Sexual and Reproductive Health of Adolescents and Youth in Nepal: Trends and Determinants

Further Analysis of the 2011 Nepal Demographic and Health Survey

Kathmandu, Nepal
March 2013

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Ministry of Health and Population

This report presents findings from a further analysis study undertaken as part of the follow-up to the 2011 Nepal Demographic and Health Survey (NDHS). Funding for the further analysis of the survey was provided by the United States Agency for International Development (USAID), the United Kingdom's Department for International Development (DFID) and the United Nations Population Fund (UNFPA). ICF International provided technical assistance for the survey and further analysis, and New ERA provided in-country coordination and technical assistance through the MEASURE DHS program, a USAID-funded project providing support and technical assistance in the implementation of population and health surveys in countries worldwide. The opinions expressed herein are those of the authors and do not necessarily reflect the views of USAID or the US government or other funding agencies.

This report is part of the MEASURE DHS program, which is designed to collect, analyze, and disseminate data on fertility, family planning, maternal and child health, nutrition, and HIV/AIDS. Additional information about the 2011 NDHS may be obtained from the Population Division, Ministry of Health and Population, Government of Nepal, Ramshahpath, Kathmandu, Nepal; telephone: (977-1) 4262987; and from New ERA, P.O. Box 722, Kathmandu, Nepal; telephone: (977-1) 4423176/4413603; fax: (977-1) 4419562; e-mail: info@newera.com.np. Information about the DHS program may be obtained from MEASURE DHS, ICF International, 11785 Beltsville Drive, Suite 300, Calverton, MD 20705, USA; telephone: 301-572-0200; fax: 301-572-0999; e-mail: reports@measuredhs.com; Internet: http://www.measuredhs.com.

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FOREWORD

The 2011 Nepal Demographic and Health Survey is the fourth nationally representative comprehensive survey conducted as part of the worldwide Demographic and Health Surveys (DHS) project in the country. The survey was implemented by New ERA under the aegis of the Population Division, Ministry of Health and Population (MoHP). Technical support for this survey was provided by ICF International with financial support from the United States Agency for International Development (USAID) through its mission in Nepal.

The standard format of the main report includes only a descriptive presentation of findings and trends, without using analytical statistical methods to ascertain the significance of change and causative association between variables. Though largely sufficient, the standard report is limited, hence, particularly in providing answers to 'why', which are very essential in re-shaping important policies and programs. Hence, following the dissemination of the NDHS 2011, MoHP and partners have convened and agreed on key areas that are very important to assess progress and gaps, and ascertain determinants, in high priority public health programs that MoHP is implementing. In this context, further analyses has been carried out by relevant technical professionals from MoHP and partners who are directly working on the given areas, with technical support and facilitation from research agencies.

The primary objective of the further analysis of 2011 NDHS is to provide more in depth knowledge and insights into key issues that emerged based on the data of 2011 NDHS, and this provides guidance in planning, implementing, re-focusing, monitoring, and evaluating health programs related to these issues in Nepal. The long term objective of the further analysis is to strengthen the technical capacity of the local institutions and individuals to analyze and use data from complex national population and health surveys to better understand specific issues per country need and situation. The further analysis includes topics on 'Maternal and Child Health in Nepal: The Effects of Caste, Ethnicity, and Regional Identity'; 'Trends and Determinants of Neonatal Mortality in Nepal'; 'Women's Empowerment and Spousal Violence in Relation to Health Outcomes in Nepal'; 'Sexual and Reproductive Health of Adolescents and Youth in Nepal: Trends and Determinants'; and 'Impact of Male Migration on Contraceptive Use, Unmet Need, and Fertility in Nepal'.

The further analysis of 2011 NDHS is the concerted effort of various individuals and institutions, and it is with great pleasure that I acknowledge the work that has gone into producing this useful document. The participation and cooperation that was extended by the members of the Technical Advisory Committee in the different phases of the survey is highly regarded.

I would like to extend my appreciation to USAID/Nepal, UK Department for International Development (DFID) and United Nations Population Fund (UNFPA) for providing financial support for the further analyses. I would also like to acknowledge ICF International Inc. for its technical assistance at all stages. Similarly, my sincere thanks go to the New ERA team for the overall management and coordination of the whole process. I also would like to thank the Population Division of the Ministry of Health and Population for its effort and dedication in the completion of this further analysis of 2011 NDHS.

Praveen Mishra
Secretary
Ministry of Health and Population

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The further analysis of 2011 Nepal Demographic and Health Survey (NDHS) was conducted under the aegis of the Population Division, Ministry of Health and Population of the Government of Nepal. The United States Agency for International Development (USAID), UK Department of International Development (DFID) and United Nations Population Fund (UNFPA) provided financial support and technical assistance was provided by ICF International through MEASURE DHS Project. Overall coordination, facilitation, administrative and logistic support was provided by New ERA, a local research firm with extensive experience in conducting such studies in the past.

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ABBREVIATION AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ASFR	Age Specific Fertility Rate
NDHS	Nepal Demographic Health Survey
GoN	Government of Nepal
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development
ICW	International Conference on Women
IEC	Information, Education and Communication
IUD	Intrauterine Device
MoHP	Ministry of Health and Population
NAYS	Nepal Adolescent and Youth Survey
NCASC	National Center for AIDS and STI Control
NHSP	Nepal Health Sector Program
RHIYA	Reproductive Health Initiatives on Youth in Asia
SLC	School Leaving Certificate
STI	Sexually Transmitted Infection
UN	United Nations
WHO	World Health Organization
WHO SEARO	World Health Organization South East Asia Regional Office

EXECUTIVE SUMMARY

This report documents levels and trends in key indicators of sexual and reproductive health among adolescents and youth age 15-24 in Nepal and examines factors affecting them. Its purpose is to inform decision-making and sustainable policy and program formulation. The analysis draws on data from consecutive Nepal Demographic and Health Surveys (NDHS) conducted in 1996, 2001, 2006, and 2011. It includes descriptive analysis of trends in marriage and sexual behavior, contraceptive use, adolescent motherhood, knowledge of HIV and AIDS, and the occurrence of symptoms of sexually transmitted infections (STIs). It also examines associations between various socio-economic characteristics and key indicators—adolescent childbearing, use of contraceptives, use of antenatal care (ANC) services, and institutional deliveries—using logistic regression and multinomial logistic models. Since the DHS is a cross-sectional study, causal relationships among these variables cannot be established; the results are associations, and causality must be ascertained from other evidence.

Adolescents and youth account for one-third of Nepal's population. Early marriage and early childbearing continue to be the norm in Nepal, although the median age at first marriage has increased over the years. Adolescent childbearing is still common, although decreasing. Women's level of education has a strong influence on the odds of adolescent childbirth; the adjusted odds of beginning childbearing before age 20 are roughly 90 percent lower among women who have received their school leaving certificate (SLC), compared to women with no education. A woman whose husband is older than her is significantly more likely to begin childbearing as an adolescent than a woman who is older than her spouse.

Among female adolescents and youth in Nepal, sexual intercourse takes place almost universally within spousal union. In contrast, more than one-fifth of unmarried male adolescents and youth have had sexual intercourse. Among currently married female adolescents and youth age 15-24, urban residence, currently living with spouse, participation in household decision-making, and the number of children ever born are positively associated with the use of modern contraception, after adjusting for other covariates.

Considerable improvements have taken place since 1996 in the use of maternal health care. The level of antenatal care (in terms of the recommended four ANC visits) among adolescents and youth has increased fourfold in the last 15 years. Women who are wealthier, women who have at least some education, and women who participate in household decision-making are more likely to make at least four ANC visits. Young women are more likely to obtain full ANC care in the first pregnancy than for later pregnancies, even when they are still young and potentially at high risk. The percentage of births that take place in health facilities has increased more than fourfold among adolescents and youth. As with ANC visits, first births are more likely than later births to take place in a health facility. Urban adolescents and youth, those from richer households, those from the Terai zone, those who have made at least four ANC visits, those who prepared for the birth by saving money, and those who participate in household decision-making are more likely to deliver their babies at health facilities.

Comprehensive knowledge of HIV and AIDS is uncommon among male adolescents and youth but even less common among females. Testing for HIV is quite rare among adolescents and youth. Adolescents and youth in Nepal are vulnerable to multiple sexual and reproductive health problems, ranging from early and unwanted pregnancies to sexually transmitted infections including HIV. There has been marked improvement in several indicators related to these problems. However, these indicators vary substantially among women according to their background characteristics. Programs should be designed and implemented specifically to meet the needs of adolescent and youth and to improve their sexual and reproductive health status in the days to come.

1 INTRODUCTION

Globally, adolescents[1] (age 10-19) and young people (age10-24) account for nearly one-fifth (18 percent) and one-quarter (26 percent) of the total population, respectively (UN, 2011.) In Nepal adolescents (age 10-19) and young people (age 10-24) comprise an even larger proportion of the population—adolescents 24 percent and young people 33 percent, respectively (MoHP, 2011). This sizable group faces unique emotional and physical health challenges. For Nepal's health system to meet these needs, the context and situation of adolescents and youth must be better understood.

1.1 BACKGROUND

There is widespread international agreement that young men and women have a right to sexual and reproductive health. The global community, first at the International Conference on Population and Development (ICPD) held in Cairo in 1994 and then at the Fourth International Conference on Women (ICW) in Beijing in 1995, resolved to protect and promote the rights of adolescents and youth to sexual and reproductive health information and services (UN, 1994; UN, 1995).

1.1.1 Status of Adolescent and Youth Sexual and Reproductive Health

Marriage and sexual behavior

In Nepal the practice of early marriage is common and is deeply rooted in the culture. The legal minimum age at marriage in Nepal is 18 with the guardian's consent and 20 without the need for the guardian's consent (the Muluki Ain (General Code), 2019 BS). In fact, however, most women have married at younger ages. For women age 25-49 the median age at first marriage was 17.5 years, and for men age 25-49 it was 21.6 years (MoHP et al., 2012). Early marriage and resulting early sexual debut can lead to a number of potentially adverse outcomes, including unplanned pregnancy and exposure to sexually transmitted infections (STIs) (WHO, 2011).

In Nepal the prevalence of human immunodeficiency virus (HIV) is estimated to be 0.3 percent in the general population age 15-49 (NCASC, 2012a).According to the 2010 report of the Joint United Nations Program on HIV/AIDS (UNAIDS, 2010) on the global AIDS epidemic, an estimated 64,000 adults and children in Nepal were living with HIV at the end of 2009 (up from 60,000 in 2001).Of these, 20,000 were women age 15 and older (UNAIDS, 2010). As in other developing countries, transmission of HIV in Nepal is driven by factors such as poverty, low literacy levels, low levels of condom use, cultural and religious factors, and stigma and discrimination. There are concentrated epidemics in certain high-risk populations in Nepal. Also, young people are particularly at risk. In 2011, only one-quarter of female youth and one-third of male youth age 15-24 had comprehensive knowledge of HIV and AIDS prevention (MoHP et al., 2012).

[1]The World Health Organization (WHO) defines 'adolescents' as individuals between the ages of 10 and19 years and "young people" as individuals 10 to 24 years of age (WHO SEARO, 2013). In this report, however, the term "adolescent" is used to refer to respondents age 15-19, because the Demographic and Health Surveys do not collect information from individuals younger than age 15.

Contraception and family planning

Among adolescents and youth, contraceptive use can prevent unintended pregnancy and early childbearing and their consequences. In Nepal knowledge about family planning among adolescents and youth is almost universal (99.9 percent).However, only 14percent of married adolescent girls age 15-19 and 24 percent of married women age 20-24 are currently using a modern contraceptive method. Unmet need for family planning has been estimated to be highest (42 percent) for married girls age 15-19, followed by 37 percent among married women age 20-24 (MoHP et al., 2012). According to a Demographic and Health Surveys (DHS) comparative report on adolescent sexual and reproductive health around the world, unmarried young women are more likely to use modern contraceptive methods and also to have higher levels of unmet need for family planning than currently married young women (Khan and Mishra, 2008).

Adolescent motherhood

Although fertility begins about the time of menarche, adolescent girls are not fully mature physically or mentally. Babies born to adolescents are more likely to be born preterm or at low birth weight and are more likely to die in the neonatal period. Many adolescent girls who become pregnant have to leave school, often with long-term adverse consequences for themselves, their families, and their communities (WHO, 2012b).Globally, about 16 million girls age 15-19 give birth every year, and these births occur predominantly in developing countries (WHO, 2012a). In Nepal childbearing begins early. Almost one-quarter of women who were age 25-49 in 2011 had given birth by age 18, and nearly one-half by age 20.

1.1.2 National Policies, Programs, and Priorities for Young People and the Remaining Gaps

The National Health Policy (1991), Medium Term Strategic Plans, the National Reproductive Health Strategy (1995), the Adolescent Health and Development Strategy (2000), and the Nepal Health Sector Program II (NHSPII, 2010-2014) outline broad strategies for reproductive health in Nepal. The NHSP II calls for establishing adolescent-friendly services through 1,000 health facilities by 2015. The National Adolescent Sexual and Reproductive Health Program addresses key issues related to adolescents and youth at the national level and seeks to integrate concerns regarding adolescents and youth into several other programs that provide specific services, including safe motherhood, family planning, HIV/AIDS, and STI programs. A new HIV/AIDS National Strategy (2011-2015) has recently been developed and approved by the government. Additional policies for research, information, education, and communication (IEC), safe motherhood, and adolescent reproductive health have been developed, as have operational guidelines for reproductive health care at all levels.

These efforts along with increased attention to management and training at the district level and below have helped to improve the quality and efficiency of health services, including reproductive health services. Better linkages with the community are being built to increase use of reproductive health services through primary health care outreach and a nationwide network of trained female community health volunteers. The government has made important progress in meeting the reproductive health needs of its diverse population, as reflected in improvements in health indicators over the last several decades. Still, Nepal's socio-economic and health

indicators remain among the lowest in Asia. A large proportion of the population lives in hard-to-reach areas, where limited communication and transportation infrastructure make delivery of information and services very difficult. Therefore, the planned improvements in effectiveness and quality of care have not yet reached all corners of the country. Other reasons for low demand and low utilization of services include low levels of public awareness and inadequate supplies, equipment, and staffing.

The Government of Nepal has identified adolescents and youth as a vulnerable and under-served population group requiring specific services and information to address their concerns, problems, and needs. However, in Nepal only a limited number of programs and projects specifically address these vulnerable young people. Various government departments and line ministries together with multilateral, bilateral, government, and non-government assistance agencies have collaboratively identified key strategies and approaches to reach young people with appropriate sexual and reproductive health information and services. The Adolescent Health and Development Strategy 2000 identified several areas for support to complement and supplement government efforts to reach adolescents and youth. For example, the Reproductive Health Initiative for Youth in Asia (RHIYA) program (2003-2006), which was implemented through national non-governmental organizations, complemented and supplemented the services of government and other organizations and helped to increase the availability and use of quality reproductive health services and information among adolescents and youth in under-served rural areas and among marginalized, vulnerable urban populations.

1.2 RATIONALE AND OBJECTIVE

To meet the mandates of Nepal's policies and programs, planners need a broad understanding of the sexual and reproductive health issues that adolescents and youth face today, as well as an understanding of how the sexual and reproductive health needs of adolescents and youth vary across sub-groups and over time. The Government of Nepal has invested in building a better understanding of issues related to adolescents and youth, and it seeks to tailor programs and policies more closely to their needs. In 2010 the Ministry of Health and Population (MoHP) conducted its first nationally representative Nepal Adolescents and Youth Survey (NAYS), covering the age group 10-24, in order to generate data specific to adolescents and youth that could help the government formulate plans, policies, and programs. While the NAYS findings provide comprehensive current information on many characteristics of Nepali adolescents and youth and the issues relevant to them, it is also important to examine trends in these issues over time.

Thus, the main objective of this further analysis is to highlight trends and determinants of sexual and reproductive health among adolescents and youth in Nepal, using data from NDHS conducted between 1996 and 2011. Specifically, the report discusses changes over this period in key indicators of adolescent and youth sexual and reproductive health, including marriage and sexual behavior, contraceptive use, adolescent motherhood, STI symptoms, and knowledge of HIV and AIDS prevention. This report is intended to be useful to policy-makers, planners, program managers, researchers, and stakeholders working in adolescent and youth sexual and reproductive health in Nepal.

2 DATA AND METHODS

2.1 DATA

This analysis uses data from four consecutive Nepal Demographic and Health Surveys (NDHS), conducted in 1996, 2001, 2006, and 2011. In these surveys the data we recollected in personal interviews with a nationally representative sample of women and men of reproductive age. The NDHS questionnaire covers topics related to sexual and reproductive health, including marriage, pregnancy, fertility, family planning, sexual behavior, maternal health, and STIs and HIV/AIDS, among others. The repeated surveys, which were conducted five years apart, allow for analysis of trends at the national level as well as for sub-groups by age, including adolescents and youth (age 15-24).

In the 2006 and 2011 NDHS, the sample included all women age 15-49, irrespective of their marital status. In contrast, the sample for the 1996 and 2001 surveys was restricted to ever-married women age 15-49. The 2001, 2006, and 2011 surveys included a male sample (ever-married men in 2001, and all men in 2006 and 2011). For the purpose of comparison overtime, 1996 and 2001 data have been analyzed using "all women"[2] and "all men" factors for selected background characteristics.

Due to the wide range of indicators examined in this analysis, several different denominators are used. Table 2.1 summarizes the sample sizes for the various denominators used throughout the report. Indicators related to marriage and sexual behavior are based either on all women and men (regardless of marital status) or in some cases on the ever-married population. Indicators related to contraception are based on the currently married population. To examine the trend in adolescent childbearing, the study uses 'all women' as the denominator. Indicators related to maternal health care are restricted to women who have given birth in the five years before the survey. Comprehensive knowledge of HIV and AIDS is calculated among the ever-married population, and "occurrence of symptoms of STI" and "testing of HIV" are calculated among those who have ever had sex.

Table 2.1 Sample sizes for denominators used in report

Sample sizes of youth (age 15-24), Nepal DHS 1996-2011

Sample Population	1996	2001		2006		2011	
	Female	Female	Male	Female	Male	Female	Male
Ever-married	2,608	2,599	364	2,424	452	2,575	382
Currently married	2,567	2,573	359	2,389	450	2,553	374
Had sex in last 12 months[1]				2,225	542	2,266	569
Ever had sex[2]						2,576	666
Had a birth in past five years	1,570	1,748		1,679		1,662	
All births in five years preceding the survey, to women age 15-24	1,894	2,519		2,299		2,182	
All men/women[1]	n/a	n/a	n/a	4,431	1,573	5,050	1,663

[1]In 1996 and 2001, only ever-married persons were interviewed; for metrics of all 15-24 year olds the report uses 2006 and 2011 survey data only.
[2]Denominator used only for HIV testing uptake which is examined for 2011 survey data only.

[2] "All women" and "all men" factors are standard inflation factors that can be applied to denominators when using ever-married samples, in order to produce estimates that are representative of all women or all men. These factors are generated using information from the NDHS household roster, which includes basic information about the entire household population, not just the ever-married sample eligible for the women's and men's interviews. To produce these estimates for all women and all men, it is necessary to apply the inflation factors to account for the proportion of women who were never married. These factors were used in the calculation of selected indicators for 1996 and 2001.

2.2 METHODS

In this report the analysis is limited to women and men age 15-24. Cross-tabulations are used to calculate the prevalence of reproductive health indicators for the entire adolescent and youth population, stratified by key background characteristics, namely, place of residence (urban/rural), ecological zone (Mountain/Hill/Terai), development region (Eastern/Central/Western/Mid-western/Far-western), and educational attainment (no education/primary/some secondary/school leaving certification (SLC) and above). For indicators based on *all* men and *all* women, "all women" and "all men" factors were applied for the 1996 and 2001 NDHS surveys, since these two samples included an *ever-married* sample only. In all tables and figures, the percentages and sample sizes are weighted, using standard NDHS sample weights, to correct for the unequal probability of selection in the sample.

Four key sexual and reproductive health indicators were selected for further exploration:

- current use of modern contraceptives
- adolescent childbearing
- use of ANC services
- delivery in a health facility

Logistic regression and multinomial regression models were used to identify determinants of each indicator. A logit link was used to model each outcome. Results are presented in the form of odds ratios. The statistical software STATA, version 12, was used for the analysis. The complex sample design of the NDHS was taken into account by using STATA's "svyset" command (including information on sample weight, cluster, and strata). All tests were carried out based on a 5 percent level of significance.

2.3 DEFINITION OF INDICATORS OF SEXUAL AND REPRODUCTIVE HEALTH IN ADOLESCENTS AND YOUTH

The variables and indicators used in this report are defined according to MEASURE DHS standard definitions.

Currently married. Respondents who at the time of interview were married, either in a formal marital union or living with someone as if married (cohabiting).

Ever-married. Respondents who at the time of interview were currently or formerly married (widowed, divorced, or separated and those who had lived with a partner but were not currently living with one), either in a formal marital union or living with someone as if married (cohabiting).

Reported having "ever had sex." Respondents who reported having ever had sexual intercourse, irrespective of their marital/cohabitation status.

Relationship to most recent sexual partner. The relationship to the respondent of the respondent's last sexual partner within the 12 months before the survey.

Condom use during last sex. Whether the respondent used a condom the last time he had sexual intercourse. Denominator: Men who have had sexual intercourse in the last year.

Current use of modern contraception. Respondents who at the time of interview were currently married and were using any modern contraceptive method to delay or avoid becoming pregnant. Women using any of the following methods are defined as current users of modern methods: female sterilization, male sterilization, pill, intrauterine device (IUD), injectables, implants (such as Norplant), and male condom.

Unmet need for family planning. Includes pregnant women whose pregnancy was mistimed, postpartum amenorrheic women whose last birth was mistimed, and fecund women who at the time of interview were neither pregnant nor postpartum amenorrhea and who were not using any method of family planning and who reported that they wanted to limit childbearing or to space their next birth, or were undecided about the timing of the next birth or whether to have another child.

Adolescent fertility rate. Computed as the age-specific fertility rate (ASFR) of 15-19 years olds. The numerator is calculated by identifying the number of live births that occurred in the three-year period to mothers age 15-19. The denominator represents the number of woman-years lived by the survey respondents in ages 15-19 during those years. The resulting proportion is multiplied by 1,000 to measure number of births per 1,000 person-years.

Adolescent and youth childbearing. Respondents age 15-24 who at the time of interview were pregnant or who had given birth at least once.

Antenatal care. Respondents who had ANC visits during the pregnancy with the most recent birth. This statistic is calculated for women age 15-24 who had a live birth in the five years preceding the survey. Only four or more ANC visits are taken into account for descriptive purpose, as this is the minimum number recommended by the MoHP, while both four or more visits and one to three visits are considered for modeling.

Place of delivery. Place of delivery of all live births in the five years preceding the survey, calculated among all births to respondents age 15-24.

Comprehensive knowledge of HIV and AIDS. Knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chances of getting HIV, knowing that a healthy looking person can have HIV infection, and rejecting the two most common local misconceptions about transmission and prevention of HIV and AIDS—in Nepal, that HIV can be transmitted by mosquito bites and that a person can become infected by sharing food with someone who has HIV.

Reported "ever been tested for HIV and received results." Among respondents who had ever had sex, those who reported that they had ever been tested for HIV and received the test results. Note that this definition differs from MEASURE DHS standards, which compute uptake among all respondents.

Sexually transmitted infection (STI). Respondents who had ever had sex and who reported having any STIs or having specific STI symptoms (genital ulcer or discharge) in the 12 months preceding the survey.

2.4 DATA LIMITATIONS

Due to small sample sizes, some indicators could not be presented for respondents age 15-19 and age 20-24 separately, and instead are shown only for adolescents and youth age 15-24 years combined. "Comprehensive knowledge of HIV and AIDS" was derived only for 2006 and 2011, due to different phrasing of questions regarding knowledge of HIV and AIDS in the earlier surveys.

Since the NDHS is across-sectional study, causality cannot be established; the results describe associations between the various background characteristics and health indicators studied.

3 RESULTS

3.1 CHARACTERISTICS OF FEMALE AND MALE ADOLESCENTS AND YOUTH

Tables 3.1 and 3.2 present basic information about the female and male adolescent and youth population in Nepal between 1996 and 2011. Population estimates are presented for *all* women and men for 2006 and 2011 but for the *ever-married* population for 1996 and 2001. For the purposes of examining trends over time, estimates for the *ever-married* population in 2006 and 2011 also are included.

As these tables show, the distribution of female and male adolescents and youth across ecological zones and development regions in Nepal has remained fairly constant since 1996. In 2011, 14 percent of all female adolescents and youth age 15-24 and 17 percent of all male adolescents and youth age 15-24 lived in urban areas. Just over half (54 percent) of female and male adolescents and youth lived in the Terai, while 40 percent lived in the Hills, and 6 percent lived in the Mountain zone. The female and male adolescent and youth populations are distributed across the five development regions as follows: one-third reside in the Central region, nearly one-quarter in the Eastern region, one-fifth in the Western region, and roughly one-tenth each in the Mid-western and Far-western regions.

In 2011, 17 percent of all female adolescents and youth and 4 percent of all male adolescents and youth had no formal education. At the other end of the education scale, 27 percent of women age 15-24 and 39 percent of men age 15-24 had received their SLC by the time of interview in 2011, roughly doubling from 2006 when 12 percent of women and 22 percent of men age 15-24 had received their SLC.

Educational attainment is lower in the ever-married populations of female and male adolescents and youth than in the population of all adolescents and youth. However, education levels among both male and female ever-married adolescents and youth increased markedly between 1996 and 2011. The percentage of ever-married men who had received their SLC increased from 16 percent in 2006 to 29 percent in 2011, and the percentage of ever-married women who had received their SLC increased from 4 percent in 1996 to 20 percent in 2011. The percentage of ever-married women with no education decreased over this period from 68 percent in 1996 to 27 percent in 2011.

Table 3.1 Characteristics of female adolescents and youth age 15-24

Percent distribution of female adolescents and youth age 15-24 by background characteristics, Nepal DHS 1996-2011

	1996		2001		2006				2011			
	Ever-married		Ever-married		Ever-married		All women		Ever-married		All women	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Age												
15-19	37.7	982	36.2	941	32.5	787	55.0	2,437	31.0	797	54.5	2,753
20-24	62.3	1,626	63.8	1,658	67.5	1,637	45.0	1,995	69.0	1,778	45.5	2,297
Place of residence												
Urban	7.1	184	8.1	210	13.7	332	15.8	700	10.0	257	13.7	692
Rural	92.9	2,424	91.9	2,389	86.3	2,092	84.2	3,731	90.0	2,318	86.3	4,358
Ecological zone												
Mountain	6.6	171	6.5	169	7.6	184	7.0	312	6.8	174	6.3	316
Hills	39.7	1,035	40.2	1,044	38.9	944	42.3	1876	37.5	966	39.5	1,996
Terai	53.8	1,402	53.4	1,386	53.5	1,296	50.6	2,243	55.7	1,435	54.2	2,738
Development region												
Eastern	19.4	507	20.8	541	22.5	546	23.4	1,035	22.6	582	24.1	1,216
Central	36.2	945	34.3	892	31.5	764	31.4	1,390	33.2	855	33.0	1,668
Western	18.5	483	19.5	508	19.8	481	19.2	853	20.3	522	20.3	1,026
Mid-Western	15.1	394	14.8	384	12.3	299	11.7	520	13.7	354	12.3	619
Far-Western	10.7	279	10.5	273	13.7	333	14.3	633	10.2	263	10.3	521
Education												
No education	68.4	1,784	56.7	1,472	39.9	968	27.8	1,231	26.6	686	17.1	866
Primary	17.0	443	21.1	547	25.7	622	23.8	1,055	23.2	598	17.6	887
Some secondary	10.9	285	16.7	433	26.6	646	36.2	1,606	30.4	783	38.2	1,930
SLC and above	3.7	96	5.6	146	7.8	188	12.2	539	19.7	508	27.1	1,368
Total	**100.0**	**2,608**	**100.0**	**2,599**	**100.0**	**2,424**	**100.0**	**4,431**	**100.0**	**2,575**	**100.0**	**5,050**

Note: 1996 and 2001 samples consist of ever-married women.

Table 3.2 Characteristics of male adolescents and youth age 15-24

Percent distribution of male adolescents and youth age 15-24 by background characteristics, Nepal DHS 2001-2011

	2001		2006				2011			
	Ever-married		Ever-married		All men		Ever-married		All men	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Age										
15-19	19.2	70	21.9	99	59.8	941	18.2	69	58.8	978
20-24	80.8	295	78.1	353	40.2	632	81.8	313	41.2	685
Place of residence										
Urban	(5.5)	20	14.3	64	21.3	335	12.4	47	17.4	289
Rural	94.5	344	85.7	388	78.7	1,238	87.6	334	82.6	1,373
Ecological zone										
Mountain	(6.8)	25	7.2	32	5.9	93	9.5	36	5.8	96
Hills	38.3	140	38.4	174	45.6	717	40.8	156	40.0	665
Terai	54.8	200	54.4	246	48.5	762	49.7	190	54.2	902
Development region										
Eastern	20.9	76	19.1	86	22.3	350	18.8	72	24.5	407
Central	34.8	127	32.9	149	34.0	535	36.3	139	33.4	556
Western	19.0	69	18.3	83	19.7	310	14.9	57	19.7	328
Mid-Western	15.8	58	14.6	66	10.5	165	16.7	64	11.9	198
Far-Western	9.4	34	15.1	68	13.5	213	13.3	51	10.5	174
Education										
No education	13.9	51	12.7	58	6.3	99	(10.0)	38	4.3	72
Primary	39.2	143	34.5	156	24.3	382	21.2	81	12.4	206
Some secondary	34.7	127	37.2	168	47.6	749	40.2	154	44.3	737
SLC and above	(12.3)	45	15.5	70	21.8	343	28.6	109	39.0	648
Total	**100.0**	**364**	**100.0**	**452**	**100.0**	**1,573**	**100.0**	**382**	**100.0**	**1,663**

Note: 2001 sample consists of ever-married men. Figures in parentheses are based on 25-49 unweighted cases.

3.2 MARRIAGE AND SEXUAL BEHAVIOR

3.2.1 Marital Status

Table 3.3 shows the trend between 1996 and 2011in the proportions of adolescent men and women who are currently married. Overall, the proportion of women age 15-24 who are currently married decreased from 62 percent in 1996 to 51 percent in 2011. Among girls age 15-19 the proportion currently married decreased from 43 percent in 1996 to 29 percent in 2011. The proportion of adolescents and youth, both male and female, who have never been married drops markedly between the 15-19 and 20-24age groups in all survey years, indicating that this is an important period of marriage formation.

Similarly, the proportion of male adolescents and youth who are currently married or in union decreased from 32 percent in 2001 to 23 percent in 2011. Among male adolescents age 15-19, the proportion currently married decreased from 11 percent in 2001 to 7 percent in 2011.

Table 3.3 Marital status

Percent distribution of female and male adolescents and youth age 15-24by current marital status, according to age and survey year, Nepal DHS 1996-2011

	1996			2001			2006			2011		
Marital status	15-19	20-24	15-24	15-19	20-24	15-24	15-19	20-24	15-24	15-19	20-24	15-24
WOMEN												
Never married	55.9	14.8	37.0	59.8	17.1	40.1	67.7	17.9	45.3	71.0	22.6	49.0
Currently in union	43.3	84.0	62.0	39.8	82.1	59.3	32.2	80.5	53.9	28.8	76.6	50.5
Formerly in union	0.7	1.3	1.0	0.4	0.8	0.6	0.1	1.6	0.8	0.2	0.7	0.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
MEN												
Never married				88.7	43.5	68.0	89.5	44.1	71.3	92.9	54.4	77.0
Currently in union				11.3	55.4	31.5	10.4	55.7	28.6	6.9	44.7	22.5
Formerly in union				0.0	1.1	0.5	0.1	0.1	0.1	0.2	0.9	0.5
Total				**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Note: Data for 1996 and 2001 are based on ever-married sample adjusted with "all women" and "all men" factors.

Table 3.4 shows that in 2011 no male adolescents and youth had married by age 15, whereas 5 percent of females age 15-19 at the time of survey had married by age 15, and 10 percent of females age 20-24 had married by age 15. In 1996, by comparison, 14 percent of females age 15-19 had married by age 15. For additional detail see Annex Tables 1 and 2, which present trends in the proportions of female and male youth and adolescents that are ever-married according to background characteristics.

Table 3.4 Marital status by exact age

Percentage of adolescents and youth age 15-24 who were married by exact ages, Nepal DHS 1996-2011

WOMEN												
Current age	1996			2001			2006			2011		
	15	18	20	15	18	20	15	18	20	15	18	20
15-19	14.3	–	–	9.1	–	–	5.5	–	–	5.0	–	–
20-24	19.1	60.3	75.7	14.1	56.1	74.5	10.2	51.4	70.9	10.1	40.7	59.8
15-24	16.5	-–	–	11.4	–	–	7.6	–	–	7.3	–	–
MEN												
				2001			2006			2011		
				15	18	20	15	18	20	15	18	20
15-19				0.8	–	–	0.7	–	–	0.0	–	–
20-24				2.3	20.1	38.5	1.8	15.5	32.9	0.0	11.1	23.7
15-24				1.5	–	–	1.2	–	–	0.0	–	–

Note: Women's data for 1996 and 2001 and men's data for 2001 are based on ever-married sample adjusted by "all women" and "all men" factors; "–" = not applicable due to censoring.

3.2.2 Ever Had Sexual Intercourse, by Marital Status

Table 3.5 presents the percent of all adolescents and youth age 15-24 who had ever had sexual intercourse, categorized by marital status. For female adolescents and youth age 15-24, sexual intercourse takes place almost exclusively within union. In 2011 only 1 percent of never-married female adolescents and youth age 15-24 had ever had sexual intercourse. In contrast, the proportion of never-married male adolescents and youth age 15-24 who had ever had sexual intercourse was 22 percent in 2011, an increase from 17 percent in 2006.

Table 3.5 Sexual behavior

Percentage of female and male adolescents and youth age 15-24 who have ever had sex, by marital status, Nepal DHS 2006 and 2011

	2006			2011		
Marital status	15-19	20-24	15-24	15-19	20-24	15-24
WOMEN						
Never married	0.3	0.1	0.3	0.6	1.0	0.6
Currently in union	99.8	99.9	99.9	98.9	99.8	99.5
Formerly in union	*	(100.0)	(100.0)	*	*	(89.5)
Total	**32.5**	**82.1**	**54.8**	**29.0**	**77.4**	**51.0**
MEN						
Never married	11.8	32.9	17.0	14.7	40.6	22.2
Currently in union	100.0	99.9	99.9	100.0	99.8	99.8
Formerly in union	*	*	*	*	*	*
Total	**21.1**	**70.3**	**40.9**	**20.7**	**67.6**	**40.1**

Note: In 1996 and 2001, the samples are ever-married and thus are not included. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and so has been suppressed.

3.2.3 Age at First Sexual Intercourse among Men

Table 3.6 shows the percentage of men who, in 2006 and 2011, had had sexual intercourse by specific ages, irrespective of marital status[3]. The proportion of male adolescents and youth currently age 15-24 who had had sexual intercourse by age 15 decreased from 4 percent in 2006 to 3 percent in 2011.

The proportions of male adolescents and youth currently age 20-24 at the time of the survey who had first sexual intercourse by exact ages 15, 18, and 20 years decreased slightly between 2006 and 2011, from 5 percent to 2 percent by age 15, from 28 percent to 22 percent by age 18, and from 48 percent to 44 percent by age 20.

Table 3.6 Age at first sexual intercourse among men

Percentage of male adolescents and youth age 15-24 who had sexual intercourse before ages 15, 18, and 20, Nepal DHS 2006 and 2011

	2006				2011			
Current age	15	18	20	N	15	18	20	N
15-19	3.1	–	–	941	3.7	–	–	978
20-24	5.3	27.7	48.3	632	2.2	22.2	43.6	685
15-24	4.1	–	–	1,573	3.1	–	–	1,663

Note: In 2001, the sample is ever-married and thus is not included for the purpose of comparison. "–" = not applicable due to censoring

3.2.4 Relationship to Most Recent Sexual Partner

Table 3.7 shows the percent distribution in 2006 and 2011 of adolescents and youth age 15-24 by the last sexual partner's relationship to the respondent. Among female adolescents and youth age 15-24, almost all sexual intercourse took place with their spouse. This did not change between the two surveys. The pattern among young males is different. In 2011, 65 percent of men age 15-24 reported that their last sexual intercourse was

[3] Since the data show that sexual initiation is closely tied to entry into marriage among women (see Table 3.5), this table presents data only for men.

with their spouse/cohabiting partner, down from 82 percent in 2006. In 2011, 31 percent reported that their last sexual intercourse was with a girlfriend, up from 11 percent in 2006. In each survey, small percentages of men age 15-24 reported that their last intercourse was with a casual acquaintance or a commercial sex worker.

Table 3.7 Relationship to the most recent sexual partner

Among adolescents and youth who had sexual intercourse in the last 12 months, the percent distribution of respondents by relationship to the most recent partner, Nepal DHS 2006 and 2011

	Women		Men	
Relationship	2006	2011	2006	2011
Spouse/cohabiting partner	99.7	99.5	82.3	65.1
Boyfriend/Girlfriend	0.1	0.5	11.2	31.2
Casual acquaintance	0.0	0.0	4.4	1.8
Relative	0.0	0.0	0.4	0.0
Commercial sex worker	0.0	0.0	1.2	1.1
Other	0.2	0.1	0.5	0.8
Total	**100**	**100**	**100**	**100**
N	**2,225**	**2,266**	**542**	**569**

Note: Most recent sexual partner within last 12 months; na=not applicable

3.2.5 Condom Use During Last Sex

Table 3.8 shows condom use among male adolescents and youth age 15-24 for their last sexual encounters, according to the 2006 and 2011 NDHS. Overall, in both surveys a minority of all sexually active young men reported using condoms during their last sex. Still, there was a noticeable increase, from 24 percent in 2006 to 36 percent in 2011. Use of condoms varied by marital status, place of residence, and level of education. The proportion of never-married male adolescents and youth who used a condom during last sex, at 73 percent in 2011, was four times that among their married counterparts. A similar difference was observed in 2006. Condom use increased in both urban and rural areas, but the level in rural areas remained much lower than in urban areas. In both surveys condom use was more common among young men with more education.

Table 3.8 Condom use during last sex: Men

Among male adolescents and youth age 15-24 who had sexual intercourse in last 12 months, the percentage who used a condom at last sexual intercourse, by background characteristics, Nepal DHS 2006 and 2011

	2006				2011			
Background characteristic	15-19	20-24	15-24	N	15-19	20-24	15-24	N
Marital status								
Never married	79.4	68.4	74.0	92	69.2	76.0	73.0	191
Ever married	5.1	(16.0)	13.6	450	14.2	18.0	17.3	377
Place of residence								
Urban	(50.7)	32.9	37.4	94	(62.8)	45.1	50.7	79
Rural	25.0	19.5	21.0	448	41.3	31.0	33.7	489
Ecological zone								
Mountain	(37.6)	10.2	18.9	37	(35.0)	22.4	26.0	46
Hills	34.3	26.1	28.2	223	43.0	35.7	37.7	234
Terai	24.0	20.0	21.1	282	48.0	32.1	36.3	289
Development region								
Eastern	(40.2)	19.2	25.3	106	(57.3)	31.1	35.8	119
Central	(22.2)	20.6	21.0	176	(39.1)	23.0	28.3	198
Western	(25.3)	27.3	26.8	108	*	49.8	50.4	102
Mid-western	(42.9)	14.8	23.5	78	(29.6)	29.4	29.5	85
Far-western	*	27.7	24.6	75	(62.3)	39.9	46.2	65
Education								
No education	*	(14.0)	11.3	61	*	*	(5.3)	43
Primary	20.4	9.5	13.1	167	(22.9)	19.4	20.4	103
Some secondary	33.8	29.0	30.4	214	49.8	24.0	32.0	208
SLC and above	*	30.3	35.5	100	63.1	51.1	53.7	215
Total	**29.2**	**21.9**	**23.9**	**542**	**44.8**	**32.8**	**36.0**	**569**

Note: In 2001, the sample is ever married and thus is not included for the purpose of comparison. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and so has been suppressed.

3.2.6 Comprehensive Knowledge of HIV and AIDS Transmission

According to the 2011 NDHS, 26 percent of all female adolescents and youth and 34 percent of all male adolescents and youth age 15-24 had comprehensive knowledge about HIV and AIDS. These values were lower than in 2006, and the decline was greater among males than among females.

As Table 3.9 shows, the level of comprehensive knowledge among adolescents and youth varies by place of residence, education, and marital status. In the 2011 NDHS, about two in every five urban adolescents and youth, both male and female, in urban areas had comprehensive knowledge, compared with about one-third of young men and about one-fourth of young women in rural areas. By education, just 1 percent of male adolescents and youth with no education had comprehensive knowledge of HIV and AIDS, compared with 53 percent of those with SLC and above education. This difference was also large for young women.

Among female adolescents and youth the proportion with comprehensive knowledge of HIV and AIDS was lower among the ever-married than the never-married. In the 2011 NDHS, among male adolescents and youth, 37 percent of the never-married had comprehensive knowledge, compared with about 25 percent of the ever-married. The corresponding figures for female adolescents and youth were 32 percent among the never-married and 20 percent among the ever-married.

Table 3.9 Knowledge About HIV and AIDS

Percentage of women and men age 15-24 who had comprehensive knowledge about HIV and AIDS*, by background characteristics, Nepal DHS 2006 and 2011

	2006				2011			
Background characteristic	Women	N	Men	N	Women	N	Men	N
Place of residence								
Urban	42.6	700	57.5	335	40.2	692	42.3	289
Rural	24.8	3,731	39.9	1,238	23.5	4,358	32.1	1,373
Ecological zone								
Mountain	13.1	312	27.0	93	13.8	316	23.4	96
Hills	32.2	1,876	51.3	717	27.7	1,996	37.0	665
Terai	25.9	2,243	38.4	762	25.7	2,738	32.7	902
Development region								
Eastern	29.4	1,035	41.9	350	25.1	1,216	31.4	407
Central	29.4	1,390	40.7	535	25	1,668	33.8	556
Western	29.3	853	48.0	310	29.3	1,026	34.8	328
Mid-Western	19.1	520	42.0	165	22.1	619	34.8	198
Far-Western	25.5	633	48.6	213	27.3	521	37.3	174
Education								
No education	4.5	1,231	8.9	99	3.2	866	1.1	72
Primary	13.7	1,055	20.2	382	9.4	887	4.6	206
Some secondary	42.1	1,606	47.9	749	24.5	1,930	28.8	737
SLC and above	64.5	539	70.3	343	52.4	1,368	52.7	648
Marital status								
Never married	36.7	2,007	48.1	1,121	31.8	2,475	36.7	1,281
Ever Married	20.2	2,424	32.5	452	19.9	2,575	24.5	382
Total	**27.6**	**4,431**	**43.6**	**1,573**	**25.8**	**5,050**	**33.9**	**1,663**

Note: "Comprehensive knowledge of HIV and AIDS" was derived only for 2006 and 2011, due to different phrasing of questions regarding knowledge of HIV and AIDS in the earlier surveys.

*Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chances of getting HIV, knowing that a healthy looking person can have HIV, and rejecting the two most common local misconceptions about transmission and prevention of HIV and AIDS--that HIV can be transmitted by mosquito bites and that a person can become infected by sharing food with someone who has HIV.

3.2.7 Ever Been Tested for HIV and Received Results

Table 3.10 shows the percentage of sexually active adolescents and youth age 15-24 who reported in 2011 that they had ever been tested for HIV and received results, according to background characteristics. In this age group a higher proportion of males than females—20 percent compared with 7 percent—had ever been tested for HIV and received results. Among both males and females, HIV testing and receiving results was more common in the 20-24 age group than in the 15-19 age group.

Table 3.10 Ever been tested for HIV and received results

Among adolescents and youth age 15-24 who have ever had sex, the percentage who have ever been tested for HIV and received results, according to background characteristics, Nepal DHS 2011

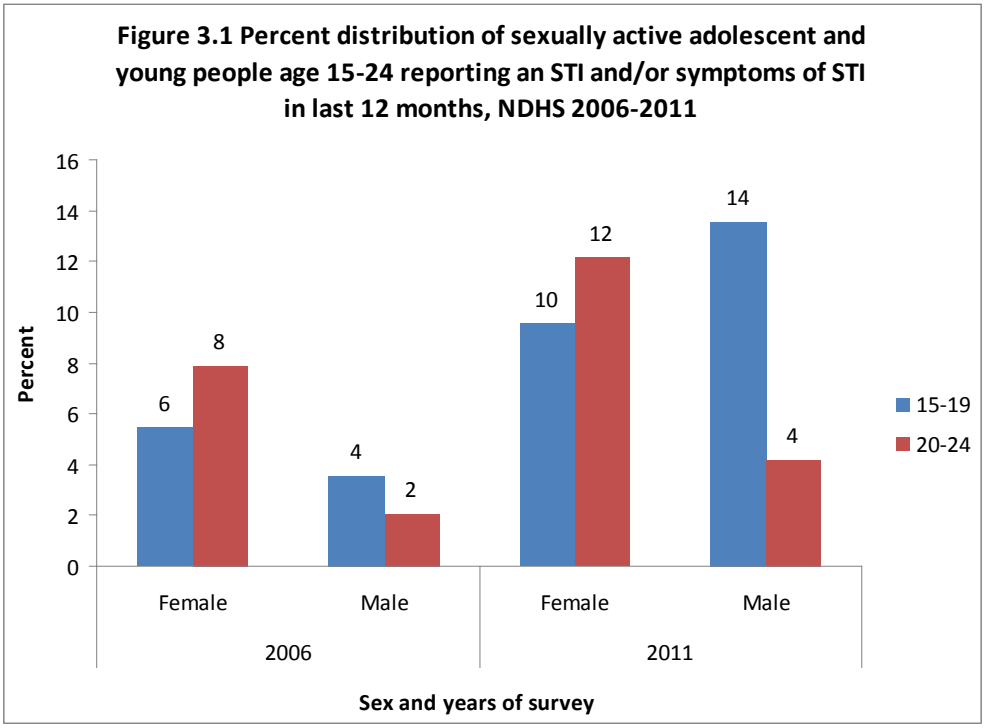
Background characteristic	Women				Men			
	15-19	20-24	15-24	N	15-19	20-24	15-24	N
Place of residence								
Urban	10.7	10.2	10.3	262	12.9	34.6	27.6	96
Rural	4.6	7.7	6.7	2314	8.6	21.0	17.2	570
Ecological zone								
Mountain	1.3	8.9	6.3	175	(16.1)	22.0	20.2	49
Hills	8.2	8.7	8.6	970	11.4	23.0	19.4	265
Terai	3.6	7.3	6.1	1,432	6.6	22.9	18.0	353
Development region								
Eastern	5.2	8.3	7.4	586	(10.4)	24.0	20.6	144
Central	3.0	2.9	2.9	857	2.5	23.0	15.9	233
Western	3.9	8.2	6.9	519	(15.6)	28.4	25.1	117
Mid-western	5.5	11.3	9.3	353	11.9	15.8	14.5	99
Far-western	14.1	18.2	17.0	262	(18.9)	19.9	19.6	73
Education								
No education	0.3	4.5	3.4	684	*	(1.9)	(1.3)	47
Primary	5.0	5.4	5.3	596	(4.6)	9.7	8.1	110
Some secondary	6.8	8.3	7.7	785	12.7	21.6	18.4	249
SLC and above	8.4	14.2	13.1	512	9.3	32.3	26.7	260
Marital status								
Never married	*	*	*	16	9.2	30.4	20.5	285
Ever Married	5.0	8.0	7.1	2,560	12.9	20.3	19.0	381
Total	**5.1**	**8.1**	**7.1**	**2,576**	**10.5**	**23.6**	**19.6**	**666**

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and so has been suppressed

The proportion of adolescents and youth who have ever been tested for HIV and received results varies with place of residence, development region, and level of education. In urban areas 28 percent of male adolescents and youth age 15-24 reported that they had ever been tested and received results, compared with 17 percent of their rural counterparts. In the Far-western region 20 percent of males and 17 percent of females age 15-24 had tested for HIV and received results. At the other end of the scale, 15 percent of males in the Mid-western region and just 3 percent of females in the Central region had tested for HIV and received results.

3.2.8 Had an STI or Its Symptoms

In both the 2006 and 2011 NDHS, respondents who had ever had sexual intercourse were asked whether, in the previous 12 months, they had experienced an infection acquired through sexual contact (an STI) or had experienced either of two symptoms associated with STIs—a bad smelling, abnormal discharge from the vagina or penis, or a genital sore or ulcer. Figure 3.1 summarizes the responses of sexually active youth age 15-24.



For both male and female adolescents and youth, the proportions reporting an STI or STI symptoms increased between 2006 and 2011. Among males, reporting STI symptoms was more common in the 15-19 age group than in the 20-24 age group. This pattern is reversed among females.

3.3 FAMILY PLANNING AND CONTRACEPTION

3.3.1 Current Use of Modern Contraceptives

Figure 3.2 shows the trend from 1996 to 2011 in modern contraceptive use among currently married female adolescents and youth age 15-24. Among currently married women age 15-19, current use of modern contraceptives increased from 4 percent in 1996 to 14 percent in 2011. Among currently married women age 20-24, modern contraceptive use doubled between 1996 and 2006 (from 14 percent to 28 percent) but then fell to 24 percent in 2011. In the 15-19 age group, modern contraceptive use rose between 1996 and 2006 and then was virtually unchanged in 2011. Still, the level in the more vulnerable 15-19 age group remains far below that in the 20-24 age group.

As Table 3.11 shows, current modern contraceptive use among women age 15-24 varies by place of residence, educational attainment, and whether at the time of the survey they were currently living with their partners. In both 2006 and 2011, women living with their partners were nearly four times more likely to use modern contraception compared with women living separately. In all four surveys modern contraceptive use was more common in urban areas. The gap between urban and rural areas narrowed between 1996 and 2011. In 1996, 2001, and 2006, modern contraceptive use was higher among women with more education. In the 2011 NDHS, however, there was little difference by educational attainment.

Figure 3.2 Current use of modern contraceptives among currently married adolescent and young women, by age group, Nepal DHS 1996-2011

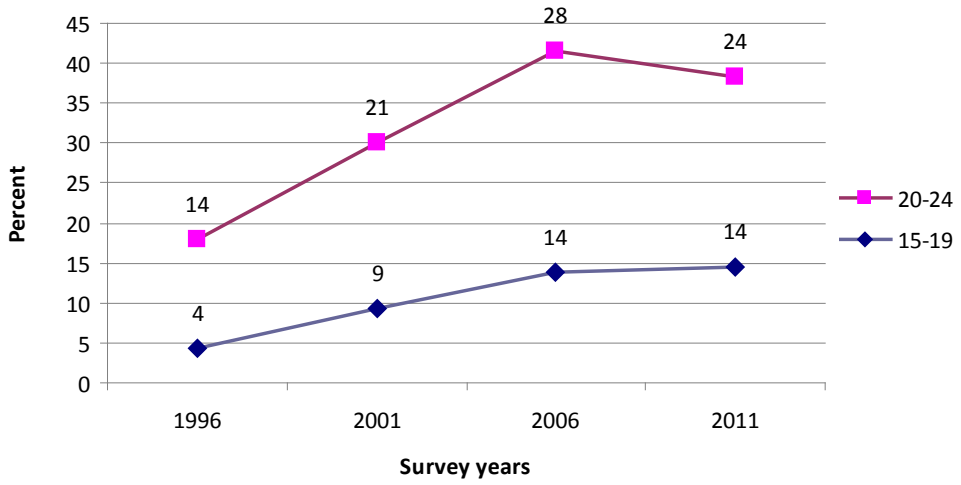


Table 3.11 Current use of modern contraceptives

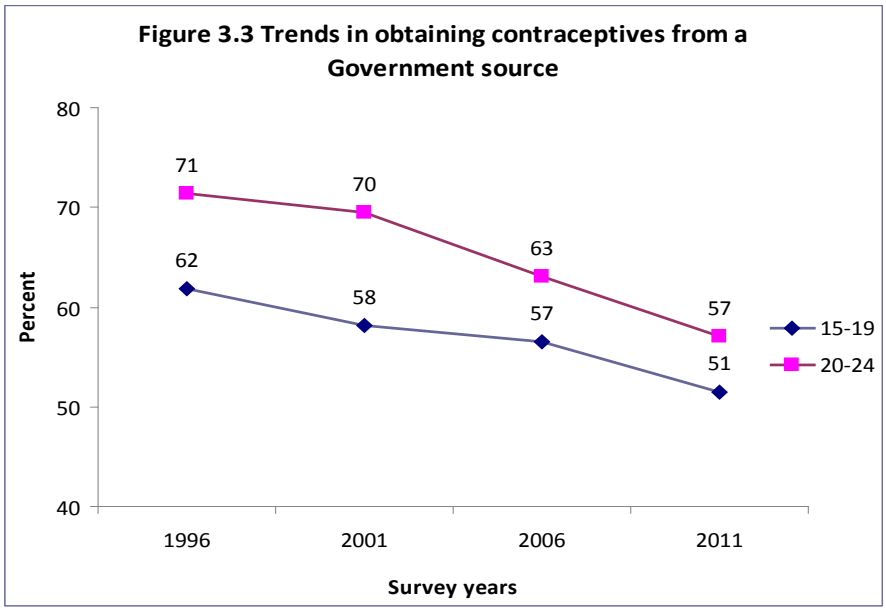
Percentage of currently married female adolescents and youth age 15-24 currently using a modern method of contraception, by background characteristics, Nepal DHS 1996-2011

	1996				2001				2006				2011			
Background characteristic	15-19	20-24	15-24	N	15-19	20-24	15-24	N	15-19	20-24	15-24	N	15-19	20-24	15-24	N
Place of residence																
Urban	12.6	35.0	28.7	183	20.5	43.3	37.9	205	33.0	43.6	40.9	327	26.4	33.4	31.8	253
Rural	3.9	11.6	8.7	2,384	8.6	18.4	14.7	2,368	11.5	25.0	20.4	2,062	13.5	22.6	19.7	2,300
Ecological zone																
Mountain	1.0	7.0	4.8	167	10.4	17.0	14.5	165	11.1	25.6	19.8	178	17.1	21.9	20.3	172
Hills	6.2	14.9	11.9	1,011	10.8	19.2	16.3	1,034	17.6	29.6	26.0	934	16.2	20.7	19.4	954
Terai	3.6	13.3	9.4	1,389	8.0	22.4	17.1	1,374	11.8	26.7	21.7	1,277	13.2	26.1	21.9	1,426
Development region																
Eastern	3.0	12.6	9.3	499	14.0	20.7	18.3	533	14.5	27.6	23.6	533	11.6	21.0	18.2	581
Central	3.2	17.2	11.6	928	8.5	21.7	16.9	887	13.9	30.0	25.1	759	12.5	28.5	23.4	848
Western	5.4	11.4	9.4	478	11.9	20.4	17.4	503	13.4	22.9	19.7	474	17.3	16.2	16.5	515
Mid-western	7.6	13.4	11.2	387	4.4	22.6	15.7	380	14.9	26.8	22.1	294	17.3	23.3	21.3	347
Far-western	4.8	7.5	6.4	275	5.0	15.7	11.9	269	12.1	30.8	24.3	329	17.6	30.5	26.7	261
Education																
No education	3.5	10.6	7.9	1,756	4.7	16.2	12.4	1,460	7.3	24.8	19.5	952	8.3	25.6	20.9	684
Primary	4.4	15.6	10.9	436	12.0	20.4	16.7	541	14.7	27.5	22.6	609	11.5	25	20.3	588
Some secondary	9.9	22.9	18.0	279	13.7	30.9	24.0	426	20.7	31.6	27.6	643	17.5	24.2	21.6	776
SLC and above	*	26.1	24.7	96	36.4	36.8	36.7	146	(16.4)	31.2	29.2	185	23.2	19.8	20.4	506
Living together with partner																
Yes	5.7	15.4	11.8	1,972	12.0	25.2	20.6	1,816	19.0	38.6	31.9	1,539	21.5	34.2	30.0	1,505
No	0.4	7.3	4.5	595	(3.4)	9.1	6.9	756	3.2	9.3	7.5	850	2.6	9.8	7.8	1,048
Total	**4.4**	**13.6**	**10.1**	**2,567**	**9.3**	**20.7**	**16.6**	**2,573**	**13.8**	**27.8**	**23.2**	**2,389**	**14.4**	**23.8**	**20.9**	**2,553**

Note: Figures in parentheses are based on 25-49 unweighted cases.

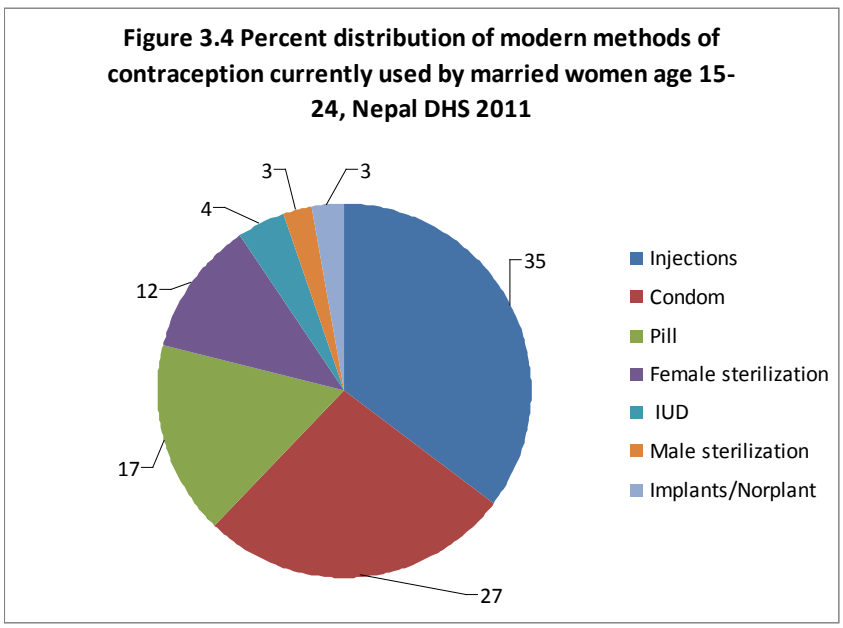
3.3.2 Source of Contraceptives

Between 1996 and 2011 among adolescents and youth there has been a trend away from obtaining contraceptives from government sources in favor of obtaining them from non-government sources, the most common of which is private pharmacies. As Figure 3.3 illustrates, the proportion of currently married female adolescents age 15-19 using modern family planning methods who received their most recent contraceptives from government sources decreased from 62 percent in 1996 to 51 percent in 2011. For those age 20-24, this proportion decreased from 71 percent to 57 percent.



3.3.3 Mix of Currently Used Modern Methods

According to the 2011 NDHS, 21 percent of currently married female adolescents and youth were using modern contraception. Figure 3.4 shows the distribution of modern contraception currently used. The majority of these young women were using injections (35 percent), followed by condoms (27 percent) and pills (17 percent).



3.3.4 Unmet Need for Family Planning

Unmet need for family planning is an indicator of the unfulfilled demand for contraception among women of reproductive age. Ensuring universal access to reproductive health, including modern contraception, is one of the priorities of NHSP II, as implemented by the MoHP. Among age groups, unmet need for family planning is highest among adolescents (MoHP et al., 2012). An understanding of unmet need for family planning among adolescents can help to focus NHSP II strategies.

Table 3.12 shows the percentage of currently married women age 15-24 with unmet need for family planning, stratified by their background characteristics. Overall, the level of unmet need among currently married female adolescents and youth has changed little in the last 15 years. In 1996, 40 percent of currently married women age 15-24 had an unmet need for family planning; in 2011 the level of unmet need was 38 percent.

As Table 3.12 shows, the level of unmet need for family planning varies by place of residence and age. In all four surveys, unmet need for family planning is higher among rural women than among urban women, and is higher among women age 15-19 than among women age 20-24. In all four surveys, unmet need for family planning is also highest among women in the Hills, and women in the Western region.

Table 3.12 Unmet need for family planning

Percentage of currently married female adolescents and youth age 15-24 with unmet need for family planning, by background characteristics, Nepal DHS 1996-2011

	1996		2001		2006		2011	
Background characteristic	%	N	%	N	%	N	%	N
Age group								
15-19	42.4	964	35.1	931	37.9	784	41.5	792
20-24	38.3	1,602	33.0	1,643	33.2	1,606	36.8	1,761
Place of residence								
Urban	27.9	183	26.3	205	26.9	327	27.2	253
Rural	40.8	2,385	34.4	2,368	35.9	2,062	39.5	2,300
Ecological zone								
Mountain	37.1	167	32.7	165	35.4	178	33.1	172
Hills	42.7	1,010	35.5	1,034	37.8	934	41.0	954
Terai	38.1	1,389	32.6	1,373	32.3	1,277	37.1	1,426
Development region								
Eastern	36.5	499	30.6	533	35.8	533	42.3	581
Central	40.0	928	31.7	887	31.0	759	32.8	848
Western	44.6	478	38.6	503	41.1	474	47.8	515
Mid-western	36.2	387	34.7	380	35.0	294	35.4	347
Far-western	32.2	275	36.4	269	31.9	329	32.2	261
Total	**39.8**	**2,567**	**33.8**	**2,574**	**34.7**	**2,389**	**38.3**	**2,552**

Note: Unmet need estimates for 1996 and 2001 have been adjusted to apply the current, revised definition.

3.3.5 Factors Associated with Current Use of Modern Contraceptives

Table 3.13 illustrates factors associated with the use of modern contraceptives among currently married female adolescents and youth age 15-24. In addition to the four background characteristics presented in descriptive tables throughout this report, several other potential correlates of the use of modern contraceptives were included in a logistic regression model for this study. These are the woman's current living arrangement with spouse (whether the male partner is living at home or elsewhere), the woman's participation in household decision-making (whether she reports participating in none, one or two, or all three decisions posed during the interview), her exposure to mass media (any versus none), and the number of children ever born to the respondent.

As Table 3.13 shows, urban residence, currently living with spouse, participation in household decision-making, and the number of children ever born are positively associated with the use of modern contraception, after adjusting for all other covariates in the model. For example, the adjusted odds of using a modern contraceptive method are 2.4 times greater among women who participate in one or two of the household decisions, compared with women who participate in no household decisions, and 1.7 times greater among women who participate in all three household decisions. Women whose husbands are currently living at home are 8.4 times more likely to be using a modern contraceptive method than women whose husbands are living elsewhere. Women who want more children are less likely to be using modern contraceptives, after adjusting for other variables in the model.

Table 3.13 Factors associated with current use of modern contraceptives

Logistic regression results for modern contraceptive use among currently married female adolescents and youth age 15-24[1]: adjusted odds ratios, Nepal DHS 2011

Variable	Odds ratio	95 percent confidence interval
Place of residence		
Rural (r)[2]	1.00	
Urban	1.72**	1.18-2.49
Ecological zone		
Mountain (r)	1.00	
Hill	0.94	0.63-1.40
Terai	1.34	0.89-2.01
Wealth quintile		
First (poorest) (r)	1.00	
Second	1.19	0.70-2.03
Third	1.06	0.64-1.76
Fourth	1.00	0.60-1.65
Fifth (richest)	1.11	0.60-2.05
Education		
No education (r)	1.00	
Primary	1.08	0.69-1.71
Some secondary	1.21	0.82-1.78
SLC and above	1.25	0.72-2.18
Living arrangement		
Living with spouse	8.39***	5.96-11.81
Husband elsewhere (r)	1.00	
Woman's participation in decision-making[3]		
No decisions at all (r)	1.00	
1-2 decisions	2.35***	1.64-3.37
All three decisions	1.65*	1.09-2.50
Fertility preference		
Wants no more children (r)	1.00	
Wants more children	0.30***	0.21-0.43
Never had sex/uncertain	0.26**	0.10-0.66
Media exposure[4]		
Not exposed to media (r)	1.00	
Exposed to media	1.24	0.89-1.71
Comprehensive knowledge of HIV and AIDS[5]		
Incomplete knowledge (r)	1.00	
Comprehensive knowledge	0.81	0.56-1.17
Number of children ever born	1.46***	1.22-1.75
N	2,036	

*p<.05; ** p<.01;*** p<.001

[1] Women who were pregnant at the time of interview and women who gave birth in the two months prior to the date of interview are excluded from this regression model.

[2] "(r)" identifies the reference category.

[3] A women's participation in decision-making was classified according to her report whether she usually makes decisions, either alone or jointly with her husband, in the following three areas: woman's own health care, making major household purchases, and visits to her family or relatives.

[4] Women who listen to the radio, watch television, and/or read the newspaper at least once a week are compared with women who have no exposure or less than weekly exposure to any of these media.

[5] Comprehensive knowledge of HIV and AIDS means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chances of getting HIV, knowing that a healthy looking person can have HIV, and rejecting the two most common local misconceptions about transmission and prevention of HIV and AIDS.

3.4 MOTHERHOOD IN ADOLESCENCE AND YOUTH

Early pregnancy and motherhood is a major social and health issue in Nepal. Early pregnancy can cause severe health problems for both the mother and child. Moreover, an early start to childbearing greatly reduces women's opportunities for education and employment and is associated with higher levels of fertility.

3.4.1 Adolescent Fertility

Age-specific fertility rates measure births to all women, whether married or unmarried, typically in five-year age groups. The age-specific fertility rate (ASFR) for ages 15-19, also referred to as adolescent fertility, is one of the indicators used in NHSP II to measures the progress of programs on adolescent sexual and reproductive health.

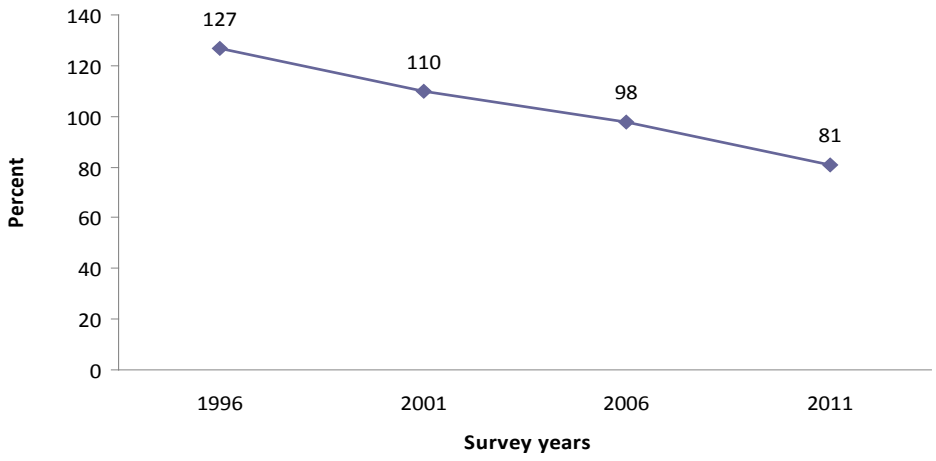
As Figure 3.5 shows, the adolescent fertility rate among women age 15-19 dropped from 127 per 1,000 person-years of exposure in 1996 to 81 per 1,000 person-years of exposure in 2011. Table 3.14, which shows age-specific fertility rates for 15-24 year olds in 2011 stratified by socio-demographic characteristics, reveals substantial differences in fertility between urban and rural areas. For example, among women age 15-19, both married and unmarried, fertility is twice as high in rural areas as in urban areas. There also are differences by ecological zone and development region. Fertility among adolescent and young women is higher in the Mountain zone than in Hills and Terai, and higher in the Mid-western and Far-western development regions than the other regions.

Table 3.14 Age-specific fertility

Age-specific fertility rate for the three years preceding the survey among adolescents and youth age 15-24, by background characteristics, Nepal DHS 2011

	ASFR (per 1,000 population)	
Background characteristic	15-19	20-24
Place of residence		
Urban	42	135
Rural	87	197
Ecological zone		
Mountain	99	245
Hills	70	183
Terai	87	184
Development region		
Eastern	66	172
Central	88	188
Western	75	177
Mid-western	95	218
Far-western	93	204
Total	**81**	**187**

Figure 3.5 Age-specific fertility rate (ASFR) among women 15-19, Nepal DHS 1996-2011



Note: Measured for three years prior to survey. "All women" factors were used to adjust 1996 and 2001

3.4.2 Childbearing among Adolescents and Youth

The percentage of female adolescents and youth age 15-24 who are pregnant or have had children decreased from 48 percent in 1996 to 39 percent in 2011. As Figure 3.6 shows, childbearing is far more prevalent among women age 20-24 than among women age 15-19. The decline in adolescent childbearing between 1996 and 2011 is pronounced in both the 15-19 and 20-24 age groups.

The percentage of adolescent and young women who have started childbearing varies by place of residence and educational status. Table 3.15 shows that over the past 15 years, among women age 15-24 with an education at the level of SLC and above, the percentage who have begun childbearing has dropped by half—from 51 percent in 1996 to 25 percent in 2011. The urban-rural differential in initiation of childbearing was greater in 2011—at 27 percent in urban areas compared with 41 percent in rural areas—than in the previous surveys.

Figure 3.6 Proportion of adolescents and youth age 15-24 who have started childbearing, Nepal DHS 1996-2011

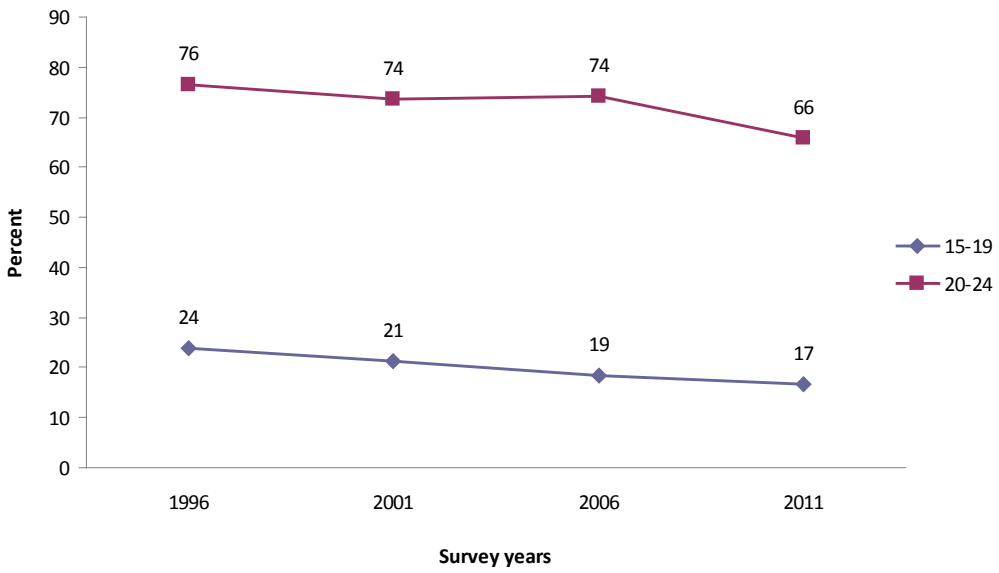


Table 3.15 Adolescent childbearing

Among all female adolescents and youth age 15-24, the percentage who have begun child bearing, by background characteristics, Nepal DHS 1996-2011

Background characteristic	1996				2001				2006				2011			
	15-19	20-24	15-24	N	15-19	20-24	15-24	N	15-19	20-24	15-24	N	15-19	20-24	15-24	N
Place of residence																
Urban	19.7	64.8	43.3	363	12.6	59.4	35.7	492	16.4	61.6	38.9	700	9.3	46.9	26.9	692
Rural	24.3	77.5	48.6	3,775	22.5	75.9	46.8	3,840	18.8	76.7	44.4	3,731	17.8	68.9	40.9	4,358
Ecological zone																
Mountain	20.4	75.5	46.0	276	19.7	71.6	42.5	280	19.8	73.5	43.3	312	17.1	77.7	42.8	316
Hills	16.9	69.3	40.7	189	17.0	70.1	40.9	1,892	17.3	69.7	41.0	1,876	15.5	62.7	37.0	1,996
Terai	31.1	83.2	55.4	1,972	25.5	77.6	50.0	2,160	19.3	77.9	45.6	2,243	17.5	66.7	40.0	2,738
Development region																
Eastern	19.8	65.7	40.4	974	22.6	59.9	39.8	1,070	20.1	70.6	44.0	1,035	15.9	62.4	36.7	1,216
Central	28.5	79.6	52.6	1,374	23.8	77.0	50.2	1,346	18.0	72.2	43.6	1,390	16.9	64.9	39.1	1,668
Western	18.8	75.0	44.3	836	16.1	74.9	41.9	892	19.3	72.6	43.8	853	16.2	65.1	37.8	1,026
Mid-western	27.0	80.8	52.6	564	22.0	81.1	47.1	617	21.7	85.3	46.9	520	20.2	73.2	44.7	619
Far-western	25.1	87.4	52.7	390	22.5	82.4	50.5	413	13.7	79.2	39.4	633	14.5	68.6	39.6	521
Education																
No education	31.8	82.9	58.3	2,333	31.5	82.4	60.0	1,908	32.7	88.0	65.0	1,231	31.6	87.5	66.4	866
Primary	22.3	76.8	42.6	791	19.6	82.5	39.1	1,014	23.0	77.5	45.6	1,055	27.8	80.1	53.2	887
Some secondary	9.6	55.5	25.9	1,011	12.4	58.8	30.0	1,340	12.3	69.8	31.2	1,606	13.2	70.9	30.1	1,930
SLC and above	*	71.4	50.9	63	(16.2)	40.1	36.5	84	3.9	44.2	27.0	539	8.0	38.6	25.1	1,368
Total	**23.9**	**76.4**	**48.1**	**4,138**	**21.4**	**73.7**	**45.5**	**4,335**	**18.5**	**74.1**	**43.5**	**4,431**	**16.7**	**65.8**	**39.0**	**5,050**

Note: Adolescent childbearing refers to adolescents and young people who are either pregnant or have children. Data for 1996 and 2001 were adjusted using the "all women" factor. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and so has been suppressed.

3.4.3 Factors Associated with Adolescent Childbearing

Table 3.16 illustrates factors associated with adolescent childbearing (defined as giving birth before age 20) among ever-married adolescents and youth currently age 20-24. In addition to the four background characteristics presented in descriptive tables throughout this report, two hypothesized correlates of adolescent childbearing were included in this model: women's age at first sexual intercourse and the age gap between the respondent and her spouse.

Women with more education are far less likely to have a child in their adolescence than women with less education. For women with primary education, the adjusted odds of having a child before reaching age 20 are about 30 percent lower than the odds for women with no education, for women with secondary education the odds are 50 percent lower, and for women with an SLC and above, the odds are 90 percent lower, again compared with women who have no education.

The odds of adolescent childbearing are significantly higher among women whose husbands are older than they are, compared with the odds among women who are older than their husbands. Contrary to expectation, women's age at first sex is positively associated with the odds of adolescent childbearing, such that sexual initiation at an older age is associated with greater odds of adolescent childbearing.

Table 3.16 Factors associated with adolescent childbearing

Logistic regression results for having had a birth before age 20 among ever married women age 20-24: adjusted odds ratios, Nepal DHS 2011

Variable	Odds ratio	95 percent confidence interval
Residence		
Rural (r)	1.00	
Urban	0.84	0.62-1.13
Ecological zone		
Mountain (r)	1.00	
Hill	0.99	0.70-1.40
Terai	1.24	0.86-1.80
Wealth quintile		
First (poorest) (r)	1.00	
Second	0.72	0.39-1.03
Third	0.73	0.28-1.04
Fourth	0.79	0.29-1.24
Fifth (richest)	0.60*	0.38-0.95
Education		
No education (r)	1.00	
Primary	0.67*	0.47-0.96
Some secondary	0.50***	0.35-0.71
SLC and above	0.08***	0.05-0.13
Age at first sexual intercourse	1.05***	1.03-1.07
Spousal age gap		
No age gap	1.34	0.66-2.70
Woman is older (r)	1.00	
Man older by 1-5 years	2.80**	1.48-5.30
Man older by 6+ years	2.20*	1.14-4.25
N	**2,070**	

* p<.05; ** p<.01;*** p<.001

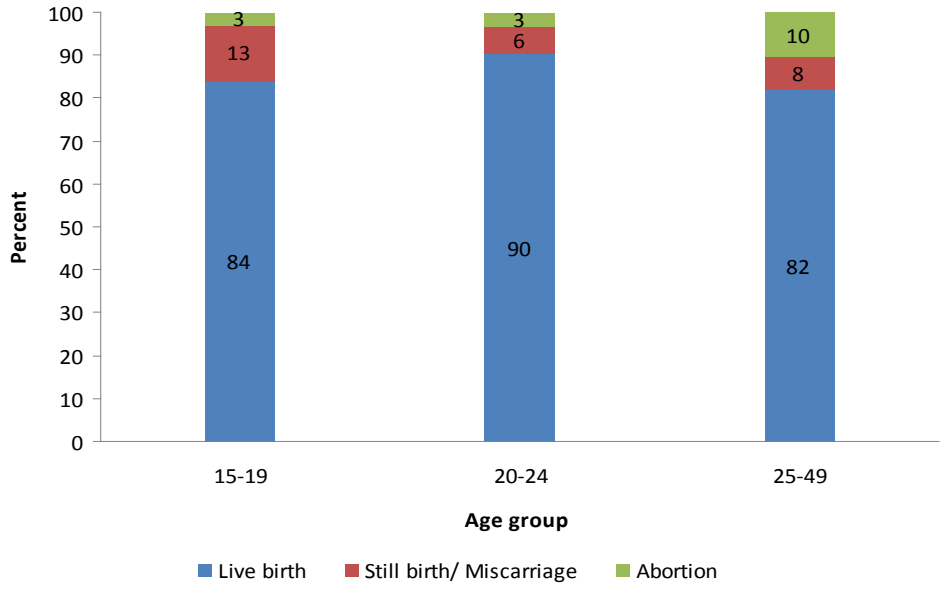
[1] "(r)" identifies the reference category.

3.4.4 Pregnancy Outcome

The percentage of still births/miscarriages is higher among women age 15-19 than among women age 25-49. Figure 3.7 shows the percent distribution of pregnancy outcomes for all pregnancies ending in the five years preceding the 2011 survey among ever-married women, by age group.

There are variations in pregnancy outcome by background characteristics (data not shown). In particular, the percentage of abortions is almost four times higher in urban areas than in rural areas. The percentage of abortions is lowest in the Mountain zone and in the Eastern region.

Figure 3.7 Percent distribution of pregnancy outcomes among ever-married women by age group, Nepal DHS 2011



3.5 MATERNAL CARE

3.5.1 Antenatal Care

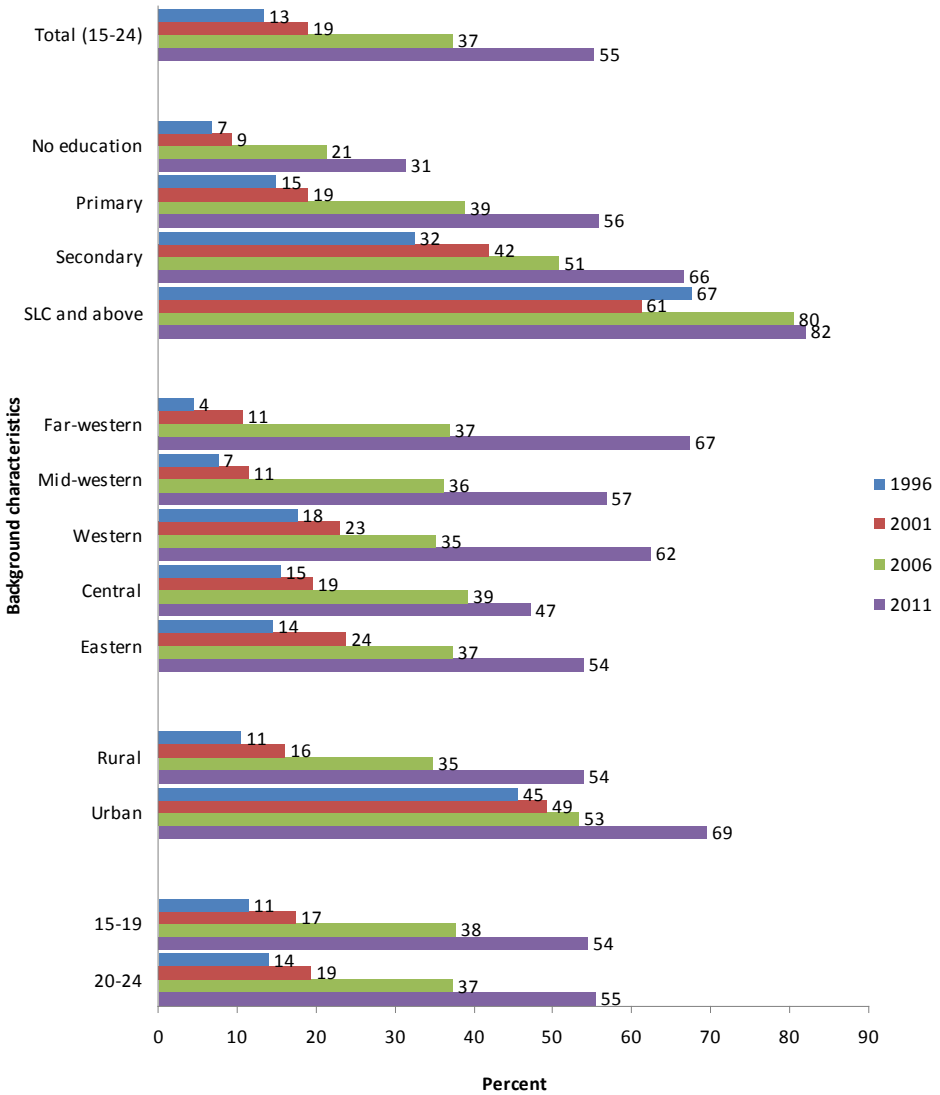
Antenatal care from a skilled provider is important to monitor pregnancy and reduce the risk of mortality for mother and baby during pregnancy and delivery. The Government of Nepal has given priority to ensuring that women have access to complete antenatal care (i.e., at least four ANC visits during pregnancy). For women who gave birth in the five years preceding the survey, the NDHS collected information on ANC coverage for the woman's most recent birth[4] (MoHP et al., 2012).

As Figure 3.8 shows, the overall proportion of adolescents and youth having at least four ANC visits increased in the past 15 years, from 13 percent in 1996 to 55 percent in 2011. In each of the four Nepal DHS surveys studied, proportions are similar for adolescents age 15-19 and youth age 20-24.

[4] In 1996, information is available only for women's births in the *three* years preceding the survey.

All sub-groups among women age 15-24 made steady progress in ANC coverage between 1996 and 2011. Along with the overall increase in coverage, the difference between rural and urban areas narrowed. In 1996, 11 percent of adolescents and youth in rural areas had at least four ANC visits for the most recent birth, compared with 45 percent in urban areas. In 2011, 54 percent in rural areas and 69 percent in urban areas had at least four ANC visits. In all four surveys the proportion of adolescents and youth age 15-24 who had four or more ANC visits for the most recent birth increased with the level of education. Even so, there was a considerable increase among those with no education—from 7 percent in 1996 to 31 percent in 2011.

Figure 3.8: Percent distribution of women aged 15-24 yrs who had a live birth five years preceeding the survey and had ANC IV visit for the most recent birth according to background characteristics, 1996-2011



Annex Table 3 shows the trend in the percentage of women age 15-24 who had four or more ANC visits for their most recent birth, according to selected background characteristics and five-year age group.

3.5.2 Factors Associated with Utilization of Antenatal Care Services

Table 3.17 presents the factors associated with the number of ANC visits during the last birth among women age 15-24. In this model two separate comparisons are made. First, women with one to three ANC visits are compared with women who made no ANC visits. Second, women with four or more visits are compared with women who made no visits. The table presents adjusted relative risk ratios from the full multinomial model.

Ecological zone and women's participation in decision-making are significantly associated with the adjusted likelihood of having one to three ANC visits, compared with no ANC visits. Having four or more ANC visits (compared with no visits) is more likely among women who are wealthier, women who have some education, and women who participate in household decision-making. For example, women who participate in all three household decisions are over three times more likely to have had four or more ANC visits than women who make no household decisions, even after controlling for all other characteristics in the model. Similarly, women with at least some education are nearly four times more likely to have had at least four ANC visits for their most recent birth, compared with women with no education, after adjusting for all other factors in the model. The higher the birth order, the lower the likelihood of having made four of more ANC visits for the most recent birth. Women who have previously given birth once or twice are roughly 50 percent less likely to have had four or more ANC visits than women who are pregnant with their first child, after adjusting for other factors in the model.

Table 3.17 Factors associated with utilization of ANC services

Multinomial logistic regression of no ANC visit versus1-3 and no visit versus 4+visits for last birth in preceding five years among women age 15-24:adjusted relative risk ratio (RRR), Nepal DHS 2011

	1-3 visits versus no visit		4+ visits versus no visit	
Covariate	RRR	95 percent confidence interval	RRR	95 percent confidence interval
Place of residence				
Urban	1.08	0.53-2.22	1.41	0.40-1.67
Rural (r)[1]	1.00		1.00	
Ecological zone				
Mountain (r)	1.00		1.00	
Hill	1.08	0.58-2.00	0.82	0.40-1.67
Terai	2.25*	1.08-4.73	1.37	0.65-2.88
Wealth[2]				
Poorer (r)	1.00			
Richer	1.33	0.60-2.92	2.22*	1.08-4.58
Education[3]				
No education (r)	1.00			
Any education	1.35	0.80-2.28	3.94***	2.48-6.27
Women's participation in decision-making[4]				
No decisions (r)	1.00		1.00	
1-2 decisions	0.87	0.49-1.54	1.34	0.76-2.37
3 decisions	2.39**	1.24-4.61	3.19***	1.60-6.35
Birth order				
1 (r)	1.00		1.00	
2-3	0.63	0.38-1.05	0.48**	0.29-0.78
4-5	0.62	0.22-1.78	0.28*	0.09-0.84
N	1,655			

Note: * p<.05; ** p<.01;*** p<.001; regression model excludes seven women with missing information on women's participation in decision-making.

[1] "(r)" identifies the reference category.

[2] Due to the small number of cases in some cells in this model, the five wealth quintiles were combined into two categories; "poorer" includes the bottom two wealth quintiles, and "richer" includes the upper three quintiles.

[3] Due to the small number of cases in some cells in this model, women's education was combined into two categories, "no education," and "any education."

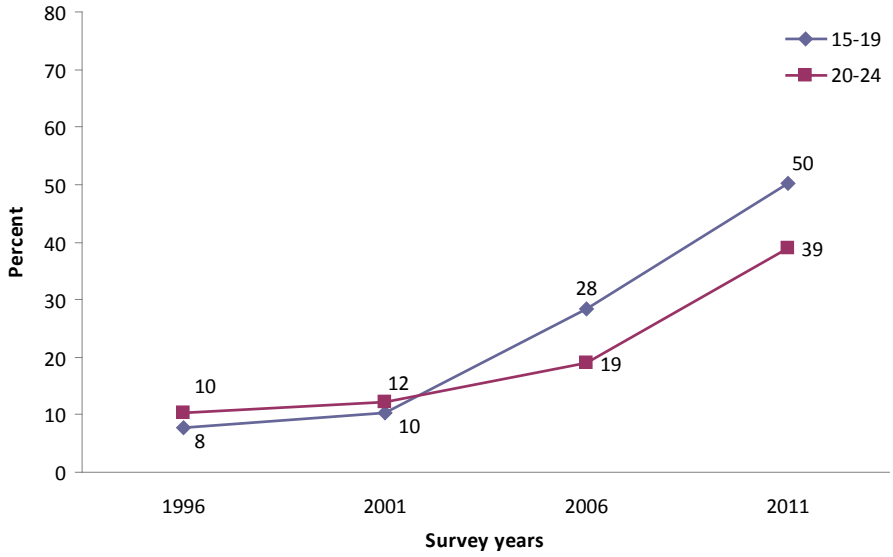
[4] A woman was categorized as participating in decision-making if she reported that she usually makes decisions, either alone or jointly with her husband, in the following three areas: woman's own health care, making major household purchases, and visits to her family or relatives.

3.5.3 Place of Delivery

The Government of Nepal has implemented various strategies to improve the quality of safe motherhood services and thus reduce the number of maternal deaths. Encouraging deliveries in health care institutions is one priority of the safe motherhood program. A free delivery policy was launched nationwide in January 2009 to address the financial barriers that women face in attending health facilities for delivery.

As Figure 3.9 shows, there has been a substantial increase in institutional deliveries among adolescents and youth since 2001. In fact, between 2006 and 2011 alone the percentage of births that took place in health facilities in the five years preceding the survey approximately doubled, both among adolescents age 15-19 and youth age 20-24.

Figure 3.9 Percentage delivered in a health facility among live births to adolescents and youth age 15-24 in the five years preceding the survey, by age group, Nepal DHS 1996-2011



Despite these positive overall trends, the percentage of births delivered in health facilities varies substantially by place of residence, ecological region, and the educational status of respondents, as shown in Table 3.18. In 2011, for example, women age 15-24 living in urban areas were nearly twice as likely as rural women to have births delivered in a health facility, at 71 percent versus 38 percent. Similarly, women age 15-24 with some secondary education were nearly twice as likely as those with no education to give birth in a health facility, at 49 percent versus 27 percent.

Table 3.18 Institutional delivery

Among births to women age 15-24 in the five years preceding the survey[1], the percentage delivered in a health facility, by background characteristics, Nepal DHS 1996-2011

Background characteristic	1996				2001				2006				2011			
	15-19	20-24	15-24	N	15-19	20-24	15-24	N	15-19	20-24	15-24	N	15-19	20-24	15-24	N
Place of residence																
Urban	(44.9)	53.0	51.4	146	(34.9)	40.4	39.6	208	60.8	40.4	43.5	304	80.6	69.7	71.1	187
Rural	5.1	6.7	6.3	1748	8.6	9.5	9.3	2310	23.7	15.7	17.0	1,995	48.2	36.2	38.3	1995
Ecological zone																
Mountain	(2.3)	2.1	2.2	120	5.0	5.0	5.0	158	6.5	8.1	7.8	175	38.7	27.8	29.7	164
Hills	14.3	12.3	12.7	744	11.2	12.2	12.0	946	30.9	19.9	21.7	866	35.6	33.7	34.0	789
Terai	4.8	10.0	8.6	1030	10.6	12.9	12.4	1415	29.8	19.9	21.4	1,258	60.1	44.4	47.3	1,229
Development region																
Eastern	9.9	6.5	7.3	348	13.2	13.7	13.6	508	25.0	18.3	19.4	543	53.1	43.8	45.6	455
Central	6.5	16.9	14.3	690	13.6	15.4	15.1	905	36.1	24.4	26.1	729	47.9	37.2	39.1	746
Western	11.5	10.3	10.6	371	6.7	12.0	11.2	458	20.0	18.6	18.8	431	51.1	45.3	46.4	405
Mid-western	3.6	3.9	3.8	282	4.8	6.8	6.5	375	37.1	15.1	19.4	290	46.8	37.9	39.4	317
Far-western	7.0	5.1	5.5	203	5.2	6.3	6.2	273	18.5	11.6	12.6	306	55.5	29.7	33.2	260
Education																
No education	3.4	4.5	4.3	1309	6.1	6.0	6.0	1,574	16.4	8.9	9.9	1,062	48.5	23.8	26.8	770
Primary	11.2	12.0	11.7	317	8.7	9.6	9.4	480	31.7	13.4	17.2	560	38.8	36.3	36.9	525
Some secondary	(26.9)	29.6	28.9	199	26.2	27.3	27.0	345	41.3	31.5	33.5	531	59.5	45.8	49.1	591
SLC and above	*	51.5	50.7	69	*	55.5	53.9	120	*	64.9	63.0	146	(56.2)	72.0	70.3	2,96
Total	**7.7**	**10.4**	**9.8**	**1894**	**10.4**	**12.1**	**11.8**	**2519**	**28.3**	**20.5**	**20.5**	**2,299**	**50.3**	**39.2**	**41.1**	**2,182**

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and so has been suppressed.

[1] For 1996, the denominator is births to women 15-24 in the *three* years prior to the survey, due to differences in the 1996 questionnaire.

3.5.4 Reasons for Not Delivering in Institution

The 2011 NDHS asked women who did not deliver in a health facility why they did not do so. Among this subset of women age 15-24, Table 3.19 shows the percentage providing various specific reasons for not delivering the most recent birth in a health facility.

Table 3.19 Reasons for not delivering in an institution

Among women age 15-24 who did not deliver their most recent birth in an institution, the percentage who provided each of the following reasons for why, Nepal DHS 2011

Reasons	Age group		
	15-19	20-24	15-24
Not necessary	55.8	62.2	61.1
Not customary	11.3	6.1	7.0
Too far/no transport	10.4	13.5	13.0
Child born before reaching facility	10.9	9.2	9.5
Husband/family did not allow	5.9	4.6	4.8
No trust/poor quality service	2.3	2.5	2.4
N	***152***	***770***	***922***

Note: Multiple responses permitted

About three of every five mothers age 15-24 (61 percent) who gave reasons for not delivering in a health facility felt that delivering in a health facility was not necessary. Thirteen percent said that the health facility was too far away or that they had no transportation to it. One in every ten reported that her child was delivered before reaching a health facility. There are no notable differences between women age 15-19 and women age 20-24 in the reasons given for not delivering in a health facility.

3.5.5 Factors Associated with Institutional Delivery

Table 3.20 shows the factors associated with institutional delivery (delivery at a health facility) for the most recent birth among women age 15-24, as reported in the 2011 NDHS. Urban residence, wealth, participation in household decision-making, attendance at antenatal visits during the pregnancy, and saving money to prepare for the birth are associated with greater likelihood of delivering in a health facility, after adjusting for all other covariates in the model. For instance, women age 15-24 who reside in urban areas have nearly four times the odds of having delivered at a health facility, compared with their counterparts in rural areas, after adjusting for all other variables. Likewise, adolescents and youth in wealthier households have nearly twice the odds of

having delivered at a health facility, compared with women in households in the lowest two wealth quintiles. Adolescents and young women from the Terai region have twice the odds of having delivered at a health facility, compared with their counterparts in Mountain areas. At the same time, women giving birth to their second or third child have 65 percent lower odds of giving birth in a health facility, compared with women giving birth to their first child, after adjusting for all other covariates.

Table 3.20 Factors associated with institutional delivery

Multinomial logistic regression of the effect of socio-demographic characteristics on institutional delivery for the most recent birth among adolescents and youth age 15-24: adjusted odds ratios, Nepal DHS 2011

Variable	Odds ratio	95 percent confidence interval
Residence		
Rural (r)[1]	1.00	
Urban	3.64***	2.38-5.57
Ecological zone		
Mountain (r)	1.00	
Hill	1.05	0.61-1.82
Terai	1.96*	1.14-3.38
Wealth		
Poorer (r)	1.00	
Richer	1.96***	1.39-2.75
Education		
No education (r)	1.00	
Some primary or higher	1.26	0.85-1.87
Women's participation in decision-making		
No decisions (r)	1.00	
1-2 decisions	1.39*	1.01-1.90
All 3 decisions	1.30	0.89-1.90
Birth order		
1 (r)	1.00	
2-3	0.35***	0.25-0.48
4-5	0.47	0.17-1.27
Antenatal care		
No ANC (r)	1.00	
1-3 ANC visits	2.01*	1.02-3.95
4 or more ANC visits	5.17***	2.62-10.19
Time since last birth in months	0.98***	0.97-0.99
Saved money for most recent delivery	1.67**	1.20-2.34
N	**1,625**	

Note: *p<.05; ** p<.01;*** p<.001; model excludes 37 women with incomplete information on variables of interest.
[1] "(r)" identifies the reference category.
[2] Due to the small number of cases in some cells in this model, the five wealth quintiles were combined into two categories: "poorer" includes the bottom two wealth quintiles, and "richer" includes the upper three quintiles.
[3] Due to the small number of cases in some cells in this model, women's education was combined into two categories: "no education" and "any education."
[4] A woman was categorized as participating in decision-making if she reported that she usually makes decisions, either alone or jointly with her husband, in the following three areas: woman's own health care, making major household purchases, and visits to her family or relatives.

4 DISCUSSION AND CONCLUSIONS

This report has analyzed trends and differentials in sexual and reproductive behavior among adolescents and youth age 15-24 in Nepal, drawing on data from successive Nepal Demographic and Health Surveys conducted in 1996, 2001, 2006, and 2011. Overall, some trends show encouraging improvements. At the same time, the findings make clear that major challenges remain, both to increase overall levels of health service utilization and to decrease risky behavior among adolescents and youth. In addressing these challenges at the national level, it is also important to reduce large gaps that reflect differences in education, residence, and other personal characteristics.

As the survey results demonstrate, the proportion of adolescents and youth who have not yet married has increased over the years. This trend has consequences for reproductive health. In 2011 more than one-fifth of male adolescents and youth reported in the NDHS that they had sexual intercourse before marriage, compared with less than 1 percent of female adolescents and youth. Among female adolescents and youth, sexual intercourse takes place almost universally within marriage, whereas for one-third of male adolescents and youth their most recent sexual intercourse was with a person other than a spouse. Overall, this behavior suggests that unmarried male adolescents and youth today are at higher risk of contracting HIV and other STIs and, as a consequence, also puts women at higher risk. Similarly, in 2011 one-fourth of unmarried male adolescents and youth reported that they did not use a condom during their most recent act of sexual intercourse. Men's condom use varies considerably by their education level, with lower levels of use among those with less education. This indicates a need for interventions addressing condom use that are tailored for unmarried men, as well as out-of-school adolescents and youths.

The survey results also show low rates of current use of modern contraception among adolescents and youth in Nepal. Young women most likely to use modern contraception are those who live in urban areas, those who live together with their spouse, those who want no more children, those who have more children already, those who participate in making household decisions, and those who are better educated. Particularly, the significant association of women's participation in decision-making with modern contraceptive use highlights the need to emphasize the empowerment of adolescent girls. Unmet need for family planning is more common among currently married female adolescents and youth compared with older women, and its level has not changed noticeably over the last 15 years. Unmet need is higher among adolescents (age 15-19) than among youth (age 20-24), and it varies with urban-rural residence, ecological zone, and development region.

Adolescent childbearing is still common in Nepal, although it is decreasing. In 2011 one of every six female adolescents age 15-19 was already pregnant or had given birth. Among women age 15-24, childbearing is significantly more common among the less educated and those whose spouse is several years older than they are.

The continued pattern of early childbearing and the persistently high levels of unmet need for family planning in Nepal demand that programs address adolescents and youth to help them delay the first pregnancy and space subsequent pregnancies. Programs should promote access to and utilization of modern contraceptives.

Antenatal care coverage (having the recommended four or more ANC visits) for adolescents and youth has increased fourfold over the last 15 years. Our results show that education, wealth, and participation in decision-making significantly increase the likelihood that a woman will have at least four ANC visits. Also, women age 15-24 who have given birth previously are less likely to have four or more ANC visits than those who have not given birth previously.

The study shows a substantial increase in the rate of institutional delivery over the last 15 years. Between 1996 and 2011 the percentage of births that took place in health facility increased by more than four times among adolescents and youth age 15-24. Half of pregnant adolescents (age 15-19) delivered in health facilities in 2011, a good indication of improvement made in institutional delivery. (The increase since 2001 may be linked with the government's maternity care incentive scheme, the *Aama* program.) Still, delivery in health facilities can be increased further, by addressing such barriers as the perception that delivery in a facility is unnecessary and the lack of transportation to a health facility. Many socio-economic variables are significantly associated with the odds of delivering in a health facility. This indicates that geographic and socio-economic constraints are restricting some women's access to maternal health services.

Comprehensive knowledge of HIV and AIDS is at a low level (and lower in 2011 than in 2006) among both male and female adolescents and youth, while females are even less informed than males. Rural adolescents and youth and those with no education have lower levels of comprehensive knowledge of HIV and AIDS. The practice of testing for HIV is rare among adolescents and youth, and rates of testing are lower among females than males. In both female and male adolescents and youth, the rate of testing and receiving results is higher among those who have completed higher levels of education.

It is impossible for a single nationally-representative survey to cover the full range of socio-cultural contexts and scenarios that influence the sexual and reproductive health behavior of adolescents and youth; NDHS is no exception. Further research may be required to develop an even more in-depth understanding of marriage and sexual behavior, contraceptive use, adolescent childbearing, and STIs and HIV/AIDS and thereby inform policy decisions and programming.

The findings of this analysis suggest the following implications for policy formulation and design of programs to improve the sexual and reproductive health of adolescents and youth in Nepal:

- Adolescents, who account for one-quarter of the total population, are more vulnerable than those age 20-24 to sexual and reproductive health risks through early marriage, risky sexual behavior, unintended pregnancy, and STIs and HIV/AIDS. Thus, all programs and activities related to sexual and reproductive health should specifically address this younger group.

- While age at marriage has been increasing over the last 15 years, there has not been a similar increase in the age at which adolescent girls begin childbearing, and the level of unmet need for family planning is high. The factors associated with early childbearing need to be better understood, and programs to delay early childbearing along with postponing marriage should be designed and implemented. There should be interventions addressed specifically to newly married adolescents and youth.

- Given that adolescent pregnancies are a particular problem among rural and uneducated adolescent girls, more efforts are needed to increase access to adolescent- and youth-friendly maternal health information and services for those in rural areas and those out of school.

- Since the educational status of adolescents and youth influences many sexual and reproductive health indicators, the collaborative efforts of both the health and education sectors, including providing comprehensive sexual and reproductive health education, would improve health outcomes in the future.

In conclusion, there has been a marked change in the overall scenario of adolescents and youth in Nepal that affects their sexual and reproductive health. With the available data, policy and strategies related to adolescent and youth sexual and reproductive health should be updated. It will be worthwhile for policy-makers and program managers to assess critically which interventions work best in the health sector and beyond, especially in education. For this, it is essential that, based on evidence, we understand what risk and protective factors play roles in adolescent and youth sexual and reproductive health behaviors and outcomes in Nepal and how they operate. This information can help focus effective services and communication on those youth who are at greatest risk for adverse sexual and reproductive health outcomes.

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ANNEX TABLES

Annex Table 1 Proportion ever-married, by background characteristics: Women

Percentage of female adolescents and youth age 15-24 who have ever been married (currently/formerly married/living with partner), by background characteristics, Nepal DHS 1996-2011

Background characteristic	1996			2001			2006			2011		
	15-19	20-24	15-24	15-19	20-24	15-24	15-19	20-24	15-24	15-19	20-24	15-24
Place of residence												
Urban	29.7	70.0	50.8	20.8	65.0	42.7	24.4	70.5	47.4	16.3	60.8	37.2
Rural	45.3	86.6	64.2	42.6	85.6	62.2	33.6	84.6	56.1	30.9	80.8	53.2
Ecological zone												
Mountain	41.7	85.1	61.9	40.1	85.3	60.0	41.0	82.2	59.0	32.7	85.6	55.1
Hills	34.3	79.1	54.6	34.7	80.1	55.1	27.5	77.8	50.3	25.9	75.2	48.4
Terai	53.7	90.9	71.1	45.1	85.6	64.2	35.0	85.7	57.8	30.7	78.1	52.4
Development region												
Eastern	33.1	75.1	52.0	34.2	69.8	50.6	30.1	78.0	52.8	26.0	74.9	47.9
Central	52.1	87.3	68.7	47.5	85.3	66.3	31.6	80.9	55.0	30.3	75.5	51.2
Western	34.6	85.5	57.7	35.3	84.6	56.9	34.4	82.4	56.4	27.1	80.7	50.8
Mid-western	51.4	90.1	69.8	41.4	90.4	62.3	37.6	87.8	57.5	35.6	82.3	57.2
Far-western	53.4	94.5	71.6	44.2	91.0	66.1	29.8	88.0	52.6	27.6	76.7	50.4
Education												
No education	60.3	91.5	76.5	58.3	92.0	77.1	56.8	94.1	78.6	56.4	93.2	79.2
Primary	37.7	86.9	56.0	37.1	85.5	53.9	38.5	87.8	58.9	45.7	90.3	67.4
Some secondary	17.4	64	34.0	24.2	66.0	40.1	21.6	78.0	40.2	22.6	84.3	40.6
SLC and above	(19.5)	79.6	59.4	(28.1)	54.4	50.4	10.7	52.9	34.9	15.9	53.9	37.2
Total	**44.0**	**85.2**	**63.0**	**40.3**	**82.9**	**59.9**	**32.3**	**82.1**	**54.7**	**29.0**	**77.4**	**51.0**

Note: Figures in parentheses are based on 25-49 unweighted cases. Figures for 1996 and 2001 were based on an ever-married sample and were then adjusted using “all women” factors.

Annex Table 2 Proportion ever-married, by background characteristics: Men

Percentage of male adolescents and youth age 15-24 who have ever been married, by background characteristics, Nepal DHS 2001-2011

Background characteristics	2001			2006			2011		
	15-19	20-24	15-24	15-19	20-24	15-24	15-19	20-24	15-24
Place of residence									
Urban	*	(25.8)	17.4	6.6	34.2	19.3	5.4	29.2	16.4
Rural	12.2	61.6	34.4	11.5	62.8	31.3	7.4	49.6	24.4
Ecological zone									
Mountain	*	(61.9)	(34.1)	12.2	77.5	34.8	12.6	75.3	38.1
Hills	*	56	29.9	8.7	48.5	24.2	7.5	44.9	23.4
Terai	(12.8)	57.2	33.3	12.1	60.0	32.3	6.2	43.0	21.0
Development region									
Eastern	*	46.8	27.4	7.7	49.8	24.7	2.5	37.4	17.6
Central	*	54.7	33.4	11.4	50.8	27.8	10.3	43.3	25.0
Western	*	41.2	31.0	8.7	57.0	26.7	4.8	40.6	17.3
Mid-western	*	(78.6)	40.5	15.0	75.9	40.1	11.2	63.7	32.3
Far-western	*	(75.7)	35.0	12.5	61.8	32.1	7.8	63.0	29.2
Education									
No education	*	(76.1)	(36.5)	(27.5)	80.7	58.1	(28.9)	(81.1)	52.8
Primary	(16.9)	64.2	38.9	19.7	72.9	40.9	11.6	72.0	39.2
Some secondary	*	46.8	26.1	7.4	55.2	22.4	5.8	62.6	20.9
SLC and above	*	(48.1)	(48.1)	2.9	35.2	20.5	4.8	26.4	16.9
Total	**11.3**	**56.5**	**32.0**	**10.5**	**55.9**	**28.7**	**7.1**	**45.6**	**23.0**

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and so has been suppressed. Figures for 2001 were based on an ever-married sample and then adjusted using "all men" factors.

Annex Table 3 Antenatal care

Among women age 15-24 who had a live birth in the five years preceding the survey[1], the percentage who had four or more antenatal care visits for the most recent birth, by background characteristics, Nepal DHS 1996-2011

Background characteristic	1996				2001				2006				2011			
	15-19	20-24	15-24	N	15-19	20-24	15-24	N	15-19	20-24	15-24	N	15-19	20-24	15-24	N
Place of residence																
Urban	(40.9)	46.7	45.4	125	(43.0)	50.3	49.1	151	54.5	52.9	53.2	230	60.4	71.0	69.4	146
Rural	9.4	10.9	10.5	1444	15.5	16.2	16.0	1597	35.2	34.6	34.7	1450	53.8	53.8	53.8	1516
Ecological zone																
Mountain	(8.3)	9.0	8.9	102	(6.4)	10.9	9.9	109	(26.2)	29.2	28.6	124	51.9	54.7	54.2	116
Hills	17.5	18.0	17.9	636	16.3	20.2	19.5	676	39.9	37.0	37.5	655	53.3	57.5	56.7	610
Terai	8.4	11.1	10.3	832	19.1	19.6	19.5	963	37.8	38.3	38.2	900	55.1	54.1	54.3	935
Development region																
Eastern	12.3	15.3	14.5	298	20.9	24.7	23.7	365	31.8	38.8	37.3	392	48.5	55.2	53.8	363
Central	10.7	17.1	15.4	557	19.5	19.5	19.5	611	39.2	39.1	39.1	537	48.0	46.9	47.1	549
Western	21.0	16.7	17.6	313	10.2	25.8	22.9	328	40.7	33.8	35.0	315	58.8	63.2	62.3	332
Mid-western	6.1	7.8	7.4	229	18.3	9.3	11.3	263	40.8	34.6	36.1	213	58.3	56.3	56.7	234
Far-western	3.8	4.6	4.4	173	9.5	10.9	10.6	181	38.1	36.6	36.8	223	(74.3)	65.9	67.3	183
Education																
No education	6.2	6.9	6.8	1076	11.9	8.5	9.2	1048	16.6	22.2	21.2	721	29.0	31.6	31.2	524
Primary	14.8	14.8	14.8	259	16.2	20.0	18.9	336	47.0	35.9	38.7	413	52.8	56.6	55.7	397
Some secondary	(31.8)	32.5	32.3	174	33.8	44.5	41.8	270	51.8	50.4	50.7	425	63.4	67.6	66.5	482
SLC and above	*	66.8	67.4	61	*	62.7	61.0	94	*	79.7	80.4	121	(84.3)	81.6	82.0	259
Total	**11.4**	**13.9**	**13.3**	**1570**	**17.3**	**19.3**	**18.9**	**1748**	**37.6**	**37.2**	**37.2**	**1679**	**54.3**	**55.4**	**55.2**	**1662**

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and so has been suppressed.
[1] For 1996, the denominator is women who had a live birth in the three years prior to the survey, due to differences in the 1996 questionnaire.