developing the curriculum	Content of curriculum	Implementation of the curriculum
Involve multiple people with expertise in theory, research, and STI/HIV education to develop the curriculum	Focus on clear health goals e.g., prevention of STI/HIV/pregnancy or both	Secure support from the appropriate authorities, such as departments of health, school districts or community organisations
Assess the relevant needs and assets of the target group	Focus narrowly on behaviour leading to goals e.g., using condoms, give clear messages about behaviour and address situations that lead to them and how to avoid them	Select educators with desired characteristics (where possible), train them, and provide monitoring, supervision and support
Use a logical model (health and psychosocial theory) to specify health goals, behaviours that affect goals, risk & protective factors affecting behaviour and activities to change risk and protective factors	Address sexual risk and protective factors that affect sexual behaviour (e.g., knowledge, perceived risk, value, attitudes, norms and self-efficacy) and change them	If required, implement activities to recruit and retain adolescents and to overcome barriers to participation (e.g., publicise the programme, offer food or obtain parental consent)
Design activities consistent with community values and available resources (e.g., staff time, skills, space and supplies)	Create a safe space for young people to participate	Implement virtually all activities with reasonable fidelity
Pilot test the programme	<p>Include multiple activities to change risk and protective factors</p> <p>Use instructionally sound teaching methods that actively involve participants, help them personalize information and designed to change risk and protective factors</p> <p>Use activities, teaching methods, and behavioural messages appropriate to the adolescents culture, developmental age, and sexual experience</p> <p>Cover topics in a logical sequence</p>	

Source: Kirby, 2007

Source: UNICEF, 2009



