# FURTHER ANALYSIS OF 2011 NEPAL DEMOGRAPHIC AND HEALTH SURVEY ON TOBACCO DATA

**Government of Nepal**
**Ministry of Health and Population**
**National Health Education, Information and Communication Centre**
**Teku, Kathmandu, Nepal**

**July 2013**

# Further Analysis of 2011 Nepal Demographic and Health Survey on Tobacco Data

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**Teku, Kathmandu, Nepal**

**July 2013**

This report presents findings from a further analysis study undertaken as a part of the follow up to 2011 Nepal Demographic and Health Survey (NDHS) on Tobacco Data.

This report has been prepared with the technical assistance from The Population, Health and Development (PHD) Group in the leadership of National Health Education, Information and Communication Centre (NHEICC), Teku, Kathmandu. The opinions expressed herein are those of the authors and do not necessarily reflect the views of any other agencies.

This report is a part of the NHEICC/MoHP program, which is designed to collect, analyze and disseminate data of Further Analysis of 2011 Nepal Demographic and Health Survey on Tobacco Data.

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## Foreword

I am pleased to have this report on Further Analysis of NDHS 2011 on Tobacco Data. This report has analyzed the tobacco use among women and men and its impact on the health of women and children. The analysis has been done with data available in the Nepal Demographic and Health Surveys of 2011.

There is a high prevalence of tobacco use in Nepal. Currently, 52% men and 13.3% female use tobacco products (NDHS 2011). Global Tobacco Youth Survey, Global School Personnel Survey and Global Health Professional Survey conducted in 2011 also revealed high percentage of smokers and tobacco users among youths and health professional students. Tobacco use is a major risk factor for the increasing non-communicable diseases (NCDs) especially cardiovascular diseases (CVD), cancers, and lung diseases, making it a major public health threat. Tobacco control activities should therefore be geared up with special focus on youths, men and women.

Reducing the tremendous burden of disease, disability, and death caused by tobacco use in Nepal is an urgent need and a shared responsibility. I hope that this further analysis will contribute as a background document for the development of appropriate tobacco control policies, strategies and activities of Ministry of Health and Population and other tobacco control organizations in reducing tobacco users.

Finally, I would like to thank National Health Education, Information and Communication Centre/MoHP, the national focal point for tobacco control activities, and all the individuals who contributed their time and expertise to assist in the development of this further analysis report.

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Government of Nepal Ministry of Health & Population Department of Health Services Teku, Kathmandu

## Foreword

Each year, tobacco use kills six million people worldwide. In Nepal too, tobacco use prevalence is high as indicated by several studies. It is a threat to our health and economic prosperity. While lung cancer is the most well-known consequence of smoking, large number of lives is lost as a result of cardiovascular disease. It is also the leading cause of death attributable to chronic obstructive pulmonary disease.

I am glad to know about publishing a report on Further Analysis of NDHS 2011 on Tobacco Data which highlights tobacco use among women and men and its comparison with data available in the Nepal Demographic and Health Survey of 2006.

Considering the morbidity and mortality that tobacco use causes, it is time to excel our efforts to get rid of the harms caused by tobacco use. We can make significant progress in our efforts to save lives and accelerate progress in the fight against tobacco use with evidence-based strategies and programs. This analysis can be useful to provide tobacco control stakeholders with useful and tobacco related data to assist in developing appropriate and effective tobacco control programs.

Finally, I would like to thank National Health Education, Information and Communication Centre/MoHP and the experts involved for their untiring efforts in bringing out this report.

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Dr. Mingmar Gyelzen Sherpa
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## Few Words

The Nepal Demographic and Health Survey is the nationally representative comprehensive survey with an objective to provide up -to -date and reliable data on different issues related to population and health, which provides guidance in planning, implementing, monitoring and evaluating health programs in Nepal. The survey includes several health related topics among men and women age 15-49 years.

I am glad to know about the further analysis of NDHS 2006 and 2011 data and the publication of its final report. Tobacco use is a major risk factor for non-communicable diseases (NCDs) including cardiovascular diseases (CVD), cancers, and lung diseases and many other health hazards. It is, therefore, important to conduct effective tobacco control activities throughout the country.

This further analysis on tobacco data provides the foundation and evidence to develop necessary actions to end the epidemic of tobacco use with specific focus on the vulnerable groups. This report will serve as an important document for all tobacco control stakeholders in order to formulate tobacco control activities.

In the end, I would like to congratulate and acknowledge the active involvement of the Population Division staff of MoHP. Equally I congratulate and acknowledge the active role of National Health Education, Information and Communication Centre (NHEICC)/MoHP and all experts involved in the successful completion of this report.

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# ACKNOWLEDGEMENTS

It is my privilege to publish this final report on *Further Analysis of 2011 NDHS on Tobacco Data*. This is the second study conducted in health sector on tobacco prevalence and its effects on using NDHS 2001, NDHS 2006 and NDHS 2011 data sets by the National Health Education, Information and Communication Centre (NHEICC/MoH&P), Teku, Kathmandu, Nepal. This study was conducted as a background document for the development of a comprehensive health communication strategy of different health programs of Ministry of Health and Population. The study analyses primary data of tobacco use habits of women and men.

I would like to thank the team of *The Population, Health and Development (PHD) Group Pvt. Ltd.* for carrying out this study successfully for National Health Education, Information and Communication Centre (NHEICC/MoH&P), Teku, Kathmandu, Nepal.

I would like to thank *Mr. Badri Bahadur Khadka, Senior Health Education Administrator (former Director of NHEICC)* and *Dr. Yagya B. Karki, Study Team Leader* for their meticulous efforts put to complete the analyses.

At last but not the least, I extend my sincere thanks to MOHP, New ERA and Macro International Inc., for making the data available for analyses.

July 2013

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Mr. Sunil Raj Sharma
Director

# ACRONYMS

| | |
|---|---|
| ARI | Acute Respiratory Infection |
| BCC | Behaviour Change Communication |
| CBS | Central Bureau of Statistics |
| EHCS | Essential Health Care Services |
| FCHV | Female Community Health Volunteer |
| FGD | Focus group Discussion |
| FHD | Family Health Division |
| FM | Frequency Modulation |
| FP | Family Planning |
| GON | Government of Nepal |
| LP | Liquid Petrol |
| MOHP | Ministry of Health and Population |
| NGO | Non-Governmental Organisation |
| NHEICC | National Health Education, Information and Communication Centre |
| NPC | National Planning Commission |
| PHDG | Population, Health and Development Group |
| Std. Deviation | Standard Deviation |
| SLTHP | Second Long Term Health Plan |
| SPSS | Statistical Packages for Social Sciences |

# EXECUTIVE SUMMARY

The National Health Policy 1991 of the Ministry of Health and Population of the Government of Nepal aims to extend the primary health care system to the rural population so that they benefit from modern medical facilities and trained health care providers in the areas of promotive, preventive and curative services. Following this policy, the National Health Education, Information and Communication Centre (NHEICC) was established under the Department of Health Services in 1993, with a mandate to give high priority to information, education and communication in the health sector but since 2002 following organization reforms NHEICC comes directly under the Ministry of Health and Population. The goal of this Centre is to contribute to the attainment of the highest level of health status of the people

The objective of this analysis is to understand the extent of tobacco use among women and men and its impact on the health of women and children. Attempts have been made to analyse the data available in the Nepal Demographic and health surveys of 2001, 2006 and 2011. The data are limited to women and men of 15-49 ages and the findings are for these women and men.

As the data were not particularly focused on tobacco and its impact on health several aspects of health impacts of tobacco use are not available. However, impact of tobacco on reproductive health have to a certain extent been analysed.

Tobacco use prevalence is higher among men compared to women and higher in rural areas than in urban areas. Women and men with no education, use tobacco more than their educated counterparts. Impact of tobacco use on the health of infants are clearly seen as infants born to mothers who smoke or use tobacco are, on average, of smaller size than their counterparts whose mothers did not use tobacco. Similarly, infants born to mothers who use tobacco are of low weight.

Using data from NDHS 2001, 2006 and 2011, it was possible to compare tobacco use prevalence. It was found that tobacco use prevalence has declined among men in 2006 compared to 2001 and further declined in 2011 but at very slow pace. Average number of cigarettes consumed has declined among men but increased among women in recent years.

Impact of tobacco use are also seen on women's health such as women who smoke have experienced earlier menopause, have lower fecundity and more miscarriages.

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# I. INTRODUCTION

The use of tobacco is one of the foremost public health problems in the world today. Currently more than 6 million people die every year globally from tobacco use, out of which 1.2 million die in the South-East Asia Region alone. The Region is amongst the largest producers and consumers of tobacco products. The widespread use of smokeless tobacco products in the Region has complicated the tobacco control situation. The Region is inhabited by more than half of the world's poor and is also one of most TB prevalent regions globally. Incidentally, both poverty and TB are closely linked to tobacco use and smoking and have added a new dimension for tobacco control.

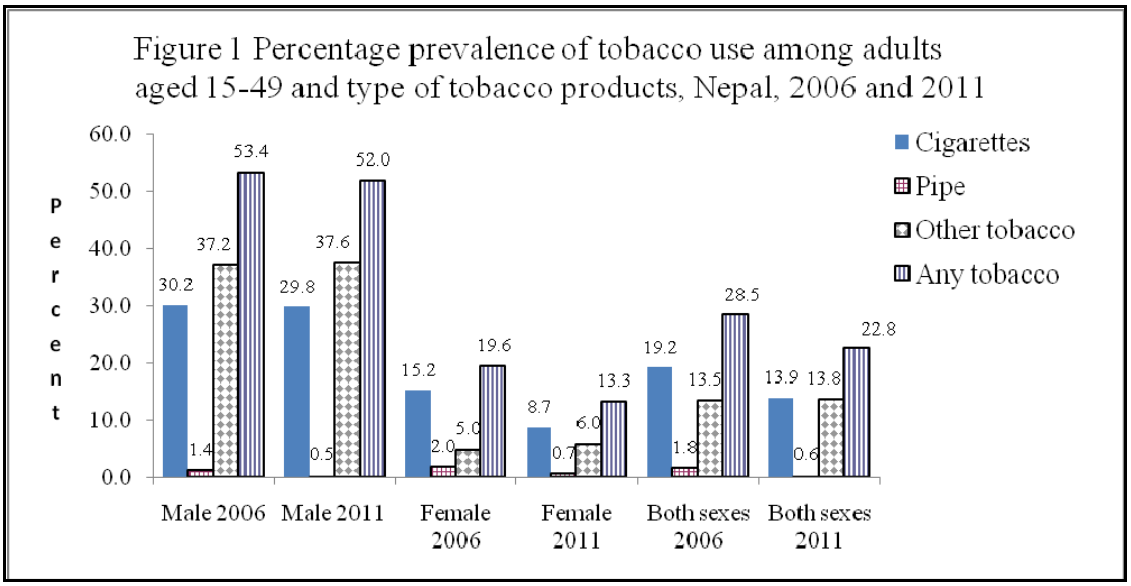
Smoking or tobacco use affects woman's reproductive health including pregnancy in a number of ways. Women using tobacco are likely to experience menopause earlier than normal, the infants of mothers who smoke during pregnancy have birth weight lower than average and the size of infants at birth are also likely to be smaller than average.

In this report, tobacco prevalence by a number of background variables of both women and men and depending on the availability of data from NDHS 2001, NDHS 2006 and NDHS 2011 on tobacco use, impacts of tobacco use on the health of mother and child have been presented.

# II. TOBACCO PREVALENCE

## 2.1 Tobacco prevalence by background characteristics

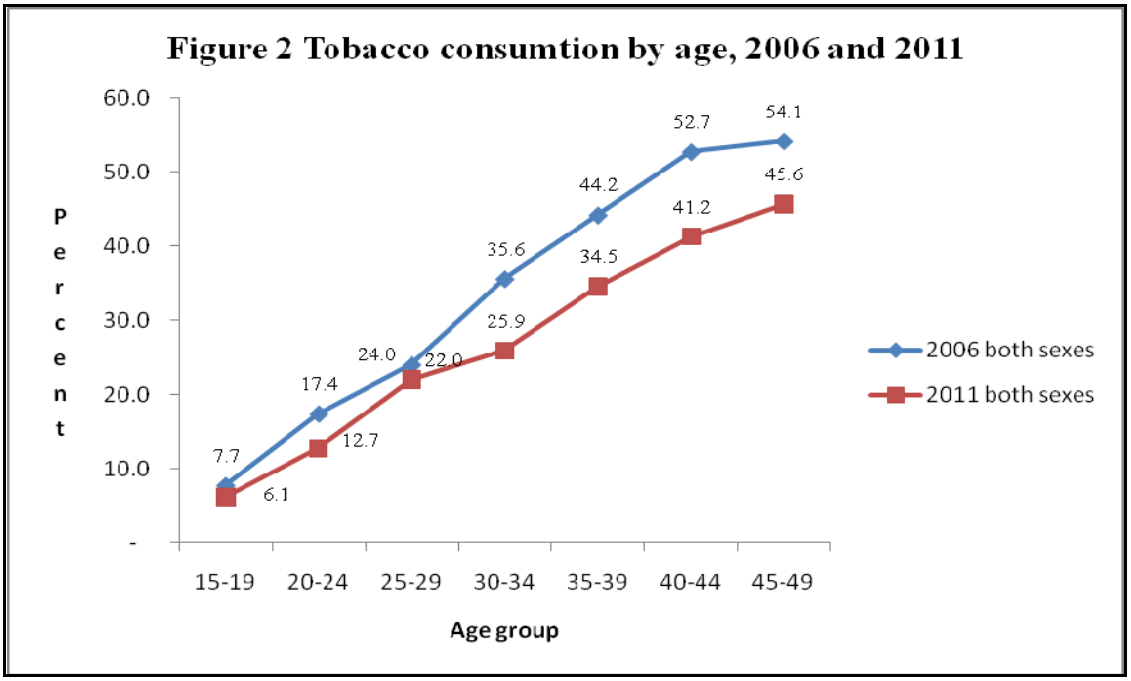
Tobacco use[1] prevalence (any tobacco) among women age 15-49 in 2006 was 19.6 percent whole among men the figure was 53.4 percent and when both males and females are combined the tobacco use prevalence becomes 28.5 percent in 2006 (**Figure 1**). The corresponding figures for males, females and both sexes combined in 2011 are 52 percent, 13.3 percent and 22.8 percent. Overall, among adults age 15-49 in the last 5 years tobacco prevalence has declined by 5.7 percentage points. The decline of tobacco use prevalence is faster (6.3 percentage points) among females than among males (1.4 percentage points). Cigarette smoking is the most common followed by other forms of tobacco use such as chewing, snuff, bidi and other while pipe use is least common. This pattern of tobacco consumption looks similar for both males and females.




Source: MOHP et al 2007 and 2012

Older people consume tobacco more than any other age group. This holds true for all respondents. The age prevalence rates for both sexes combined are vividly shown in **Figure 2**. Tobacco consumption has declined in all age groups.

[1] Tobacco use here refers to smoking and consumption of chewing tobacco.




Source: MOHP et al 2007 and 2012

Looking at tobacco use among males it is surprising to find that more males age 15-29 smoked cigarettes than five years ago. The age group 25-29 looks particularly problematic as overall tobacco consumption among them has increased in the last five years although in other age groups it has declined (Table 1).

Table 1 Tobacco use prevalence (percent), males age 15-49 by 5-year age group, Nepal, 2006 and 2011

| Age | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of men | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| 15-19 | 10.8 | 13.1 | 20.9 | 0.1 | 0.1 | (49.5) | 13.9 | 10.8 | (22.1) | 20.6 | 19.8 | (3.8) | 941 | 978 |
| 20-24 | 25.3 | 26.6 | 4.9 | 0.3 | 0.3 | (4.6) | 34.2 | 28.6 | (16.3) | 46.8 | 43.8 | (6.5) | 632 | 685 |
| 25-29 | 27.1 | 36.4 | 34.4 | 0.8 | 0.4 | (51.2) | 43.6 | 49.7 | 14.0 | 57.8 | 64.2 | 11.0 | 524 | 581 |
| 30-34 | 39.1 | 32.1 | (17.9) | 1.4 | 1.0 | (29.8) | 49.5 | 50.5 | 2.0 | 69.9 | 64.1 | (8.3) | 499 | 499 |
| 35-39 | 42.3 | 32.9 | (22.3) | 4.1 | 1.1 | (73.0) | 48.6 | 54.8 | 12.6 | 69.1 | 68.5 | (1.0) | 444 | 542 |
| 40-44 | 42.4 | 42.5 | 0.1 | 1.4 | 1.3 | (11.8) | 51.0 | 50.9 | (0.1) | 74.4 | 69.2 | (7.0) | 414 | 438 |
| 45-49 | 50.3 | 46.1 | (8.2) | 3.8 | 1.6 | (56.6) | 45.9 | 46.9 | 2.2 | 75.4 | 69.9 | (7.3) | 399 | 399 |

Source: MOHP et al 2007 and 2012

Relatively fewer younger people reported consuming tobacco than older people regardless of sex. Among males mostly consumed tobacco products are other tobacco (mainly chewing tobacco, Table 1) and cigarettes while among women it is mainly cigarettes (Table 2). Tobacco consumption using Hukka or pipe (hubble-bubble or water pipe) is found among both males and females and interestingly females of older ages are found consuming tobacco using pipe. Increasingly older women – age 25 and over consume other tobacco products; it appears with age they consume more other tobacco products (Table 2).

Table 2 Tobacco use prevalence (percent), females age 15-49 by 5-year age group, Nepal, 2006 and 2011

| Age | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of women | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| 15-19 | 1.8 | 0.5 | (69.1) | 0.0 | 0.0 | (11.5) | 1.1 | 0.7 | (31.9) | 2.7 | 1.3 | (53.8) | 2,437 | 2,753 |
| 20-24 | 5.1 | 1.9 | (62.6) | 0.5 | 0.3 | (39.3) | 3.2 | 1.7 | (48.4) | 8.1 | 3.5 | (56.8) | 1,994 | 2,297 |
| 25-29 | 10.0 | 5.8 | (42.3) | 1.3 | 0.4 | (70.6) | 4.8 | 5.5 | 14.2 | 14.0 | 10.3 | (26.2) | 1,773 | 2,101 |
| 30-34 | 16.6 | 9.5 | (43.1) | 2.2 | 1.1 | (51.2) | 6.2 | 6.8 | 9.7 | 22.8 | 14.9 | (34.6) | 1,336 | 1,734 |
| 35-39 | 27.1 | 15.5 | (42.9) | 3.0 | 1.2 | (59.8) | 9.3 | 9.9 | 6.7 | 35.1 | 22.7 | (35.4) | 1,220 | 1,557 |
| 40-44 | 37.3 | 22.2 | (40.5) | 5.8 | 1.4 | (75.8) | 8.5 | 13.6 | 59.9 | 44.7 | 31.7 | (29.1) | 1,121 | 1,284 |
| 45-49 | 38.3 | 24.9 | (34.9) | 5.4 | 1.9 | (64.7) | 8.2 | 15.1 | 83.2 | 44.9 | 35.4 | (21.2) | 912 | 947 |

Tobacco use prevalence among the male population age 15-49 was lower (48.2%) in urban areas than rural areas (53.6%) in 2006 and it has remained so in 2011 too but the decline in tobacco use is much less in rural areas compared to the urban areas (Table 3). Among the males cigarette and other tobacco products consumption has actually increased in rural areas in 2011. Decline in tobacco consumption has taken place in all three ecological regions but the pace of decline is the slowest in the Mountain region followed by hill and the Terai regions.

Table 3 Tobacco use prevalence (percent), males age 15-49 by residence and ecological regions, Nepal, 2006 and 2011

| Residence | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of men | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| Urban | 27.9 | 25.1 | (10.3) | 0.1 | 0.0 | (100.0) | 31.5 | 30.0 | (4.7) | 48.2 | 44.4 | (8.0) | 730 | 717 |
| Rural | 30.7 | 30.8 | 0.4 | 1.7 | 0.5 | (68.2) | 38.5 | 39.2 | 1.8 | 54.6 | 53.6 | (1.9) | 3,123 | 3,404 |
| Ecological region | | | | | | | | | | | | | | |
| Mountain | 41.5 | 40.4 | (2.6) | 2.9 | 4.5 | 54.6 | 21.6 | 27.8 | 28.6 | 54.2 | 53.5 | (1.3) | 241 | 245 |
| Hill | 29.3 | 29.1 | (0.6) | 2.0 | 0.4 | (78.3) | 30.7 | 31.0 | 1.1 | 49.4 | 48.3 | (2.3) | 1,641 | 1,659 |
| Terai | 29.6 | 29.2 | (1.2) | 0.71 | 0.0 | (100.0) | 44.5 | 43.6 | (2.0) | 56.6 | 54.5 | (3.8) | 1,972 | 2,218 |

Tobacco consumption has declined among women in urban and rural areas and in all three ecological belts except that the consumption of other tobacco products has increased in rural areas and all three ecological regions (Table 4).

Table 4 Tobacco use prevalence (percent), females age 15-49 by residence and ecological regions, Nepal, 2006 and 2011

| Residence | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of women | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| Urban | 8.5 | 4.6 | (45.9) | 0.2 | 0.1 | (69.1) | 3.5 | 2.7 | (21.4) | 11.5 | 6.7 | (41.7) | 1,687 | 1,820 |
| Rural | 16.5 | 9.4 | (42.8) | 2.3 | 0.8 | (65.2) | 5.3 | 6.6 | 24.1 | 21.1 | 14.4 | (31.8) | 9,106 | 10,855 |
| Ecological region | | | | | | | | | | | | | | |
| Mountain | 25.5 | 18.3 | (28.4) | 6.5 | 4.1 | (37.1) | 6.9 | 7.1 | 2.4 | 32.5 | 23.9 | (26.4) | 753 | 806 |
| Hill | 17.3 | 11.0 | (36.7) | 1.4 | 0.8 | (43.0) | 5.9 | 7.8 | 32.3 | 22.0 | 16.6 | (24.7) | 4,597 | 5,090 |
| Terai | 12.0 | 5.9 | (50.9) | 1.8 | 0.2 | (87.2) | 4.0 | 4.5 | 13.4 | 15.8 | 9.57 | (39.4) | 5,443 | 6,779 |

Regional variations in tobacco use are notable, with use of tobacco being highest in the Mid-western region, where 32.3 percent of men and women use tobacco, and lowest in the Western region, where 24.7 percent of men and women do so. This pattern has remained the same in 2011 too although in all five regions tobacco use has declined (Table 5).

Table 5 Tobacco use prevalence (percent), males & females age 15-49 by development regions, Nepal, 2006 and 2011

| Dev region | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of men & women | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| EDR | 15.2 | 11.0 | (27.7) | 0.4 | 0.0 | (87.7) | 18.7 | 16.4 | (12.5) | 29.3 | 22.4 | (23.5) | 3,241 | 4,055 |
| CDR | 21.2 | 15.2 | (28.4) | 0.9 | 0.3 | (66.6) | 11.5 | 12.3 | 6.9 | 28.2 | 22.6 | (19.6) | 4,919 | 5,685 |
| WDR | 14.0 | 11.0 | (21.5) | 0.0 | 0.1 | NA | 14.5 | 13.5 | (6.7) | 24.7 | 20.4 | (17.1) | 2,786 | 3,459 |
| MWDR | 24.8 | 20.4 | (17.9) | 6.0 | 4.1 | (31.6) | 9.5 | 14.4 | 51.3 | 32.3 | 28.8 | (11.0) | 1,666 | 1,972 |
| FWDR | 23.0 | 15.0 | (34.7) | 5.4 | 0.4 | (92.0) | 11.8 | 12.4 | 4.3 | 30.4 | 22.2 | (26.8) | 2,034 | 1,628 |

This pattern of tobacco use is found for cigarette and pipe smoking but not for other tobacco products. Consumption of other tobacco products has increased in 2011 compared to 2006 in Central, Mid Western and Far Western Development Regions (Table 5).

Breaking down tobacco use among the male population by 13 sub regions reveals that decline in tobacco use has not taken place in all of them. In Eastern mountain, Eastern hill, Western hill and Mid western hill regions tobacco use among males increased in 2011 compared to 2006 (Table 6) while in the remaining sub-regions tobacco use declined in 2011. Cigarette smoking has increased among males Eastern Mountain, Eastern Hill, Eastern Terai, Western Terai, Western Hill, Western and Mid Western Terai in the last five years (Table 6).

The use of tobacco, overall, has declined in the last five years among women in all 13 sub regions but the use of other tobacco products has increased in Central Mountain, Central Hill, Central Terai, Far Western Hill and Far Western Terai (Table 7). Cigarette smoking has declined among women in all 13 sub regions while the use of pipe has followed suit except for Mid Western Terai.

Table 6 Tobacco use prevalence (percent), males age 15-49 by sub development regions, Nepal, 2006 and 2011

| Sub dev reg | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of men | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| EM | 24.1 | 30.3 | 25.5 | 0.0 | 1.5 | N.A. | 24.1 | 27.3 | 13.0 | 42.4 | 45.5 | 7.3 | 59 | 66 |
| CM | 43.2 | 34.8 | (19.6) | 1.4 | 0.0 | (100.0) | 21.9 | 27.5 | 25.6 | 54.8 | 52.2 | (4.8) | 73 | 69 |
| WM | 49.5 | 49.1 | (0.9) | 4.6 | 9.1 | 98.2 | 19.3 | 28.2 | 46.3 | 60.6 | 59.1 | (2.4) | 109 | 110 |
| EH | 21.9 | 31.1 | 42.1 | 0.0 | 0.3 | N.A. | 37.2 | 35.2 | (5.5) | 50.7 | 53.2 | 5.0 | 215 | 293 |
| CH | 33.7 | 33.3 | (1.1) | 0.6 | 0.0 | (100.0) | 28.0 | 21.3 | (24.0) | 50.8 | 44.0 | (13.5) | 722 | 616 |
| WH | 20.4 | 21.8 | 6.9 | 0.0 | 0.0 | N.A. | 33.1 | 37.3 | 12.7 | 43.7 | 49.1 | 12.4 | 387 | 440 |
| MWH | 34.3 | 29.1 | (15.1) | 12.0 | 3.2 | (73.5) | 27.6 | 36.5 | 32.2 | 51.0 | 51.3 | 0.7 | 210 | 189 |

| Sub dev reg | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of men | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| FWH | 35.5 | 29.2 | (17.9) | 1.9 | 0.8 | (55.4) | 32.7 | 38.3 | 17.2 | 55.1 | 51.7 | (6.3) | 107 | 120 |
| ET | 25.2 | 28.7 | 13.7 | 0.2 | 0.0 | (100.0) | 43.8 | 40.7 | (7.1) | 55.6 | 51.6 | (7.2) | 576 | 638 |
| CT | 35.0 | 30.7 | (12.4) | 0.9 | 0.0 | (100.0) | 47.6 | 49.5 | 4.0 | 61.8 | 61.5 | (0.5) | 571 | 764 |
| WT | 21.8 | 25.4 | 16.6 | 0.0 | 0.0 | N.A. | 43.1 | 40.8 | (5.4) | 49.7 | 49.4 | (0.5) | 320 | 358 |
| MWT | 29.2 | 36.0 | 23.0 | 1.3 | 0.0 | (100.0) | 43.5 | 40.1 | (7.9) | 56.1 | 54.1 | (3.6) | 155 | 242 |
| FWT | 35.1 | 24.9 | (29.2) | 1.7 | 0.0 | (100.0) | 42.7 | 40.6 | (5.0) | 56.6 | 47.0 | (16.9) | 350 | 217 |

Several studies have shown an inverse relationship between education and smoking prevalence (World Bank, 1999), Nepal shows the same pattern. Table 8 shows in 2006 among the males 51 percent of the illiterate adult population age 15-49 smoking; as the level of education increases the proportion of smokers declines. Similar pattern is seen in 2011 too.

Table 7 Tobacco use prevalence (percent), females age 15-49 by sub development regions, Nepal, 2006 and 2011

| Sub dev reg | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of women | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| EM | 11.1 | 7.9 | (29.3) | 0.0 | 0.0 | N.A. | 14.9 | 9.2 | (38.2) | 23.3 | 14.4 | (38.1) | 189 | 229 |
| CM | 28.2 | 22.1 | (21.7) | 0.0 | 2.3 | N.A. | 2.5 | 9.7 | 291.5 | 28.7 | 25.2 | (12.3) | 202 | 258 |
| WM | 31.5 | 22.9 | (27.3) | 13.3 | 8.2 | (38.3) | 5.2 | 3.4 | (34.3) | 39.2 | 30.1 | (23.3) | 362 | 319 |
| EH | 15.3 | 7.3 | (52.1) | 0.0 | 0.0 | N.A. | 20.6 | 18.3 | (11.0) | 30.7 | 22.3 | (27.5) | 628 | 956 |
| CH | 17.2 | 11.9 | (30.9) | 1.4 | 0.3 | (77.2) | 2.6 | 3.2 | 21.8 | 18.9 | 13.4 | (29.0) | 1,713 | 1,563 |
| WH | 13.2 | 8.8 | (33.3) | 0.0 | 0.1 | N.A. | 7.0 | 6.2 | (11.6) | 19.2 | 13.9 | (27.6) | 1,267 | 1513 |
| MWH | 25.4 | 17.4 | (31.4) | 5.7 | 5.2 | (8.1) | 0.6 | 10.9 | 1,672.3 | 27.4 | 23.1 | (15.7) | 650 | 650 |
| FWH | 21.5 | 13.7 | (36.2) | 1.2 | 0.2 | (79.2) | 1.2 | 1.7 | 45.9 | 22.3 | 15.4 | (30.9) | 341 | 409 |
| ET | 10.8 | 3.4 | (68.3) | 0.7 | 0.0 | (100.0) | 6.6 | 4.8 | (28.1) | 16.4 | 7.8 | (52.4) | 1,576 | 1873 |
| CT | 13.1 | 6.5 | (50.2) | 0.6 | 0.2 | (59.3) | 1.5 | 3.9 | 162.9 | 14.8 | 9.7 | (34.4) | 1,638 | 2414 |
| WT | 9.3 | 5.1 | (44.8) | 0.0 | 0.0 | N.A. | 5.9 | 5.5 | (6.6) | 14.4 | 9.1 | (37.2) | 783 | 1147 |
| MWT | 12.5 | 11.2 | (10.0) | 0.9 | 0.9 | 2.6 | 4.2 | 3.7 | (10.0) | 15.5 | 14.1 | (9.6) | 457 | 669 |
| FWT | 14.1 | 6.7 | (52.7) | 7.6 | 0.6 | (92.2) | 2.5 | 5.8 | 128.2 | 17.7 | 10.2 | (42.2) | 989 | 675 |

However, comparison of tobacco consumption between 2006 and 2011 data shows that increasingly more educated males take up using tobacco products compared to illiterate males. For instance, overall, tobacco use remained at 80 percent among the illiterate males in 2006 and 2011 but among the educated males it increased by about 9 percentage points (Table 8). Very interestingly cigarette smoking has slightly declined among the illiterate males while among the educated males it increased quite substantially. This has far reaching implications for tobacco consumption prevention efforts.

Table 8 Tobacco use prevalence (percent), males age 15-49 by education, Nepal, 2006 and 2011

| Education | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of men | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| No education | 50.5 | 50.4 | (0.1) | 3.7 | 1.1 | (71.1) | 55.6 | 60.5 | 8.7 | 80.1 | 80.1 | 0.0 | 710 | 567 |
| Primary | 38.4 | 40.4 | 5.2 | 1.5 | 0.7 | (50.1) | 43.6 | 51.7 | 18.7 | 63.8 | 69.4 | 8.7 | 1,083 | 814 |
| Some secondary | 21.3 | 26.4 | 23.8 | 0.6 | 0.3 | (44.3) | 29.8 | 33.6 | 12.7 | 42.2 | 45.5 | 7.7 | 1,281 | 1,437 |
| SLC+ | 14.9 | 18.1 | 21.5 | 0.4 | 0.2 | (60.1) | 23.6 | 23.3 | (1.5) | 33.0 | 35.9 | 8.8 | 779 | 1,303 |

Among the female population too tobacco use prevalence is much higher for illiterate than for educated females but the trend of tobacco use has increased among the educated women than among the illiterate women in the last five years (Table 9).

Table 9 Tobacco use prevalence (percent), females age 15-49 by education, Nepal, 2006 and 2011

| Education | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of women | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| No education | 25.7 | 17.9 | (30.6) | 3.7 | 1.7 | (54.9) | 6.7 | 10.8 | 61.4 | 31.6 | 25.5 | (19.4) | 5,729 | 5,045 |
| Primary | 7.7 | 7.1 | (8.6) | 0.0 | 0.1 | N.A. | 6.2 | 6.7 | 9.7 | 13.2 | 13.1 | (0.9) | 1,902 | 2,209 |
| Some secondary | 0.8 | 1.5 | 90.7 | 0.0 | 0.0 | N.A. | 1.8 | 2.0 | 14.5 | 2.4 | 3.33 | 40.0 | 2,225 | 3,089 |
| SLC+ | 0.5 | 0.1 | (75.9) | 0.0 | 0.0 | N.A. | 0.1 | 0.3 | 141.4 | 0.6 | 0.39 | (39.6) | 938 | 2,331 |

Use of tobacco is highest (65.4 percent) among men in the lowest wealth quintile and it has remained virtually the same in 2011 too while decline is observed among the poorer, richer and richest wealth quintiles in 2011 compared to 2006 (Table 10). lowest among men in the highest wealth quintile (Table 5) and this pattern is found true among women too. Consumption of cigarettes and pipe also follow this pattern but the consumption of other tobacco products is higher among men of poor and middle income groups.

Table 10 Tobacco use prevalence (percent), males age 15-49 by wealth quintile, Nepal, 2006 and 2011

| Education | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of men | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| Poorest | 45.1 | 39.0 | (13.6) | 5.3 | 2.3 | (57.0) | 39.6 | 45.1 | 13.8 | 65.4 | 64.8 | (1.0) | 621 | 610 |
| Poorer | 35.6 | 34.1 | (4.2) | 1.1 | 0.6 | (49.9) | 45.6 | 41.7 | (8.5) | 61.2 | 56.0 | (8.6) | 696 | 695 |
| Middle | 28.9 | 32.8 | 13.6 | 1.1 | 0.1 | (89.2) | 40.2 | 47.6 | 18.4 | 54.6 | 59.3 | 8.5 | 714 | 830 |
| Richer | 22.6 | 25.0 | 10.8 | 0.2 | 0.0 | (100.0) | 35.8 | 33.8 | (5.5) | 48.7 | 45.9 | (5.6) | 860 | 920 |
| Richest | 24.3 | 23.6 | (2.9) | 0.2 | 0.0 | (100.0) | 28.5 | 26.2 | (8.0) | 43.5 | 41.5 | (4.4) | 961 | 1,066 |

The population census of 2001 reported 101 caste/ethnic groups in Nepal (CBS and UNFPA, 2002) while the population census of 2011 has reported 126 caste/ethnic groups in Nepal (CBS. 2012). The NDHS 2006 and 2011 captured 75 caste/ethnic groups (MOHP et al. 2007 and MOHP et al. 2012). In this report the caste/ethnic groups are broadly grouped into 7 categories. The 7 categories include Chhetri/Thakuri, Bahun/Sanyasi, Janjati, Dalit, Muslim, Terai other castes and other[2].

[2] Other in this survey include unidentified groups.

In 2011, of the 7 broad caste/ethnic groups tobacco use prevalence is the highest among Dalit men age 15-49 (63.9%), followed by Muslim (59.8%), Terai castes (55.6%), Chhetri (53.8%), other (53.3%), Janjati (50.9%) and Bahun (39.2%). This pattern was the same in 2006 but by 2011 the proportions using tobacco products have declined among Dalit, Janjati, Bahun and other groups while among Chhetri, Terai castes and Muslims (Table 11).

Table 11 Tobacco use prevalence (percent), males age 15-49 by caste/ethnicity, Nepal, 2006 and 2011

| Caste/ ethnicity | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of men | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| Chhetri | 30.2 | 35.1 | 16.5 | 2.6 | 2.1 | (20.4) | 29.4 | 34.2 | 16.5 | 51.0 | 53.8 | 5.5 | 661 | 780 |
| Bahun | 19.5 | 18.4 | (5.7) | 0.9 | 0.2 | (83.7) | 30.7 | 28.3 | (7.9) | 42.6 | 39.2 | (8.0) | 531 | 651 |
| Janjati | 31.5 | 30.6 | (2.6) | 1.3 | 0.1 | (95.5) | 36.9 | 35.8 | (3.0) | 53.4 | 50.9 | (4.5) | 1,507 | 1,661 |
| Dalit | 39.4 | 36.7 | (6.8) | 1.6 | 0.4 | (75.8) | 49.9 | 47.4 | (5.0) | 67.3 | 63.9 | (5.0) | 437 | 515 |
| Terai Castes | 28.6 | 25.8 | (9.9) | 0.6 | 0.0 | (100.0) | 44.1 | 51.3 | 16.5 | 54.4 | 55.6 | 2.3 | 489 | 372 |
| Muslim | 23.6 | 27.6 | 16.7 | 0.0 | 0.0 | N.A. | 47.2 | 48.8 | 3.3 | 55.9 | 59.8 | 7.0 | 127 | 127 |
| Other | 43.7 | 40.0 | (8.4) | 0.0 | 0.0 | N.A. | 26.2 | 42.9 | 63.5 | 59.2 | 53.3 | (9.9) | 103 | 15 |

In 2011, of the 7 broad caste/ethnic groups tobacco use prevalence is the highest among Dalit women age 15-49 (19.5%) too, followed by Janjati (16.6%), Chhetri (15.0%), Muslim (6.6%), Bahun (4%), Terai castes (3.6%) and other (0.0%), and this pattern was the same in 2006 but unlike males by 2011 the proportions using tobacco products have declined for all caste/ethnic groups (Table 12).

Table 12 Tobacco use prevalence (percent), females age 15-49 by caste/ethnicity, Nepal, 2006 and 2011

| Caste/ ethnicity | Cigarettes | | | Pipe | | | Other tobacco | | | Any tobacco | | | Number of women | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 |
| Chhetri | 20.0 | 10.0 | (49.9) | 3.1 | 1.6 | (49.4) | 4.1 | 6.4 | 57.3 | 23.8 | 15.0 | (37.0) | 2,013 | 2,436 |
| Bahun | 5.1 | 3.3 | (34.7) | 0.3 | 0.0 | (100.0) | 2.4 | 1.0 | (60.2) | 7.0 | 4.0 | (43.5) | 1,478 | 1,961 |
| Janjati | 15.4 | 10.7 | (30.4) | 2.6 | 0.5 | (82.6) | 6.3 | 8.2 | 29.4 | 21.0 | 16.6 | (21.0) | 4,763 | 5,008 |
| Dalit | 29.2 | 12.4 | (57.4) | 1.4 | 1.3 | (9.8) | 11.3 | 8.6 | (23.8) | 38.2 | 19.5 | (48.9) | 765 | 1,773 |
| Terai Castes | 9.0 | 2.8 | (69.1) | 0.9 | 0.0 | (100.0) | 1.8 | 1.1 | (38.7) | 11.0 | 3.6 | (67.3) | 1,174 | 1,003 |
| Muslim | 13.1 | 2.4 | (82.1) | 0.0 | 1.1 | N.A. | 2.1 | 3.2 | 55.4 | 15.2 | 6.6 | (56.3) | 389 | 468 |
| Other | 23.9 | 0.0 | (100.0) | 0.0 | 0.0 | N.A. | 2.3 | 0.0 | (100.0) | 26.3 | 0.0 | (100.0) | 213 | 25 |

***Bidi smoking:*** The NDHS 2011 also collected information on bidi (dry tobacco wrapped in dry leaves) smoking which was not available in demographic surveys carried out in 2006 and earlier. Bidi smoking prevalence among women aged 15-49 was found higher (1.4%) than their male counterparts (0.9%, Appendix Table 1). Bidi smoking was found more common among older, rural, illiterate, poor women and those living in hill region of the country.

Women from Chhetri/Thakuri and Janjati groups are likely to smoke bidi than other women. compared to women few men smoke bidi. Just as women rural , illiterate and poor men are more likely to smoke bidi (Appendix Table 1).

## 2.2 Number of cigarettes smoked in last 24 hours

All respondents who reported smoking cigarettes were asked how many cigarettes they smoked in the last 24 hours and data on the quantity of cigarette sticks consumed in last 24 hours showed that among the male smokers, on average, 7.0 sticks were consumed by males 15-49 years of age in Nepal in 2006 and this slightly declined to 6.4 (Appendix Table 2). Examination of cigarette consumption by age shows that among the younger males cigarette consumption has actually increased in 2011 compared to 2006. For instance, adolescents age 15-19 the average number of cigarette consumed increased from 4.9 stick in 2006 to 5.2 sticks in 2011. Average number of cigarette sticks consumption has increased for males up to age 34 (Appendix Table 2).

Among the women population, the mean number of cigarette sticks smoked has increased in 2011 compared to 2006. For example, the average number of cigarettes consumed by females was 6.2 in 2006 while by 2011 it increased to 6.5 (Appendix Table 3).

Data on the quantity of cigarette sticks consumed in last 24 hours for both sexes combined showed that among the smokers, on average, 6.5 sticks were consumed by persons 15-49 years of age in Nepal in 2006 and this remained about the same (6.4 sticks) in 2011 too (Appendix Table 4). The mean value of 6.5 cigarette sticks per day compares closely with the findings of about 6 per day for all respondents age 10 and over (Karki, Yagya B. et al, 2003).

Females were found to smoke slightly fewer sticks (6.2 sticks), on average, than males (7.0 sticks) in 2006 but in 2011 it is reversed – females smoked slightly more sticks (6.5 sticks) a day than their male counterparts (6.4 sticks). The majority (35.8 percent) of women and men who smoked reported consuming 3-5 cigarettes (Appendix Tables 2 and 3).

Number of cigarettes smoked in the past 24 hours by residence and sex is shown in Table 13.1. The mean number of cigarettes smoked by males in urban areas has declined more than in rural areas – the percentage change in 2011 compared to 2006 is -11.6 in urban areas while in rural areas it is -9.1.

Table 13.1 Percent distribution of males age 15-49 by number of cigarettes smoked in last 24 hours according to residence, Nepal, 2006 and 2011

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | % | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Urban | 4.9 | 23.2 | 34.0 | 16.7 | 16.3 | 4.9 | 100.0 | 5.9 | 203 |
| Rural | 2.8 | 26.6 | 28.4 | 11.2 | 20.1 | 10.9 | 100.0 | 7.2 | 959 |
| Total | 3.2 | 26.0 | 29.3 | 12.1 | 19.4 | 9.9 | 100.0 | 7.0 | 1,162 |
| **NDHS 2011** | | | | | | | | | |
| Urban | 8.9 | 26.7 | 31.1 | 12.8 | 17.2 | 3.3 | 100.0 | 5.3 | 180 |
| Rural | 9.0 | 24.9 | 28.1 | 12.8 | 14.8 | 10.5 | 100.0 | 6.6 | 1,050 |
| Total | 9.0 | 25.1 | 28.5 | 12.8 | 15.1 | 9.4 | 100.0 | 6.4 | 1,230 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| Urban | 80.4 | 15.2 | (8.5) | (23.7) | 5.9 | (32.3) | | (11.6) | |
| Rural | 221.4 | (6.5) | (0.9) | 14.4 | (26.6) | (4.3) | | (9.1) | |
| Total | 183.4 | (3.3) | (2.8) | 5.2 | (22.2) | (4.7) | | (9.0) | |

Among the females the mean number of cigarette sticks smoked in a day has declined in urban areas – from 6.9 in 2006 to 5.8 in 2011 but increased in rural areas from 6.1 in 2006 to 6.6 in 2011 (Table 13.2).

Table 13.2 Percent distribution of females age 15-49 by number of cigarettes smoked in last 24 hours according to residence, Nepal, 2006 and 2011

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | % | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Urban | 3.4 | 16.6 | 35.9 | 17.9 | 17.9 | 8.3 | 100.0 | 6.9 | 145 |
| Rural | 1.5 | 20.1 | 40.7 | 17.7 | 14.4 | 5.6 | 100.0 | 6.1 | 1,498 |
| Total | 1.6 | 19.8 | 40.3 | 17.7 | 14.7 | 5.8 | 100.0 | 6.2 | 1,643 |
| **NDHS 2011** | | | | | | | | | |
| Urban | 4.8 | 24.1 | 34.9 | 13.3 | 19.3 | 3.6 | 100.0 | 5.8 | 83 |
| Rural | 2.6 | 21.4 | 36.4 | 15.3 | 15.8 | 8.5 | 100.0 | 6.6 | 1,022 |
| Total | 2.8 | 21.6 | 36.3 | 15.1 | 16.0 | 8.1 | 100.0 | 6.5 | 1,105 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| Urban | 39.8 | 45.6 | (2.6) | (26.1) | 7.5 | (56.3) | | (15.2) | |
| Rural | 79.9 | 6.6 | (10.6) | (13.7) | 9.3 | 51.8 | | 7.0 | |
| Total | 70.7 | 9.3 | (9.9) | (14.7) | 8.8 | 39.4 | | 5.0 | |

Overall, when both males and females are combined, the mean number of cigarettes consumed in a day has not declined in 2011 compared to 2006 (Table 13.3).

Table 13.3 Percent distribution of both sexes age 15-49 by number of cigarettes smoked in last 24 hours according to residence, Nepal, 2006 and 2011

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | Percent | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Urban | 4.3 | 20.4 | 34.8 | 17.2 | 17.0 | 6.3 | 100.0 | 6.3 | 348 |
| Rural | 2.0 | 22.6 | 35.9 | 15.1 | 16.6 | 7.7 | 100.0 | 6.6 | 2,457 |
| Total | 2.3 | 22.4 | 35.8 | 15.4 | 16.7 | 7.5 | 100.0 | 6.5 | 2,805 |
| **NDHS 2011** | | | | | | | | | |
| Urban | 7.6 | 25.9 | 32.3 | 12.9 | 17.9 | 3.4 | 100.0 | 5.8 | 264 |
| Rural | 5.9 | 23.2 | 32.2 | 14.0 | 15.3 | 9.5 | 100.0 | 6.6 | 2,070 |
| Total | 6.1 | 23.5 | 32.2 | 13.9 | 15.5 | 8.8 | 100.0 | 6.5 | 2,334 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| Urban | 76.4 | 26.7 | (7.0) | (25.0) | 5.4 | (45.9) | | (8.1) | |
| Rural | 195.2 | 2.4 | (10.3) | (7.6) | (8.4) | 23.6 | | 0.0 | |
| Total | 166.5 | 5.0 | (9.9) | (9.9) | (6.8) | 17.3 | | 0.0 | |

Among the males age 15-49, on average, the largest number of cigarettes (9.8 cigarettes) per day is consumed in Mountains followed by hills (7.3 cigarettes) and the Terai (5.2 cigarettes) in 2011 (Table 14.1). This pattern was similar in 2006 too but in 2011 the mean number of cigarettes consumed has declined in hills and Terai regions while in the Mountain region it has increased from 9.4 to 9.8.

The proportion of males consuming 20 sticks of cigarettes or more has increased in the Mountains in 2011 to 24 percent from 13 percent in 2006 (Table 14.1). In the Terai too the proportion of men consuming 20 cigarettes or more a day has increased form 5 percent to 6 percent.

Table 14.1 Percent distribution of males age 15-49 by number of cigarettes smoked in last 24 hours according to ecological region, Nepal, 2006 and 2011

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | Percent | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Mountain | 2.0 | 9.0 | 25.0 | 15.0 | 36.0 | 13.0 | 100.0 | 9.4 | 100 |
| Hill | 2.7 | 16.9 | 29.6 | 13.5 | 22.5 | 14.8 | 100.0 | 8.6 | 480 |
| Terai | 3.8 | 36.4 | 29.8 | 10.6 | 14.2 | 5.1 | 100.0 | 5.3 | 583 |
| Total | 3.2 | 26.0 | 29.3 | 12.2 | 19.5 | 9.8 | 100.0 | 7.0 | 1,163 |
| **NDHS 2011** | | | | | | | | | |
| Mountain | 5.1 | 11.2 | 25.5 | 11.2 | 23.5 | 23.5 | 100.0 | 9.8 | 98 |
| Hill | 5.4 | 19.0 | 28.4 | 17.8 | 18.0 | 11.4 | 100.0 | 7.3 | 483 |
| Terai | 12.3 | 31.7 | 29.1 | 9.2 | 11.7 | 5.9 | 100.0 | 5.2 | 649 |
| | 9.0 | 25.1 | 28.5 | 12.8 | 15.1 | 9.4 | 100.0 | 6.4 | 1230 |

Among the females the mean number of cigarettes consumed has declined in the Mountain region in 2011 compared to 2006 while the opposite is true for the other two ecological regions. For instance, the mean number of cigarettes was 7 in 2006 which declined to 6 in 2011 but the corresponding figures are 6.3 and 6.4 for hills and 5.8 and 6.3 for the Terai (Table 14.2).

Table 14.2 Percent distribution of females age 15-49 by number of cigarettes smoked in last 24 hours according to ecological region, Nepal, 2006 and 2011

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | Percent | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Mountain | 1.6 | 23.3 | 34.2 | 13.0 | 18.7 | 9.3 | 100.0 | 7.0 | 193 |
| Hill | 2.3 | 18.7 | 38.1 | 18.7 | 16.0 | 6.3 | 100.0 | 6.3 | 796 |
| Terai | 0.9 | 20.0 | 44.8 | 17.9 | 12.1 | 4.3 | 100.0 | 5.8 | 654 |
| Total | 1.6 | 19.8 | 40.3 | 17.7 | 14.7 | 5.8 | 100.0 | 6.2 | 1,643 |
| **NDHS 2011** | | | | | | | | | |
| Mountain | 3.4 | 21.1 | 42.2 | 12.2 | 15.0 | 6.1 | 100.0 | 6.0 | 147 |
| Hill | 2.7 | 21.7 | 35.3 | 14.9 | 15.9 | 9.5 | 100.0 | 6.8 | 558 |
| Terai | 2.8 | 21.5 | 35.8 | 16.5 | 16.5 | 7.0 | 100.0 | 6.3 | 400 |
| Total | 2.8 | 21.5 | 36.4 | 15.1 | 16.0 | 8.1 | 100.0 | 6.5 | 1,105 |

When both sexes are combined the mean number of cigarettes smoked in a day shows a slight decline (6.4 cigarettes a day) in 2011 compared to 2006 (6.5 cigarettes a day, Table 14.3). In the Mountains and Terai the proportion of population consuming 20 cigarettes a day has increased in 2011 as against 2006.

Table 14.3 Percent distribution of both sexes age 15-49 by number of cigarettes smoked in last 24 hours according to ecological region, Nepal, 2006 and 2011

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | Percent | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Mountain | 1.7 | 18.4 | 31.1 | 13.7 | 24.6 | 10.6 | 100.0 | 7.8 | 293 |
| Hill | 2.4 | 18.0 | 34.9 | 16.8 | 18.4 | 9.5 | 100.0 | 7.2 | 1,276 |
| Terai | 2.3 | 27.7 | 37.8 | 14.5 | 13.1 | 4.7 | 100.0 | 5.6 | 1,237 |
| Total | 2.3 | 22.3 | 35.7 | 15.4 | 16.7 | 7.5 | 100.0 | 6.5 | 2,806 |
| **NDHS 2011** | | | | | | | | | |
| Mountain | 4.1 | 17.1 | 35.5 | 11.8 | 18.4 | 13.1 | 100.0 | 7.5 | 245 |
| Hill | 3.9 | 20.5 | 32.1 | 16.2 | 16.9 | 10.4 | 100.0 | 7.0 | 1,041 |
| Terai | 8.7 | 27.8 | 31.6 | 12.0 | 13.5 | 6.3 | 100.0 | 5.6 | 1,049 |
| Total | 6.1 | 23.4 | 32.2 | 13.9 | 15.5 | 8.8 | 100.0 | 6.4 | 2,335 |

Males age 15-49 from Mid-western Development Region smoke, on average, the highest number of cigarettes (7.8 cigarettes) a day followed by males from the Eastern Development Region (6.4 cigarettes), Central Development Region (6.1 cigarettes) while males from the remaining two Development Regions smoke, on average, the same number of cigarettes (5.9 cigarettes) a day in 2011 (Appendix Table 5). Compared to 2006 cigarette consumption among males declined in Central, Western and Mid Western regions but in two other regions it increased.

Among the females, the average number of cigarette consumption increased in 2011 compared to 2006 in four development regions except in Far Western Development Region (Appendix Table 6).

Examination of cigarette consumption by both sexes together shows that in 2011 it increased in three development regions – Eastern, Western and Mid Western region and declined in two other regions – Central and Far Western regions (Appendix Table 7).

Sub-regional variations are common among men and women in tobacco use. The mean number of cigarettes consumed a day by males declined in Central Mountain, Central Hill, Western Hill, MWH, FWH, Central Terai, western Terai and Far Western Terai while in the rest of the sub regions it increased in 2011 compared to 2006 (Appendix Table 8).

Of the 13 sub regions, average number of cigarettes consumed by females in 2011 increased in 8 sub regions and declined in 5 sub regions compared to 2006. The percentage change was highest in Western Terai (32.5%) followed by Mid Western Terai (17.5%), Eastern Mountain (16.8%), Western Hill (16.5%), Mid Western Hill (13.4%) and Central Hill (10.8%) (Appendix Table 9).

Males and females combined indicators on number of cigarette consumption a day in 13 sub regions show higher consumption in 6 sub regions in 2011 compared with 2006. Highest percentage change was found in Eastern Mountain (27.6%), followed by Mid Western Terai (20.7%), Western Terai (11.2%), Eastern Terai (9.3%) and Western Hill (5.5%) (Appendix Table 10).

Although tobacco use prevalence showed consistent inverse relationship with the level of education as shown in Tables 8 and 9 above for males and females in both 2006 and 2011, the number of cigarette sticks consumed in the last 24 hours among cigarette smokers did not follow the same pattern. The mean

number of cigarettes consumed a day among females in 2006 (Appendix Table 12) and males in 2011 (Appendix Table 11) did not follow this pattern.

Males with primary education were consuming, on average, 7.5 cigarettes a day but males with no education consuming slightly less than 6.8 sticks (Appendix Table 12). Between gender, overall males consumed more cigarettes a day than females in 2006 but in 2011 men and women with no education consumed an equal number of cigarette sticks (6.5 sticks) among females than males (6.8 sticks) a day (Appendix Tables 10 and 11).

The average number of cigarettes consumed a day among illiterate females and females with primary education only increased in 2011 compared to 2006 from 6.3 sticks to 6.8 sticks among illiterates and from 5.0 sticks to 5.1 sticks for females with primary education (Appendix Table 11).

The average numbers of cigarettes consumed a day among illiterate and respondents with primary education only increased for males and females combined in 2011 compared to 2006 from 6.7 sticks to 6.8 sticks (Appendix Table 12). Among both sexes combined the average number of cigarettes consumed a day remained the same for respondents with primary (6.7 sticks) and some secondary education (5.7 sticks) in 2006 and 2011 (Appendix Table 13).

Among the male cigarette smokers, the average number of cigarettes consumed a day increased among the poorest (from 8.0 to 8.3 sticks) and poorer wealth quintiles (from 6.5 to 6.7 sticks) in 2011 compared to 2006 (Appendix Table 14). For middle, richer and richest wealth quintiles the consumption of cigarettes declined.

Among the females except for the richest wealth quintile the average number of cigarettes consumed a day increased in 2011 compared to 2006 for four other wealth quintiles (Appendix Table 15).

Male and female combined indicator shows increase of cigarette consumption among the poorest and poorer wealth quintiles in 2011 than in 2006 – from 7 sticks a day to 7.3 sticks a day for the poorest quintile and from 6.3 sticks a day to 6.6 sticks a day for the poorer quintile (Appendix Table 16).

Caste/ethnic wise, Muslim and other castes consumed the largest number of cigarettes (about 10) in 2006 followed by Chhetri/Thakuri males (8.9 sticks), Dalit (6.8 sticks, Janjati (6.6 sticks) and so on (Appendix Table 17). In 2011 Chhetri/Thakuri males have consumed the largest number of cigarettes (7.4 sticks) a day followed by Janjati (6.7 sticks) and Dalit (6.4 sticks). Average number of cigarette sticks consumed has declined in 2011 compared to 2006 except for Janjati (Appendix Table 17).

Among the females cigarette consumption per day declined for most caste./ethnic groups in 2011 as against 2006 but for Bahun/Sanyasi, Janjati and Dalit groups the consumption of cigarettes increased in 2011 (Appendix Table 18).

Both sexes combined cigarette consumption data shows decline in cigarette consumption for all caste/ethnic groups except for Janajti. The Janjati, on average, consumed 6.3 sticks a day in 2006 but it increased to 6.9 sticks a day in 2011 (Appendix Table 19).

# III. TOBACCO USE AND MATERNAL HEALTH

About one in 8 pregnant women consumed any tobacco product in 2006 and this proportion declined to 9 percent in 2011 (Table 15.1). in Nepal and of them most consume cigarettes (Figure 3). Nineteen percent women who are breastfeeding but not pregnant reported consuming tobacco products. One in five women who are neither pregnant nor breastfeeding use tobacco products in 2006 and this declined to about 14 percent in 2011.

Table 15.1 Prevalence of tobacco use by maternity status, 2006 and 2011, Nepal

| Type of tobacco product | Pregnant | | | Breast feeding, not pregnant | | | Neither | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change |
| Cigarettes | 9.8 | 5.0 | -49.0 | 13.7 | 6.9 | -49.6 | 16.3 | 9.6 | -40.9 |
| Pipe | 0.8 | 1.0 | 25.0 | 1.6 | 0.8 | -50.0 | 2.2 | 0.7 | -68.2 |
| Other tobacco | 3.1 | 4 | 29.0 | 5.9 | 6.2 | 5.1 | 4.8 | 6.1 | 27.1 |
| Any tobacco | 11.8 | 9.1 | -22.9 | 18.9 | 13.5 | -28.6 | 20.6 | 16.4 | -20.4 |
| Number of women | 612 | 621 | | 2,908 | 2,974 | | 7,272 | 9,194 | |

Although the proportion of cigarette smokers among pregnant women has declined in 2011 compared to 2006 (Table 15.1), the mean number of cigarettes consumed in the last 24 hours has increased among the pregnant women in 2011 (4.9 sticks a day) compared to 2006 (4.8 sticks a day, Table 15.2). This increase is noticed for breastfeeding but not pregnant women and neither pregnant nor breastfeeding women too.

Table 15.2 Percent distribution of cigarette smoking women age 15-49 by maternity status according to number of cigarettes smoked in last 24 hours, Nepal, 2006 and 2011

| Number of cigarettes smoked | Pregnant | | | Breastfeeding, not pregnant | | | Neither | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2006 | 2011 | % change | 2006 | 2011 | % change | 2006 | 2011 | % change |
| 0 | 1.7 | 6.7 | 292.2 | 1.5 | 1.5 | 2.0 | 1.7 | 3.0 | 74.0 |
| 1-2 | 31.7 | 36.7 | 15.7 | 21.9 | 21.9 | 0.2 | 18.5 | 20.9 | 13.2 |
| 3-5 | 43.3 | 23.3 | -46.1 | 43.7 | 41.3 | -5.4 | 39.0 | 35.6 | -8.7 |
| 6-9 | 13.3 | 13.3 | 0.3 | 15.3 | 12.8 | -16.6 | 18.8 | 15.8 | -15.9 |
| 10-19 | 6.7 | 16.7 | 148.8 | 12.3 | 15.3 | 24.4 | 15.9 | 16.2 | 1.6 |
| 20+ | 3.3 | 3.3 | 1.0 | 5.3 | 7.1 | 34.8 | 6.2 | 8.5 | 37.6 |
| Total | 100.0 | 100.0 | | 100.0 | 100.0 | | 100.0 | 100.0 | |
| Mean | 4.8 | 4.9 | 2.3 | 5.8 | 6.5 | 12.2 | 6.4 | 6.6 | 2.5 |
| N | 60 | 31 | | 398 | 196 | | 1185 | 878 | |

# IV. IMPACT OF TOBACCO ON FECUNDITY

Woman's fecundity is affected by a number of factors and one of them has been established as tobacco use. According to NDHS 2006, of the total women interviewed 96.7 percent were fecund and 3.3 percent were in-fecund (MOHP, et al 2007). When these women were classified as tobacco users and non-users proportionately less women using tobacco (92.5 percent) were found fecund than women using no tobacco (97.7 percent, Box 1). Among the in-fecund women, tobacco users were nearly 4 times more likely to be in-fecund than those women who did not use tobacco[3].

Box 1 Percent distribution of fecund and in-fecund women age 15-49 by tobacco use, Nepal 2006

| Use of tobacco | In-fecund | Fecund | Total % | Number of women |
|---|---|---|---|---|
| Any tobacco | 7.5 | 92.5 | 100.0 | 2,118 |
| None | 2.3 | 97.7 | 100.0 | 8,676 |
| Total | 3.3 | 96.7 | 100.0 | 10,794 |

Tobacco use by women is seen affecting fecundity both in urban and rural areas and much more so in rural areas than in urban areas. For instance, the proportion of fecund women is less (94.8 percent) among tobacco users than among none tobacco users (98.2 percent) in urban areas and this pattern is true for rural women too but the proportion is much lower (92.3 percent) in rural areas than in the urban areas (Table 16). The proportion of in-fecund women among tobacco users is nearly 3 times (5.2 percent) compared to the proportion in-fecund among non-tobacco users (1.8 percent) in urban areas and in rural areas the corresponding figure is slightly over 3 times (7.7 percent versus 2.4 percent).

Table 16 Percentage distribution of women age 15-49 by residence according to fecundity status and tobacco use, Nepal, 2006

| Residence | | Fecundity status | | Total | |
|---|---|---|---|---|---|
| **Urban** | **Uses tobacco** | **Infecund** | **Fecund** | **Percent** | **Number** |
| | Any tobacco | 5.2 | 94.8 | 100.0 | 194 |
| | None | 1.8 | 98.2 | 100.0 | 1,493 |
| | Total | 2.2 | 97.8 | 100.0 | 1,687 |
| **Rural** | **Uses tobacco** | | | | |
| | Any tobacco | 7.7 | 92.3 | 100.0 | 1,924 |
| | None | 2.4 | 97.6 | 100.0 | 7,182 |
| | Total | 3.6 | 96.4 | 100.0 | 9,106 |

Source: MOHP et al 2007

It is clear from above that tobacco use affects fecundity of women of reproductive age but the data in Table 17 reveals more on the impact of tobacco use on fecundity. It is seen that tobacco use affects fecundity the most in the Terai region followed by hill region and the Mountain region. For instance, the proportion in-fecund among tobacco users is 8.8 percent in the Terai region and the corresponding figures for the hill region and the Mountain region are 7.1 percent and 4.5 percent respectively. In contrast, among the non-tobacco users only 2.6 percent were in-fecund in the Terai, 2 percent in the hill region and 2.2 percent in the Mountain region.

[3] Due to unavailability of data in 2011 no comparison could be made.

Table 17 Percentage distribution of women age 15-49 by ecological region according to fecundity status and tobacco use, Nepal, 2006

| Ecological region | | Fecundity status | | Total | |
|---|---|---|---|---|---|
| **Mountain** | **Uses tobacco** | **In-fecund** | **Fecund** | **Percent** | **Number** |
| | Any tobacco | 4.5 | 95.5 | 100.0 | 245 |
| | None | 2.2 | 97.8 | 100.0 | 508 |
| | Total | 2.9 | 97.1 | 100.0 | 753 |
| **Hill** | **Uses tobacco** | | | | |
| | Any tobacco | 7.1 | 92.9 | 100.0 | 1,013 |
| | None | 2.0 | 98.0 | 100.0 | 3,584 |
| | Total | 3.1 | 96.9 | 100.0 | 4,597 |
| **Terai** | **Uses tobacco** | | | | |
| | Any tobacco | 8.8 | 91.2 | 100.0 | 860 |
| | None | 2.6 | 97.4 | 100.0 | 4,584 |
| | Total | 3.6 | 96.4 | 100.0 | 5,444 |

Source: MOHP et al 2007

In five development regions of the country the impact of tobacco use on fecundity is most likely in the CDR (8.3% in-fecund) followed by Eastern development region (7.7%), Western and Far-western development regions (7.0% each) and least likely in the Mid-western development region (6.8%, Table 18).

Table 18 Percentage distribution of women age 15-49 by development region according to fecundity status and tobacco use, Nepal, 2006

| Development region | | Fecundity status | | Total | |
|---|---|---|---|---|---|
| **Eastern** | **Uses tobacco** | **In-fecund** | **Fecund** | **Percent** | **Number** |
| | Any tobacco | 7.7 | 92.3 | 100 | 495 |
| | None | 1.8 | 98.2 | 100 | 1,897 |
| | Total | 3.0 | 97.0 | 100 | 2,392 |
| **Central** | **Uses tobacco** | | | | |
| | Any tobacco | 8.3 | 91.7 | 100 | 625 |
| | None | 2.4 | 97.6 | 100 | 2,928 |
| | Total | 3.4 | 96.6 | 100 | 3,553 |
| **Western** | **Uses tobacco** | | | | |
| | Any tobacco | 7.0 | 93.0 | 100 | 356 |
| | None | 3.2 | 96.8 | 100 | 1,713 |
| | Total | 3.9 | 96.1 | 100 | 2,069 |
| **Mid-western** | **Uses tobacco** | | | | |
| | Any tobacco | 6.8 | 93.2 | 100 | 311 |
| | None | 1.7 | 98.3 | 100 | 939 |
| | Total | 3.0 | 97.0 | 100 | 1,250 |
| **Far-western** | **Uses tobacco** | | | | |
| | Any tobacco | 7.0 | 93.0 | 100 | 330 |
| | None | 2.3 | 97.7 | 100 | 1,198 |
| | Total | 3.3 | 96.7 | 100 | 1,528 |

Source: MOHP et al 2007

# V. IMPACT OF TOBACCO ON ONSET OF MENOPAUSE

Women are considered menopausal if they are neither pregnant nor postpartum amenorrheic and have not had a menstrual period for at least six months preceding the survey. The proportion of women who were menopausal in 2006 increased with age from 4.4 percent among women age 30-34 to 63.6 percent among women age 48-49 and these proportions are slightly different in 2011 but for age 48-49 the proportion menopausal has declined to 50 percent in 2011 (Table 18.1). Overall, 16.2 percent of women age 30-49 are menopausal in 2006 and it declined to 13.5 percent in 2011.

Table 18.1 Percentage distributions of women age 30-49 by residence according to menopausal status and tobacco use, Nepal, 2006 and 2011

| Age | Use any tobacco, 2006 | Use any tobacco, 2011 | Percent change | No tobacco use, 2006 | No tobacco use, 2011 | Percent change | Total, 2006 | Total, 2011 | Percent change |
|---|---|---|---|---|---|---|---|---|---|
| 30-34 | 4.6 | 9.6 | 106.8 | 10.9 | 17.6 | 62.4 | 4.4 | 6.5 | 46.3 |
| 35-39 | 7.8 | 11.3 | 44.9 | 12.4 | 19.8 | 59.8 | 6.2 | 8.2 | 31.9 |
| 40-41 | 7.2 | 7.4 | 2.3 | 6.8 | 7.6 | 10.9 | 12.0 | 10.4 | -13.4 |
| 42-43 | 9.5 | 13.5 | 41.3 | 5.6 | 9.9 | 77.9 | 11.9 | 15.5 | 30.9 |
| 44-45 | 14.2 | 13.0 | -7.9 | 13.9 | 11.4 | -17.7 | 24.5 | 19.0 | -22.5 |
| 46-47 | 26.3 | 17.8 | -32.2 | 21.0 | 14.1 | -32.5 | 48.2 | 30.6 | -36.4 |
| 48-49 | 30.3 | 27.4 | -9.7 | 29.5 | 19.6 | -33.8 | 63.6 | 49.8 | -21.6 |
| Total % | 100.0 | 100.0 | | 100.0 | 100.0 | | 16.2 | 13.5 | |
| Total n | 346 | 230 | | 396 | 516 | | 742 | 746 | |

Source: MOHP et al 2007 and MOHP et al 2012

Research studies elsewhere have shown tobacco use affecting onset of menopause at an earlier age ( Pop Reports, Series L, Number 1, 1979). The NDHS 2006 data also show that proportionately more women consuming tobacco entering into menopause at age 40 and later than other women who do not consume tobacco; after age 40 the proportion of tobacco users consistently outnumber non-tobacco users in entering into menopause and this pattern holds true for both 2006 and 2011 (Table 18.1).

In urban areas the proportion menopausal women age 30-49 was 12 percent - lower than in the rural areas - 16.8 percent but among women who used tobacco products the proportion menopausal women was much higher in both urban and rural areas in 2006 and this pattern was found in 2011 too but the proportions are fewer in 2011 (Table 18.2). The gap between tobacco using women and non-tobacco using women in terms of proportion menopausing was higher (7.3 percentage points) in rural areas than in urban areas (6.5 percentage points) and similar gaps are found in 2011 too (Table 18.2).

Table 18.2 Percentage distributions of women age 30-49 by menopausal status and tobacco use according to residence, Nepal, 2006 and 2011

| | NDHS 2006 | | | Total | | NDHS 2011 | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| Residence | Tobacco use | Non-menopausal women | Menopausal women | % | Number | Non-menopausal women | Menopausal women | % | Number |
| Urban | Any tobacco | 82.9 | 17.1 | 100.0 | 146 | 85.7 | 14.3 | 100.0 | 98 |
| | None | 89.4 | 10.6 | 100.0 | 537 | 93.1 | 6.9 | 100.0 | 699 |
| | Total | 88.0 | 12.0 | 100.0 | 683 | 92.2 | 7.8 | 100.0 | 797 |
| Rural | Any tobacco | 78.7 | 21.3 | 100.0 | 1,496 | 88.9 | 11.1 | 100.0 | 1,255 |
| | None | 85.9 | 14.1 | 100.0 | 2,410 | 92.4 | 7.6 | 100.0 | 3,470 |
| | Total | 83.2 | 16.8 | 100.0 | 3,906 | 91.5 | 8.5 | 100.0 | 4,725 |

The proportion of women age 30-49 menopausal was the highest (17.3 percent) in the Terai region followed by the Mountain region (16.5 percent) and the hill region (14.8 percent) in 2006 and this pattern remained the same in 2011 too but the proportions are much smaller (Table 18.3). However, these proportions vary a great deal when broken down by whether women are using tobacco products or not. The proportions of tobacco consuming women having menopause are higher in all regions compared to non-tobacco users. The gap between tobacco using women and non-tobacco using women in terms of proportion menopausing is the largest (12.5 percentage points) in the Terai region compared to the Mountain and hill regions where the gap is of 3.6 percentage points and these gaps have narrowed in 2011 (Table 18.3).

Table 18.3 Percentage distributions of women age 30-49 by menopausal status and tobacco use according to ecological region, Nepal, 2006 and 2011

| | NDHS 2006 | | | Total | | NDHS 2011 | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| Ecological region | Tobacco use | Non-menopausal women | Menopausal women | % | Number | Non-menopausal women | Menopausal women | % | Number |
| Mountain | Any tobacco | 81.8 | 18.2 | 100.0 | 159 | 89.4 | 10.6 | 100.0 | 141 |
| | None | 85.4 | 14.6 | 100.0 | 157 | 94.1 | 5.9 | 100.0 | 219 |
| | Total | 83.5 | 16.5 | 100.0 | 316 | 92.2 | 7.8 | 100.0 | 360 |
| Hill | Any tobacco | 83.0 | 17.0 | 100.0 | 760 | 90.6 | 9.4 | 100.0 | 669 |
| | None | 86.6 | 13.4 | 100.0 | 1,223 | 93.2 | 6.8 | 100.0 | 1,619 |
| | Total | 85.2 | 14.8 | 100.0 | 1,983 | 92.4 | 7.6 | 100.0 | 2,288 |
| Terai | Any tobacco | 74.1 | 25.9 | 100.0 | 723 | 86.0 | 14.0 | 100.0 | 544 |
| | None | 86.7 | 13.3 | 100.0 | 1,567 | 92.0 | 8.0 | 100.0 | 2,331 |
| | Total | 82.7 | 17.3 | 100.0 | 2,290 | 90.9 | 9.1 | 100.0 | 2,875 |

Among tobacco users the proportions of women in menopause are much higher than those who do not consume any tobacco products. For example, the proportion of women using tobacco products in menopause ranges from 15.2 percent in Mid-western development region to as high as 28.0 percent in

Central development region in 2006. The gap between tobacco using women and non-tobacco using women in terms of proportion menopausing is the largest (12.7 percentage points) in the Central development region followed by Eastern development region (10.3 percentage points), Western development region (3.8 percentage points) Mid-western development region (2.4 percentage points) and Far-western development region (1.4 percentage points, Table 18.4). These gaps are found in 2011 too but he gaps are not that big comapred to 2006.

Table 18.4 Percentage distribution of women age 30-49 by menopausal status and tobacco use according to development region, Nepal, 2006 and 2011

| | NDHS 2006 | | | Total | | NDHS 2011 | | Total | |
|---|---|---|---|---|---|---|---|---|---|
| Devel-opment region | Tobacco use | Non-menopausal women | Menopausal women | % | Number | Non-menopausal women | Menopausal women | % | Number |
| Eastern | Any tobacco | 78.4 | 21.6 | 100.0 | 379 | 88.8 | 11.2 | 100.0 | 294 |
| | None | 88.7 | 11.3 | 100.0 | 619 | 93.5 | 6.5 | 100.0 | 1,032 |
| | Total | 84.8 | 15.2 | 100.0 | 998 | 92.5 | 7.5 | 100.0 | 1,326 |
| Central | Any tobacco | 72.0 | 28.0 | 100.0 | 517 | 86.9 | 13.1 | 100.0 | 434 |
| | None | 84.6 | 15.4 | 100.0 | 1,035 | 91.7 | 8.3 | 100.0 | 1,438 |
| | Total | 80.4 | 19.6 | 100.0 | 1,552 | 90.5 | 9.5 | 100.0 | 1,872 |
| Western | Any tobacco | 84.6 | 15.4 | 100.0 | 267 | 89.3 | 10.7 | 100.0 | 262 |
| | None | 88.5 | 11.5 | 100.0 | 624 | 93.7 | 6.3 | 100.0 | 959 |
| | Total | 87.3 | 12.7 | 100.0 | 891 | 92.8 | 7.2 | 100.0 | 1,221 |
| Mid Western | Any tobacco | 84.8 | 15.2 | 100.0 | 223 | 91.1 | 8.9 | 100.0 | 225 |
| | None | 87.2 | 12.8 | 100.0 | 304 | 93.9 | 6.1 | 100.0 | 377 |
| | Total | 86.1 | 13.9 | 100.0 | 527 | 92.9 | 7.1 | 100.0 | 602 |
| Far Western | Any tobacco | 83.3 | 16.7 | 100.0 | 257 | 89.1 | 10.9 | 100.0 | 137 |
| | None | 84.7 | 15.3 | 100.0 | 365 | 89.0 | 11.0 | 100.0 | 363 |
| | Total | 84.1 | 15.9 | 100.0 | 622 | 89.0 | 11.0 | 100.0 | 500 |

# VI. IMPACT OF TOBACCO USE ON PREGNANCY OUTCOME

According to NDHS 2006 about 10 percent of women age 15-49 reported having a miscarriage in the five years preceding the survey and this proportion increased to 12 percent in 2011 (Table 19.1). Among the miscarriages higher proportion (19.4% in 2006 and 21.8% in 2011) of women who consumed tobacco products had miscarriages than their counterparts (7.8% in 2006 and 10.3% in 2011) who did not consume any tobacco product (Table 19.1).

Table 19.1 Percent distribution of women by pregnancy termination before calendar beginning according to tobacco consumption, 2006 and 2011

| Tobacco consumption | 2006 | | | | 2011 | | | |
|---|---|---|---|---|---|---|---|---|
| | No miscarriage | Miscarriage | Total % | Number of women | No miscarriage | Miscarriage | Total % | Number of women |
| Consume any tobacco | 80.6 | 19.4 | 100.0 | 2,118 | 78.2 | 21.8 | 100.0 | 1,687 |
| No tobacco | 92.2 | 7.8 | 100.0 | 8,676 | 89.7 | 10.3 | 100.0 | 10,987 |
| Total | 89.9 | 10.1 | 100.0 | 10,794 | 88.2 | 11.8 | 100.0 | 12,674 |

Source: MOHP et al 2007 and MOHP et al 2012

Among women age 15-49 reported having a miscarriage in the five years preceding the survey women consuming any tobacco product had higher miscarriage in both rural ( 19.6% versus 7.8% in 2006 and 12% versus 9.9% in 2011) and urban areas (17% versus 7.8% in 2006 and 26.2% versus 21.5% in 2011) than their counterparts who did not consume any tobacco (Table 19.2).

Table 19.2 Percentage distribution of women age 15-49 that had a miscarriage in the last five years preceding the survey by pregnancy outcome and tobacco use according to residence, Nepal, 2006 and 2011

| | | NDHS 2006 | | | | NDHS 2011 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Pregnancy ended in miscarriage or not | | Total | | Pregnancy ended in miscarriage or not | | Total | |
| Residence | Tobacco use | No | Yes | % | Number | No | Yes | % | Number |
| Urban | Any tobacco | 83.0 | 17.0 | 100.0 | 194 | 73.8 | 26.2 | 100.0 | 122 |
| | None | 92.2 | 7.8 | 100.0 | 1,493 | 78.5 | 21.5 | 100.0 | 1,565 |
| | Total | 91.2 | 8.8 | 100.0 | 1,687 | 78.2 | 21.8 | 100.0 | 1,687 |
| Rural | Any tobacco | 80.4 | 19.6 | 100.0 | 1,923 | 88.0 | 12.0 | 100.0 | 1,697 |
| | None | 92.2 | 7.8 | 100.0 | 7,181 | 90.1 | 9.9 | 100.0 | 9,290 |
| | Total | 89.7 | 10.3 | 100.0 | 9,104 | 89.7 | 10.3 | 100.0 | 10,987 |

Among women age 15-49 reported having a miscarriage in the five years preceding the survey women using any tobacco product had higher miscarriage in all three ecological regions. For instance in Mountain region higher (15.5% in 2006 and 19.2% in 2011) proportion of women using any tobacco product had miscarriage than their counterparts who did not consume any tobacco (8.3% in 2006 and 9.3% in 2011) and similar pattern was found for Hills and the Terai regions (Table 19.3).

Table 19.3 Percentage distribution of women age 15-49 who had a miscarriage in the last five years preceding the survey by pregnancy outcome and tobacco use according to ecological region, Nepal, 2006 and 2011

| Ecological zone | Tobacco use | NDHS 2006 | | | | NDHS 2011 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Pregnancy ended in miscarriage or not | | Total | | Pregnancy ended in miscarriage or not | | Total | |
| | | No | Yes | % | Number | No | Yes | % | Number |
| Mountain | Any tobacco | 84.5 | 15.5 | 100.0 | 245 | 80.8 | 19.2 | 100.0 | 193 |
| | None | 91.7 | 8.3 | 100.0 | 508 | 90.7 | 9.3 | 100.0 | 613 |
| | Total | 89.4 | 10.6 | 100.0 | 753 | 88.3 | 11.7 | 100.0 | 806 |
| Hill | Any tobacco | 80.8 | 19.2 | 100.0 | 1,014 | 79.3 | 20.7 | 100.0 | 844 |
| | None | 92.9 | 7.1 | 100.0 | 3,584 | 89.3 | 10.7 | 100.0 | 4,245 |
| | Total | 90.2 | 9.8 | 100.0 | 4,598 | 87.7 | 12.3 | 100.0 | 5,089 |
| Terai | Any tobacco | 79.3 | 20.7 | 100.0 | 860 | 76.1 | 23.9 | 100.0 | 648 |
| | None | 91.7 | 8.3 | 100.0 | 4,583 | 89.9 | 10.1 | 100.0 | 6,130 |
| | Total | 89.8 | 10.2 | 100.0 | 5,443 | 88.6 | 11.4 | 100.0 | 6,778 |

# VII. EFFECTS OF TOBACCO USE ON THE HEALTH OF INFANTS AND CHILDREN

The infants of mothers who smoke/use tobacco during pregnancy have birth weight lower, on average, than infants born to non-smoking/ non-tobacco using women (Wilcox, A. J. et al., 1993). Mother's smoking/tobacco use status also affects a child's size at birth; such children tend to be of smaller size than children born to non-smoking/ non-tobacco using women.

## 7.1 Effect on child size at birth

A child's birth weight or size at birth is an important indicator of a child's vulnerability to the risk of childhood illnesses and the chances of survival. Children whose birth weight is less than 2.5 kilograms or children reported to be "very small" or "smaller than average" are considered to have a higher than average risk of early childhood death. According to NDHS 2006 about six percent of children were reported to be "very small" at birth and about 14 percent were reported as "smaller than average" in 2006 (Table 20). Further more, among the "very small" it was found that higher proportion (6.4 percent) of children was "very small" if their mothers were smokers/tobacco users than if their mothers were non-smokers/non- tobacco users. Similar pattern was found for women in 2011 and among the tobacco users the proportion with "very small" babies increased in 2011 (7%) compared to 2006 (6.4%, Table 20).

Table 20 Among births in the last five years preceding the survey, percent distribution of births by mother's estimate of size of child at birth according to tobacco use, Nepal, 2006 and 2011

| Tobacco use | Size of child at birth, 2006 | | | | Total percent | Number of births |
|---|---|---|---|---|---|---|
| | Very small | Smaller than average | Average or larger | Don't know/missing | | |
| Any tobacco | 6.4 | 17.5 | 76.2 | 0.0 | 100.0 | 1,084 |
| None | 5.2 | 12.8 | 81.8 | 0.1 | 100.0 | 4,461 |
| Total | 5.5 | 13.7 | 80.7 | 0.1 | 100.0 | 5,545 |
| **Tobacco use** | **Size of child at birth, 2011** | | | | | |
| Any tobacco | 7.0 | 16.8 | 75.8 | 0.4 | 100.0 | 686 |
| None | 3.1 | 11.6 | 85.2 | 0.1 | 100.0 | 4,704 |
| Total | 3.6 | 12.3 | 84.0 | 0.1 | 100.0 | 5,390 |
| **Tobacco use** | **Size of child at birth: percent change 2006-2011** | | | | | |
| Any tobacco | 9.4 | -4.0 | -0.5 | NA | | |
| None | -40.4 | -9.4 | 4.2 | 0.0 | | |
| Total | -34.5 | -10.2 | 4.1 | 0.0 | | |

Among births in the last five years preceding the survey, higher proportion (8.9 percent) of children born to smoking/tobacco using mothers were "very small" in urban areas than (4.9 percent) children born to non-smoking/non-tobacco using mothers and similar pattern was found in rural areas too

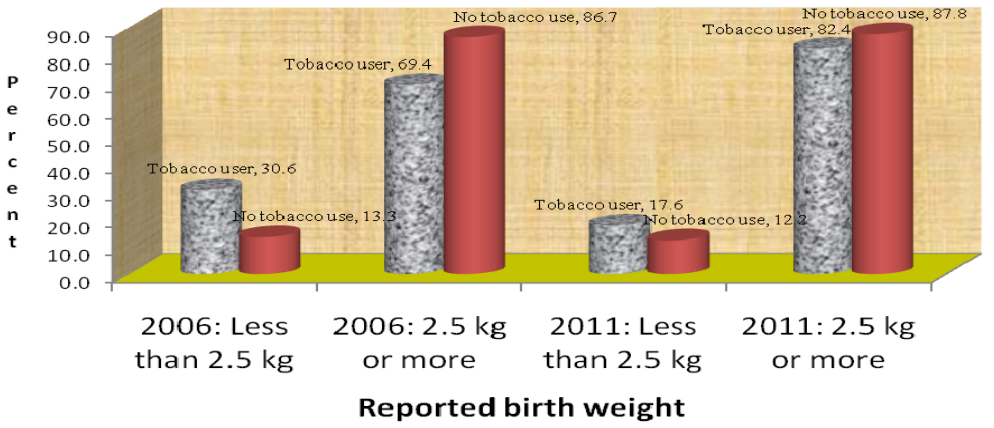
(Appendix Table 20). Similarly, the proportion of children whose size was "smaller than average" was higher (10.1 percent in urban areas and 18.0 percent in rural areas) for smoking/tobacco using mothers than for non-smoking/non-tobacco using mothers (8.5 percent in urban areas and 13.5 percent in rural areas, Appendix Table 20).

Among births in the last five years preceding the survey, higher proportion (8.8 percent) of children born to smoking/tobacco using mothers were "very small" in Mountain region than (7.3 percent) children born to non-smoking/non-tobacco using mothers but this was not found in the hill and the Terai regions (Appendix Table 21). However, proportions of children "smaller than average" born to smoking/tobacco using mothers were higher in all three ecological regions than the proportions born to non-smoking/non-tobacco using mothers.

## 7.2 Effects of tobacco use on birth weight

In Nepal, the majority of births do not take place in a health facility, and therefore they are less likely to be weighed at birth in a non institutional setting. Among children born in the five years before the survey with a reported birth weight, 14 percent were of low birth weight in 2006 and it was 12.4 percent in 2011, that is, weighed less than 2.5 kg at birth. Children born to mothers who smoke/use tobacco are more than twice as likely to be of low birth weight as children born to mothers who do not smoke/use tobacco (30.6% versus 13.3% in 2006 and 18% versus 12% in 2011, Figure 3).

**Figure 3 Among births in the last five years preceding the survey, percent distribution of births with a reported birth weight by tobacco use status, Nepal 2006 and 2011**




Among the births to women who smoke or use tobacco, fewer proportions of births were 2.5 kg or more in both urban and rural areas in both 2006 and 2011 (Appendix Table 22).

The percentage of children with low birth weight born to smoking/tobacco using women is much higher than children born to mothers who do not smoke/use tobacco with low birth weight in both mountain/hill regions (38.5% versus 11.7% in 2006 and 19% versus 12.7% in 2011) and the Terai region (22.7% versus 15.1% and 16.3% versus 11.9% in 2011, Table 21).

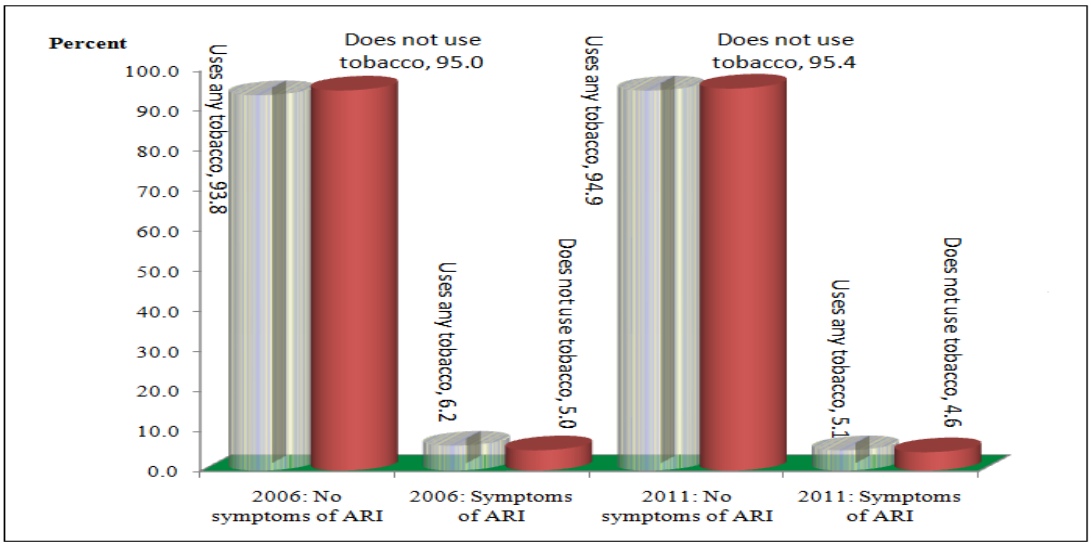
Table 21 Among births in the last five years preceding the survey, percent distribution of births with a reported birth weight according to ecological region and tobacco use, Nepal, 2006 and 2011

| Ecological region | Reported birth weight: 2006 | | | | |
|---|---|---|---|---|---|
| | **Tobacco use** | **Less than 2.5 KG** | **2.5 KG or more** | **Total %** | **Number of births** |
| Mountain and Hill | Any tobacco | 38.5 | 61.5 | 100.0 | 26 |
| | None | 11.7 | 88.3 | 100.0 | 471 |
| | Total | 13.1 | 86.9 | 100.0 | 497 |
| Mountain and Hill | **Reported birth weight: 2011** | | | | |
| | Any tobacco | 19.0 | 81.0 | 100.0 | 42 |
| | None | 12.7 | 87.3 | 100.0 | 735 |
| | Total | 13.0 | 87.0 | 100.0 | 777 |
| Mountain and Hill | **Reported birth weight: percent change 2006-2011** | | | | |
| | Any tobacco | -50.6 | 31.7 | | |
| | None | 8.5 | -1.1 | | |
| | Total | -0.8 | 0.1 | | |
| Terai | **Reported birth weight: 2006** | | | | |
| | Any tobacco | 22.7 | 77.3 | 100.0 | 22 |
| | None | 15.1 | 84.9 | 100.0 | 436 |
| | Total | 15.5 | 84.5 | 100.0 | 458 |
| Terai | **Reported birth weight: 2011** | | | | |
| | Any tobacco | 16.3 | 83.7 | 100.0 | 49 |
| | None | 11.9 | 88.1 | 100.0 | 1,130 |
| | Total | 12.1 | 87.9 | 100.0 | 1,179 |
| Terai | **Reported birth weight: percent change 2006-2011** | | | | |
| | Any tobacco | -28.2 | 8.3 | | |
| | None | -21.2 | 3.8 | | |
| | Total | -21.9 | 4.0 | | |

## 7.3 Tobacco use and ARI among children under five

According to NDHS 2006 the proportion of children under five years of age with symptoms of ARI at some time in the two weeks preceding the survey was 5.3 percent (MOHP et al 2007) and this slightly declined to 4.6 percent in 2011 (MOHP et al 2012). Children of mothers who smoke/use tobacco are more likely than their counterparts to be affected be ARI. For instance, higher (6.2% in 2006 and 5.1% in 2011) proportion of children whose mothers smoke/use tobacco suffer from ARI than (5% in 2006 and 4.6% in 2011) children whose mother do not use tobacco products (Figure 4).

Figure 4 Among children under 5 years of age, the percentage who had symptoms of acute respiratory infection (ARI), according to mother's tobacco use status, Nepal 2006 and 2011




Source: MOHP, et al 2007 and 2012

It is also seen that percentage of children with symptoms of ARI is higher (6.8% in 2006 and 12% in 2011 in urban areas and 6.1% in 2006 and 4.8% in 2011 in rural areas) whose mothers smoke/use tobacco than children whose mothers do not smoke/use tobacco (4.7% in 2006 and 4.6% in 2011 in urban areas and 5.1% in 2006 and 4.6% in 2011 in rural areas) both in urban and rural areas (Table 22).

Table 22 Among children under five years of age, the percentage who had symptoms of ARI according to residence and mother's tobacco use status, Nepal, 2006 and 2011

| | | Symptoms of ARI | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Residence | Tobacco use | No symptoms of ARI | | | Symptoms of ARI | | | Total 2006 | | Total 2011 | |
| Urban | | 2006 | 2011 | % change | 2006 | 2011 | % change | Percent | Number of children | Percent | Number of children |
| | Any tobacco | 93.2 | 88.0 | -5.6 | 6.8 | 12.0 | 76.5 | 100.0 | 74 | 100.0 | 25 |
| | None | 95.3 | 95.4 | 0.1 | 4.7 | 4.6 | -2.4 | 100.0 | 577 | 100.0 | 458 |
| | Total | 95.1 | 95.0 | -0.1 | 4.9 | 5.0 | 1.4 | 100.0 | 651 | 100.0 | 483 |
| Rural | | | | | | | | | | | |
| | Any tobacco | 93.9 | 95.2 | 1.4 | 6.1 | 4.8 | -21.7 | 100.0 | 938 | 100.0 | 628 |
| | None | 94.9 | 95.4 | 0.6 | 5.1 | 4.6 | -10.4 | 100.0 | 3,662 | 100.0 | 4,028 |
| | Total | 94.7 | 95.4 | 0.7 | 5.3 | 4.6 | -13.3 | 100.0 | 4,600 | 100.0 | 4,656 |

Source: MOHP, et al 2007 and 2012

The proportions of children with symptoms of ARI are higher in Mountain (7.3% in 2006 and 3.8% in 2011), hill (6.6% in 2006 and 4.1% in 2011) and the Terai (4.9% in 2006 and 7.8% in 2011) ecological zones whose mothers smoke/use tobacco than the proportions of children whose mothers do not smoke/use tobacco (Table 23).

Table 23 Among children under five years of age, the percentage who had symptoms of ARI according to ecological and mother's tobacco use status, Nepal, 2006 and 2011

| Ecological region | Tobacco use | Symptoms of ARI: No symptoms of ARI | | | Symptoms of ARI | | | Total 2006 | | Total 2011 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mountain | | 2006 | 2011 | % change | 2006 | 2011 | % change | Percent | Number of children | Percent | Number of children |
| | Any tobacco | 92.7 | 96.2 | 3.7 | 7.3 | 3.8 | -47.4 | 100.0 | 164 | 100.0 | 104 |
| | None | 94.3 | 97.3 | 3.2 | 5.7 | 2.7 | -52.7 | 100.0 | 279 | 100.0 | 295 |
| | Total | 93.7 | 97.0 | 3.5 | 6.3 | 3.0 | -52.4 | 100.0 | 443 | 100.0 | 399 |
| Hill | | | | | | | | | | | |
| | Any tobacco | 93.4 | 95.9 | 2.7 | 6.6 | 4.1 | -38.3 | 100.0 | 563 | 100.0 | 370 |
| | None | 93.8 | 94.5 | 0.7 | 6.2 | 5.5 | -11.1 | 100.0 | 1,608 | 100.0 | 1,663 |
| | Total | 93.7 | 94.8 | 1.1 | 6.3 | 5.2 | -16.8 | 100.0 | 2,171 | 100.0 | 2,033 |
| Terai | | | | | | | | | | | |
| | Any tobacco | 95.1 | 92.2 | -3.1 | 4.9 | 7.8 | 59.8 | 100.0 | 286 | 100.0 | 179 |
| | None | 95.8 | 95.8 | 0.0 | 4.2 | 4.2 | -0.4 | 100.0 | 2,352 | 100.0 | 2,528 |
| | Total | 95.7 | 95.6 | -0.2 | 4.3 | 4.4 | 3.5 | 100.0 | 2,638 | 100.0 | 2,707 |

Source: MOHP, et al 2007 and 2012

Among children under five years of age, the percentage who had symptoms of ARI is higher for children whose mothers smoke/use tobacco in Eastern (8.4% in 2006 and 6.4% in 2011), and Far-western (8.2% in 2006 and 6.7% in 2011) development regions than those children whose mothers did not smoke/use tobacco (Table 24).

Table 24 Among children under five years of age, the percentage who had symptoms of ARI according to development region and mother's tobacco use status, Nepal, 2006 and 2011

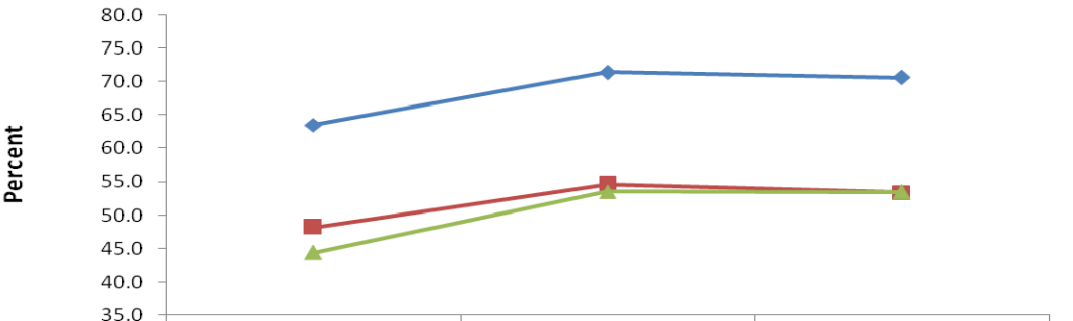
| Developme nt region | Tobacco use | Symptoms of ARI: No symptoms of ARI | | | Symptoms of ARI | | | Total 2006 | | Total 2011 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Eastern | | 2006 | 2011 | % change | 2006 | 2011 | % change | Percent | Number of children | Percent | Number of children |
| | Any tobacco | 91.6 | 93.6 | 2.2 | 8.4 | 6.4 | -23.6 | 100.0 | 239 | 100.0 | 172 |
| | None | 96.0 | 96.9 | 0.9 | 4.0 | 3.1 | -22.3 | 100.0 | 907 | 100.0 | 1,038 |
| | Total | 95.1 | 96.4 | 1.4 | 4.9 | 3.6 | -27.3 | 100.0 | 1146 | 100.0 | 1,210 |
| Central | | | | | | | | | | | |
| | Any tobacco | 93.4 | 99.3 | 6.2 | 6.6 | 0.7 | -88.6 | 100.0 | 274 | 100.0 | 134 |
| | None | 96.0 | 96.2 | 0.2 | 4.0 | 3.8 | -5.1 | 100.0 | 1,453 | 100.0 | 1,505 |
| | Total | 95.6 | 96.5 | 0.9 | 4.4 | 3.5 | -19.6 | 100.0 | 1,727 | 100.0 | 1,639 |
| Western | | | | | | | | | | | |
| | Any tobacco | 97.1 | 94.1 | -3.2 | 2.9 | 5.9 | 106.7 | 100.0 | 174 | 100.0 | 101 |
| | None | 93.7 | 93.5 | -0.2 | 6.3 | 6.5 | 2.9 | 100.0 | 810 | 100.0 | 864 |
| | Total | 94.3 | 93.6 | -0.8 | 5.7 | 6.4 | 12.9 | 100.0 | 984 | 100.0 | 965 |
| Mid Western | | | | | | | | | | | |
| | Any tobacco | 95.6 | 93.6 | -2.0 | 4.4 | 6.4 | 43.1 | 100.0 | 180 | 100.0 | 173 |
| | None | 92.9 | 94.4 | 1.6 | 7.1 | 5.6 | -20.6 | 100.0 | 467 | 100.0 | 588 |
| | Total | 93.7 | 94.2 | 0.6 | 6.3 | 5.8 | -8.8 | 100.0 | 647 | 100.0 | 761 |
| Far Western | | | | | | | | | | | |
| | Any tobacco | 91.8 | 93.3 | 1.7 | 8.2 | 6.7 | -18.9 | 100.0 | 146 | 100.0 | 75 |
| | None | 93.9 | 94.7 | 0.9 | 6.1 | 5.3 | -13.7 | 100.0 | 602 | 100.0 | 490 |
| | Total | 93.4 | 94.5 | 1.1 | 6.6 | 5.5 | -16.2 | 100.0 | 748 | 100.0 | 565 |

Source: MOHP, et al 2007 and 2012

# VIII. CHANGE IN TOBACCO USE PREVALENCE AMONG MEN

Examination of tobacco use prevalence data from NDHS 2001, NDHS 2006 and NDHS 2011 reveal that tobacco prevalence among men age 15-49 has declined in the last 5 years from 70.6 percent in 2001 to 53.4 percent in 2006 but stayed the same in 2011 (Figure 5). Tobacco prevalence declined both in rural and urban areas in 2006 but it declined very slightly in rural areas in 2011.

**Figure 5 Tobacco use prevalence among men age 15-49 by residence and total, Nepal 2001, 2006 and 2011**

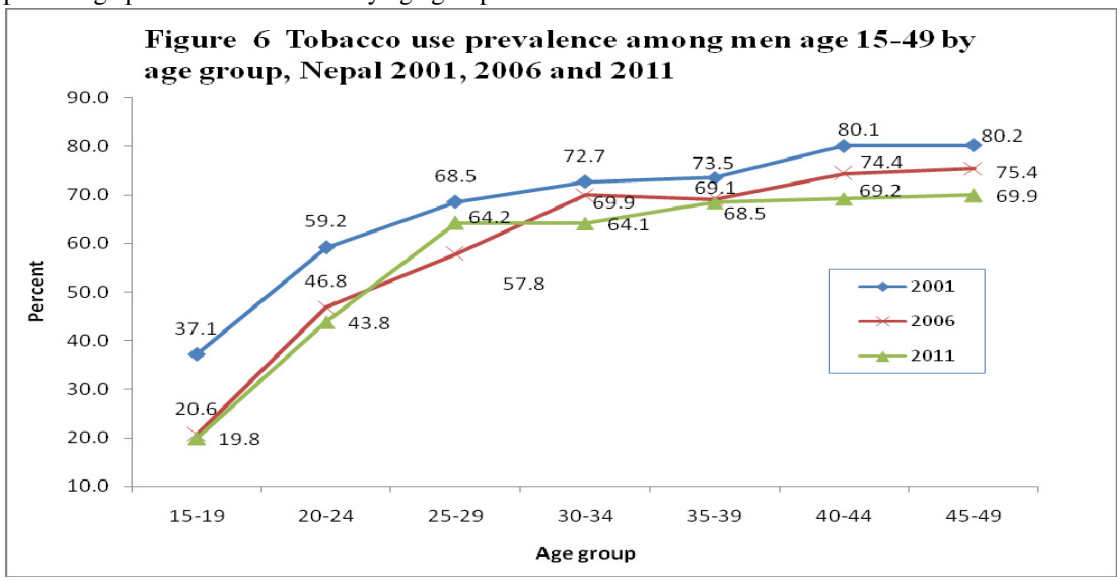



| | Urban | Rural | Total |
|---|---|---|---|
| Year 2001 | 63.5 | 71.4 | 70.6 |
| Year 2006 | 48.2 | 54.6 | 53.4 |
| Year 2011 | 44.4 | 53.6 | 53.5 |

Source: MOH, et al 2002, MOHP et al 2007 and MOHP et al 2012

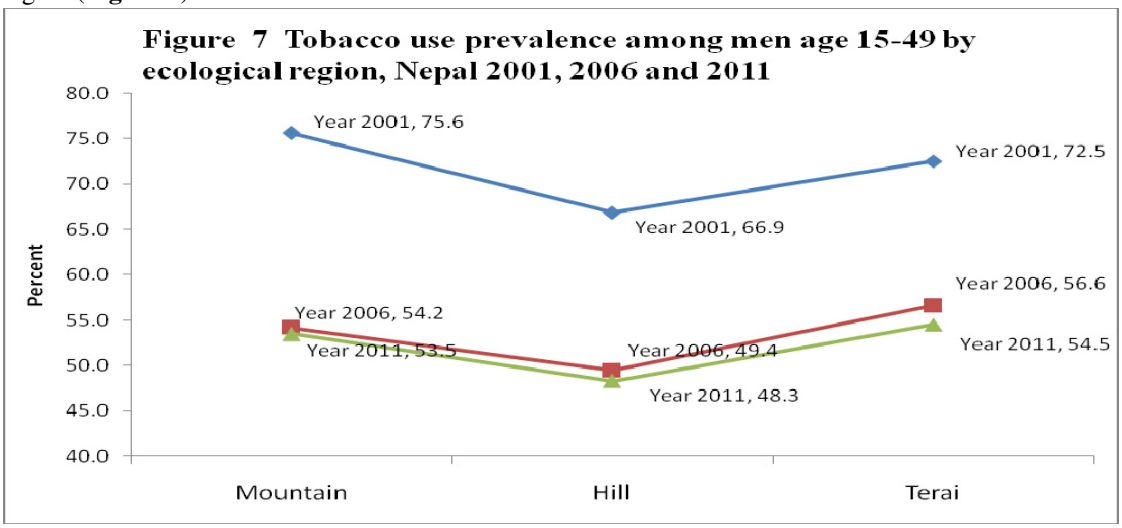
Tobacco use prevalence declined in every age group except age 25-29, too in 2006 and 2011 from the 2001 level (Figure 6). In 2011 more males (64.2%) became tobacco users than in 2006 (57.8%). The percentage points decline varied by age group.

**Figure 6 Tobacco use prevalence among men age 15-49 by age group, Nepal 2001, 2006 and 2011**



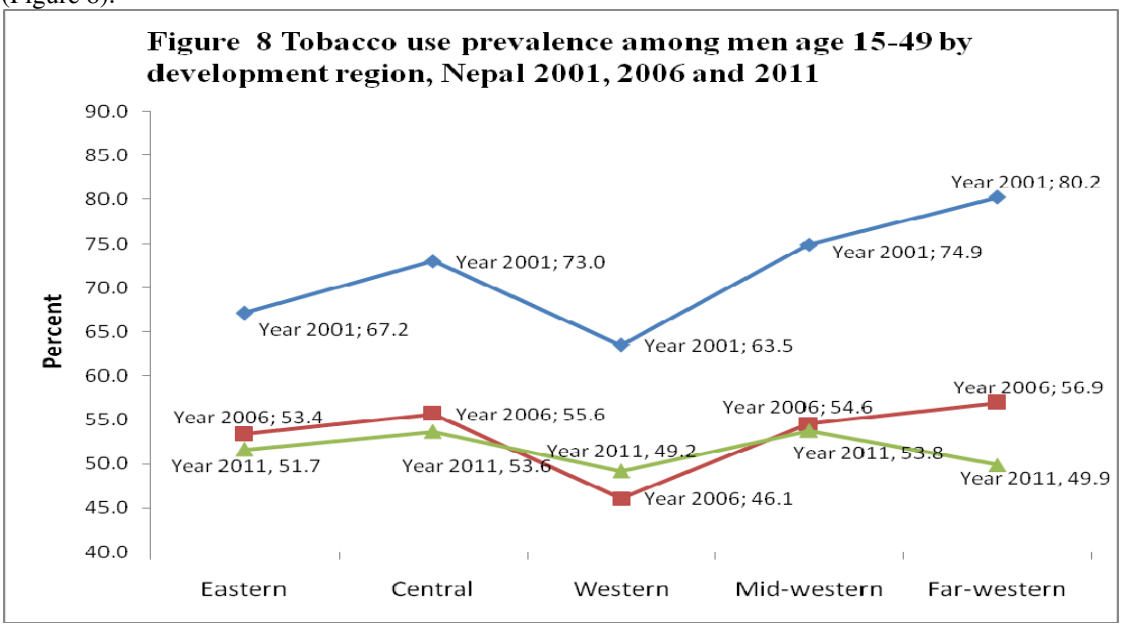

Source: MOH, et al 2002, MOHP et al 2007 and MOHP et al 2012

Tobacco use prevalence continuously declined between 2001 to 2011 in all three ecological regions but the percentage points decline was the largest in Mountain region, followed by hill region and the Terai region (**Figure 7**).




Source: MOH et al 2002, MOHP, et al 2007 and 2012

Tobacco use prevalence declined between 2001 and 2006 in all five development regions and the percentage points decline was the largest (23.3 percentage points) in the Far-western development region followed by Mid-western region (20.3 percentage points), Central and Western regions (17.4 percentage points each) and least (13.8 percentage points) in the Eastern development region, (Figure 8). Tobacco use prevalence declined between 2006 and 2011 in four development regions but not in Western Development region where it increased to 49.2 percent in 2011 from 46.1 percent in 2006 (Figure 8).

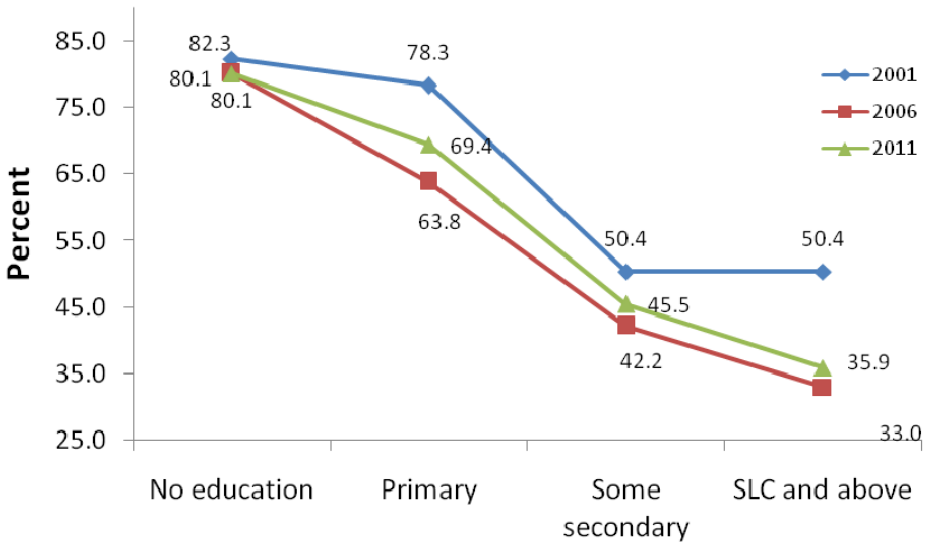



Source: MOH et al 2002, MOHP, et al 2007 and 2012

Tobacco use prevalence declined between 2001 and 2006 among men with different education levels but it is clear that the pace of decline was very minimal (2.2 percentage points) among men with no education (Figure 9). The pace of decline was the fastest (17.4 percentage points) among men with education SLC[4] and above and the second fastest (14.5 percentage points) decline was observed among men with primary education. The pace of decline was not that fast among men with some secondary education.

The tobacco use and education situation changed in 2011. Tobacco use remained at the same level in 2006 and 2011 for men with no education and with men with more education tobacco use increased in 2011 compared to 2006 (Figure 9).

**Figure 9 Tobacco use prevalence among men age 15-49 by education, Nepal 2001, 2006 and 2011**

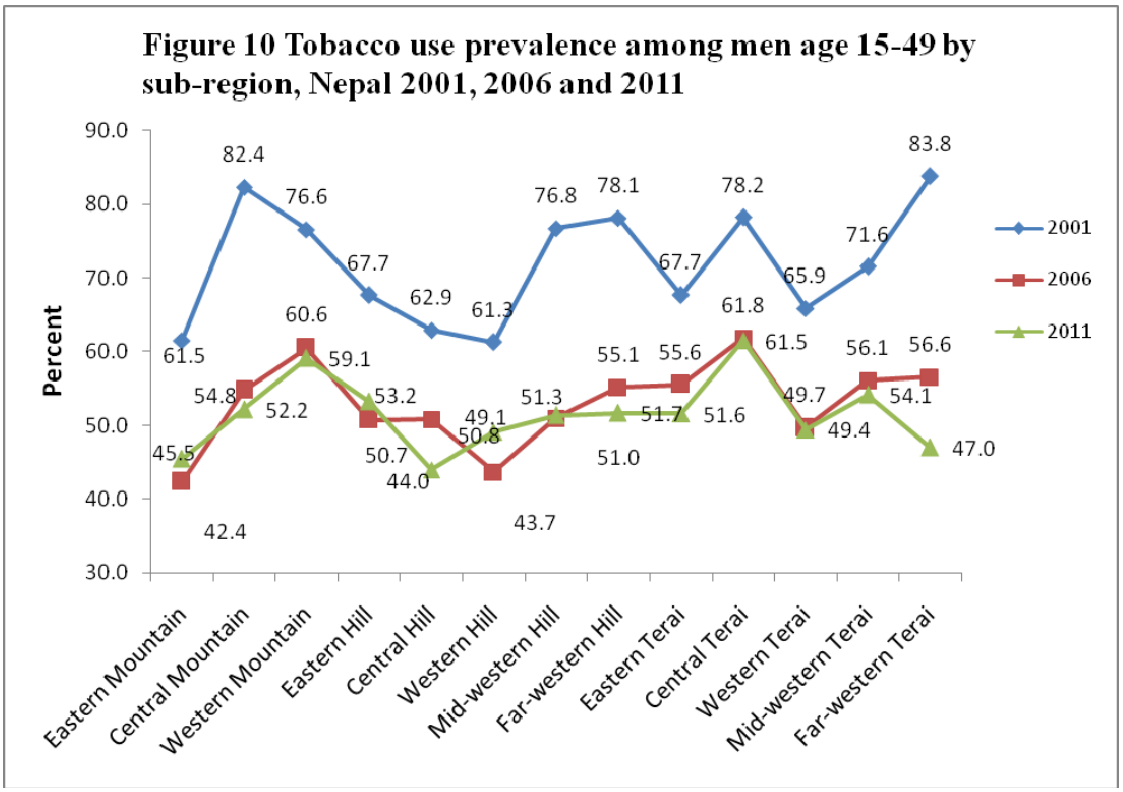



Source: MOH et al 2002, MOHP, et al 2007 and 2012

Tobacco use prevalence declined between 2001 and 2006 among men in all 13 sub-regions (Figure 10). The pace of decline was the fastest (27.6 percentage points) in Central Mountain region but in Far-western Terai, Mid-western Hill and Far-western Hill the pace of decline ranged from 23 percentage points to 27 percentage points. The pace of tobacco use prevalence decline ranged from 16 percentage points to 19 percentage points in Eastern Mountain, Western Hill, Eastern Hill, Central Terai, Western Terai and the Western Mountain regions. In Mid-western Terai, Eastern Terai and Central Hill the pace of tobacco use prevalence were the low - ranging from 12 percentage points to 15 percentage points.

Tobacco use prevalence declined between 2006 and 2011 among men in 9 sub regions but the decline has not been as high as during the 2001 and 2006 period. Higher proportions of men consumed tobacco in Eastern Mountain, Eastern hill, Western hill and Mid Western hill in 2011 than in 2006 (Figure 10).

[4] SLC=School Leaving Certificate




Source: MOH et al 2002, MOHP, et al 2007 and 2012

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# Appendix

Table 1 Prevalence of bidi smoking by male and female according to background characteristics, Nepal 2011

| Characteristic | | Women | Men | Both sexes | Number of women | Number of women | Number of women and men |
|---|---|---|---|---|---|---|---|
| **Age** | 15-19 | 0.0 | 0.1 | 0.1 | 2,753 | 978 | 3,731 |
| | 20-24 | 0.0 | 0.0 | 0.3 | 2,298 | 685 | 2,983 |
| | 25-29 | 0.2 | 0.1 | 1.0 | 2,101 | 581 | 2,682 |
| | 30-34 | 0.2 | 0.1 | 1.2 | 1,734 | 500 | 2,234 |
| | 35-39 | 0.3 | 0.2 | 2.5 | 1,558 | 541 | 2,099 |
| | 40-44 | 0.3 | 0.1 | 2.6 | 1,284 | 438 | 1,722 |
| | 45-49 | 0.4 | 0.3 | 4.2 | 946 | 398 | 1,344 |
| **Residence** | | | | | | | |
| | Urban | 0.0 | 0.1 | 0.4 | 1,820 | 718 | 2,538 |
| | Rural | 1.4 | 0.8 | 1.5 | 10,854 | 3,403 | 14,257 |
| **Development Region** | | | | | | | |
| | Eastern | 0.3 | 0.2 | 1.3 | 3,058 | 997 | 4,055 |
| | Central | 0.4 | 0.5 | 1.4 | 4,236 | 1,448 | 5,684 |
| | Western | 0.1 | 0.0 | 0.2 | 2,660 | 798 | 3,458 |
| | Mid-western | 0.4 | 0.1 | 2.9 | 1,478 | 494 | 1,972 |
| | Far-western | 0.2 | 0.0 | 1.5 | 1,243 | 384 | 1,626 |
| **Eco Region** | | | | | | | |
| | Mountain | 0.2 | 0.0 | 2.3 | 806 | 245 | 1,051 |
| | Hill | 0.9 | 0.3 | 1.9 | 5,090 | 1,659 | 6,749 |
| | Terai | 0.3 | 0.6 | 0.8 | 6,779 | 2,217 | 8,995 |
| **Sub region** | | | | | | | |
| | Eastern mountain | 0.0 | 0.0 | 0.3 | 228 | 66 | 294 |
| | Central mountain | 0.1 | 0.0 | 4.0 | 258 | 68 | 326 |
| | Western mountain | 0.1 | 0.0 | 2.3 | 319 | 111 | 430 |
| | Eastern hill | 0.2 | 0.1 | 2.7 | 956 | 293 | 1,249 |
| | Central hill | 0.2 | 0.0 | 1.1 | 1,563 | 617 | 2,180 |
| | Western hill | 0.0 | 0.0 | 0.3 | 1,513 | 439 | 1,952 |
| | Mid-western hill | 0.4 | 0.1 | 6.3 | 649 | 189 | 838 |
| | Far-western hill | 0.0 | 0.0 | 1.5 | 409 | 120 | 529 |
| | Eastern terai | 0.1 | 0.1 | 0.6 | 1,873 | 637 | 2,510 |
| | Central terai | 0.2 | 0.5 | 1.3 | 2,415 | 764 | 3,179 |
| | Western terai | 0.0 | 0.0 | 0.1 | 1,147 | 358 | 1,505 |
| | Mid-western terai | 0.0 | 0.0 | 0.3 | 668 | 242 | 910 |
| | Far-western terai | 0.1 | 0.0 | 1.0 | 676 | 217 | 893 |

| Characteristic | | Women | Men | Both sexes | Number of women | Number of women | Number of women and men |
|---|---|---|---|---|---|---|---|
| **Broad caste/ ethnicity** | | | | | | | |
| | Chhetri/Thakuri | 0.6 | 0.2 | 2.5 | 2,436 | 779 | 3,215 |
| | Bahun/Sanyasi | 0.0 | 0.0 | 0.2 | 1,961 | 652 | 2,613 |
| | Janjati | 0.6 | 0.5 | 1.4 | 5,008 | 1,661 | 6,669 |
| | Dalit | 0.2 | 0.1 | 1.4 | 1,773 | 515 | 2,288 |
| | Terai other Castes | 0.0 | 0.1 | 0.5 | 1,003 | 373 | 1,376 |
| | Muslim | 0.0 | 0.0 | 0.8 | 468 | 127 | 595 |
| | Other | 0.0 | 0.0 | 0.0 | 25 | 14 | 39 |
| **Education** | | | | | | | |
| | No education | 1.3 | 0.4 | 3.2 | 5,046 | 566 | 5,612 |
| | Primary | 0.1 | 0.1 | 0.8 | 2,210 | 815 | 3,024 |
| | Some secondary | 0.0 | 0.4 | 0.4 | 3,088 | 1,437 | 4,525 |
| | SLC and above | 0.0 | 0.0 | 0.0 | 2,331 | 1,303 | 3,634 |
| **Wealth index** | | | | | | | |
| | Poorest | 0.9 | 0.3 | 4.5 | 2,118 | 611 | 2,729 |
| | Poorer | 0.3 | 0.1 | 1.4 | 2,394 | 694 | 3,088 |
| | Middle | 0.2 | 0.1 | 0.8 | 2,601 | 830 | 3,431 |
| | Richer | 0.1 | 0.2 | 0.6 | 2,722 | 919 | 3,641 |
| | Richest | 0.0 | 0.1 | 0.1 | 2,839 | 1,067 | 3,906 |
| **Total** | | **1.4** | **0.9** | **1.3** | **12,674** | **4,121** | **16,795** |

Table 2 Percent distribution of males age 15-49 by number of cigarettes smoked in last 24 hours according to 5-year age group, Nepal, 2006 and 2011

| | Number of cigarettes smoked in last 24 hours | | | | | | Total | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| **NDHS 2006** | **0** | **1-2** | **3-5** | **6-9** | **10-19** | **20+** | **%** | | |
| 15-19 | 3.9 | 45.1 | 29.4 | 7.8 | 3.9 | 9.8 | 100.0 | 4.9 | 102 |
| 20-24 | 5.0 | 34.4 | 31.9 | 8.8 | 13.1 | 6.9 | 100.0 | 5.5 | 160 |
| 25-29 | 4.2 | 33.1 | 35.2 | 11.3 | 13.4 | 2.8 | 100.0 | 4.9 | 142 |
| 30-34 | 3.1 | 31.8 | 28.7 | 12.3 | 16.4 | 7.7 | 100.0 | 5.9 | 195 |
| 35-39 | 3.2 | 21.8 | 34.6 | 11.7 | 18.1 | 10.6 | 100.0 | 7.2 | 188 |
| 40-44 | 1.7 | 14.8 | 18.8 | 14.2 | 36.4 | 14.2 | 100.0 | 9.8 | 176 |
| 45-49 | 2.0 | 13.0 | 28.0 | 16.5 | 26.0 | 14.5 | 100.0 | 9.3 | 200 |
| Total | 3.2 | 26.1 | 29.3 | 12.2 | 19.4 | 9.8 | 100.0 | 7.0 | 1,163 |
| **NDHS 2011** | | | | | | | | | |
| 15-19 | 11.6 | 33.3 | 25.6 | 17.1 | 3.9 | 8.5 | 100.0 | 5.2 | 129 |
| 20-24 | 8.3 | 32.6 | 26.5 | 9.9 | 16.6 | 6.1 | 100.0 | 5.8 | 181 |
| 25-29 | 10.4 | 30.3 | 29.4 | 10.9 | 13.3 | 5.7 | 100.0 | 5.2 | 211 |
| 30-34 | 8.7 | 24.8 | 29.8 | 12.4 | 15.5 | 8.7 | 100.0 | 6.0 | 161 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 35-39 | 12.8 | 19.0 | 30.2 | 8.4 | 22.3 | 7.3 | 100.0 | 6.3 | 179 |
| 40-44 | 7.5 | 17.7 | 26.9 | 19.9 | 16.1 | 11.8 | 100.0 | 6.9 | 186 |
| 45-49 | 4.9 | 19.0 | 29.9 | 13.0 | 15.2 | 17.9 | 100.0 | 8.9 | 184 |
| Total | 9.1 | 25.0 | 28.4 | 12.9 | 15.1 | 9.4 | 100.0 | 6.4 | 1,231 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| 15-19 | 196.5 | (26.1) | (13.0) | 117.4 | (1.2) | (13.0) | | 6.7 | |
| 20-24 | 65.7 | (5.2) | (16.8) | 13.7 | 26.3 | (11.6) | | 6.8 | |
| 25-29 | 146.8 | (8.4) | (16.5) | (3.3) | (0.8) | 101.9 | | 6.3 | |
| 30-34 | 182.6 | (21.9) | 3.8 | 0.9 | (5.4) | 13.0 | | 1.2 | |
| 35-39 | 302.6 | (12.9) | (12.7) | (28.4) | 23.6 | (31.7) | | (11.8) | |
| 40-44 | 341.6 | 20.1 | 43.4 | 40.0 | (55.6) | (16.7) | | (29.1) | |
| 45-49 | 144.6 | 46.3 | 6.8 | (20.9) | (41.5) | 23.7 | | (4.2) | |
| Total | 186.0 | (4.0) | (3.0) | 5.8 | (22.2) | (3.9) | | (8.9) | |

Source: MOHP, et al 2007 and 2012

Table 3 Percent distribution of females age 15-49 by number of cigarettes smoked in last 24 hours according to 5-year age group, Nepal, 2006 and 2011

| | Number of cigarettes smoked in last 24 hours | | | | | | Total | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| **NDHS 2006** | **0** | **1-2** | **3-5** | **6-9** | **10-19** | **20+** | **%** | | |
| 15-19 | 4.7 | 32.6 | 27.9 | 18.6 | 7.0 | 9.3 | 100.0 | 5.7 | 43 |
| 20-24 | 1.0 | 29.1 | 49.5 | 11.7 | 6.8 | 1.9 | 100.0 | 4.5 | 103 |
| 25-29 | 1.7 | 24.7 | 46.6 | 15.2 | 10.1 | 1.7 | 100.0 | 4.9 | 178 |
| 30-34 | 2.3 | 20.3 | 42.8 | 17.1 | 9.9 | 7.7 | 100.0 | 6.1 | 222 |
| 35-39 | 1.8 | 20.6 | 37.0 | 16.4 | 18.5 | 5.8 | 100.0 | 6.4 | 330 |
| 40-44 | 1.2 | 17.5 | 40.2 | 19.4 | 16.0 | 5.7 | 100.0 | 6.4 | 418 |
| 45-49 | 1.7 | 14.3 | 37.8 | 20.9 | 18.1 | 7.2 | 100.0 | 7.1 | 349 |
| Total | 1.7 | 19.7 | 40.4 | 17.8 | 14.7 | 5.7 | 100.0 | 6.2 | 1,643 |
| **NDHS 2011** | | | | | | | | | |
| 15-19 | 6.7 | 33.3 | 33.3 | 6.7 | 20.0 | 0.0 | 100.0 | 4.1 | 15 |
| 20-24 | 2.3 | 25.0 | 40.9 | 13.6 | 15.9 | 2.3 | 100.0 | 5.5 | 44 |
| 25-29 | 3.3 | 31.1 | 37.7 | 13.9 | 9.8 | 4.1 | 100.0 | 4.9 | 122 |
| 30-34 | 3.0 | 26.2 | 42.7 | 12.2 | 9.8 | 6.1 | 100.0 | 5.3 | 164 |
| 35-39 | 1.7 | 19.9 | 40.2 | 14.5 | 17.4 | 6.2 | 100.0 | 6.4 | 241 |
| 40-44 | 4.9 | 19.6 | 33.0 | 15.1 | 17.5 | 9.8 | 100.0 | 6.8 | 285 |
| 45-49 | 0.8 | 16.1 | 30.1 | 19.5 | 20.3 | 13.1 | 100.0 | 8.3 | 236 |
| Total | 2.8 | 21.6 | 36.2 | 15.2 | 16.1 | 8.1 | 100.0 | 6.5 | 1,107 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| 15-19 | 43.3 | 2.4 | 19.4 | (64.2) | 186.7 | (100.0) | | (28.5) | |
| 20-24 | 134.1 | (14.2) | (17.4) | 17.0 | 134.1 | 17.0 | | 22.1 | |
| 25-29 | 94.5 | 26.0 | (19.1) | (8.1) | (2.7) | 143.2 | | (0.2) | |
| 30-34 | 35.4 | 29.3 | (0.3) | (28.8) | (1.6) | (20.4) | | (13.0) | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 35-39 | -8.7 | (3.3) | 8.9 | (11.2) | (5.7) | 8.1 | (0.3) |
| 40-44 | 310.7 | 12.5 | (17.9) | (22.1) | 9.5 | 71.1 | 5.9 |
| 45-49 | -50.7 | 12.4 | (20.5) | (6.8) | 12.7 | 83.4 | 17.7 |
| Total | 64.3 | 9.5 | (10.2) | (14.9) | 9.6 | 42.1 | 5.0 |

Source: MOHP, et al 2007 and 2012

Table 4 Percent distribution of males and females age 15-49 by number of cigarettes smoked in last 24 hours according to 5-year age group, Nepal, 2006 and 2011

| **NDHS 2006** | **Number of cigarettes smoked in last 24 hours** | | | | | | **Total** | **Mean number of cig smoked** | **Number of cig smokers** |
|---|---|---|---|---|---|---|---|---|---|
| **Both sexes** | **0** | **1-2** | **3-5** | **6-9** | **10-19** | **20+** | **%** | | |
| 15-19 | 4.1 | 41.4 | 29.0 | 11.0 | 4.8 | 9.7 | 100.0 | 5.1 | 145 |
| 20-24 | 3.4 | 32.3 | 38.8 | 9.9 | 10.6 | 4.9 | 100.0 | 5.1 | 263 |
| 25-29 | 2.8 | 28.4 | 41.6 | 13.4 | 11.6 | 2.2 | 100.0 | 4.9 | 320 |
| 30-34 | 2.6 | 25.7 | 36.2 | 14.9 | 12.9 | 7.7 | 100.0 | 6.0 | 417 |
| 35-39 | 2.3 | 21.0 | 36.1 | 14.7 | 18.3 | 7.5 | 100.0 | 6.7 | 518 |
| 40-44 | 1.3 | 16.7 | 33.8 | 17.8 | 22.1 | 8.2 | 100.0 | 7.4 | 594 |
| 45-49 | 1.8 | 13.8 | 34.2 | 19.3 | 20.9 | 9.8 | 100.0 | 7.9 | 549 |
| Total | 2.3 | 22.3 | 35.8 | 15.5 | 16.6 | 7.4 | 100.0 | 6.5 | 2,806 |
| **NDHS 2011** | | | | | | | | | |
| 15-19 | 11.1 | 33.3 | 26.4 | 16.0 | 5.6 | 7.6 | 100.0 | 5.1 | 144 |
| 20-24 | 7.1 | 31.1 | 29.3 | 10.7 | 16.4 | 5.3 | 100.0 | 5.8 | 225 |
| 25-29 | 7.8 | 30.6 | 32.4 | 12.0 | 12.0 | 5.1 | 100.0 | 5.1 | 333 |
| 30-34 | 5.8 | 25.5 | 36.3 | 12.3 | 12.6 | 7.4 | 100.0 | 5.6 | 325 |
| 35-39 | 6.4 | 19.5 | 36.0 | 11.9 | 19.5 | 6.7 | 100.0 | 6.4 | 420 |
| 40-44 | 5.9 | 18.9 | 30.6 | 17.0 | 17.0 | 10.6 | 100.0 | 6.9 | 471 |
| 45-49 | 2.6 | 17.4 | 30.0 | 16.7 | 18.1 | 15.2 | 100.0 | 8.6 | 420 |
| Total | 6.1 | 23.4 | 32.1 | 14.0 | 15.6 | 8.8 | 100.0 | 6.4 | 2,338 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| 15-19 | 168.5 | (19.4) | (8.9) | 44.7 | 15.1 | (20.9) | | (0.8) | |
| 20-24 | 107.8 | (3.7) | (24.4) | 7.9 | 54.5 | 7.9 | | 13.2 | |
| 25-29 | 177.6 | 7.7 | (22.0) | (10.6) | 3.9 | 133.4 | | 3.8 | |
| 30-34 | 121.6 | (0.5) | 0.3 | (17.2) | (2.6) | (3.8) | | (6.4) | |
| 35-39 | 177.5 | (7.2) | (0.4) | (18.9) | 6.5 | (11.5) | | (4.5) | |
| 40-44 | 341.4 | 13.4 | (9.6) | (4.8) | (23.0) | 28.7 | | (7.5) | |
| 45-49 | 43.8 | 25.6 | (12.4) | (13.7) | (13.6) | 54.9 | | 8.6 | |
| Total | 164.0 | 4.7 | (10.2) | (9.8) | (6.5) | 18.9 | | (0.9) | |

Source: MOHP, et al 2007 and 2012

Table 5 Percent distribution of males age 15-49 by number of cigarettes smoked in last 24 hours according to development region, Nepal, 2006 and 2011

| **Dev Region** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **NDHS 2006** | **0** | **1-2** | **3-5** | **6-9** | **10-19** | **20+** | **Percent** | **Mean number of cig smoked** | **Number of cig smokers** |
| Eastern | 5.8 | 33.3 | 27.1 | 13.5 | 14.5 | 5.8 | 100.0 | 5.6 | 207 |
| Central | 1.7 | 24.7 | 29.7 | 9.3 | 21.1 | 13.5 | 100.0 | 7.8 | 474 |
| Western | 5.3 | 24.7 | 29.3 | 11.3 | 20.0 | 9.3 | 100.0 | 6.5 | 150 |
| Mid-western | 3.4 | 9.7 | 28.3 | 20.0 | 29.0 | 9.7 | 100.0 | 8.7 | 145 |
| Far-western | 1.6 | 35.3 | 31.0 | 12.8 | 13.4 | 5.9 | 100.0 | 5.6 | 187 |
| Total | 3.1 | 26.1 | 29.2 | 12.2 | 19.5 | 9.9 | 100.0 | 7.0 | 1163 |
| **NDHS 2011** | | | | | | | | | |
| **Dev Region** | | | | | | | | | |
| Eastern | 11.2 | 21.4 | 33.3 | 11.6 | 13.6 | 8.8 | 100.0 | 6.4 | 294 |
| Central | 10.6 | 28.1 | 22.5 | 14.3 | 15.8 | 8.9 | 100.0 | 6.1 | 463 |
| Western | 9.7 | 24.2 | 29.0 | 18.8 | 8.1 | 10.2 | 100.0 | 5.9 | 186 |
| Mid-western | 1.2 | 21.6 | 33.3 | 9.9 | 21.6 | 12.3 | 100.0 | 7.8 | 171 |
| Far-western | 6.2 | 30.1 | 33.6 | 4.4 | 18.6 | 7.1 | 100.0 | 5.9 | 113 |
| Total | 8.9 | 25.2 | 28.6 | 12.8 | 15.2 | 9.4 | 100.0 | 6.4 | 1,227 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| **Dev Region** | | | | | | | | | |
| Eastern | 93.6 | (35.7) | 23.2 | (14.5) | (6.1) | 52.6 | | 16.0 | |
| Central | 527.1 | 13.8 | (24.5) | 53.6 | (25.3) | (34.4) | | (21.7) | |
| Western | 81.5 | (1.9) | (1.0) | 66.0 | (59.7) | 9.4 | | (9.2) | |
| Mid-western | (66.1) | 124.1 | 17.9 | (50.3) | (25.3) | 27.2 | | (10.2) | |
| Far-western | 286.1 | (14.7) | 8.4 | (65.5) | 39.0 | 20.4 | | 4.5 | |
| Total | 187.0 | (3.3) | (2.1) | 4.8 | (22.3) | (5.2) | | (9.0) | |

Table 6 Percent distribution of females age 15-49 by number of cigarettes smoked in last 24 hours according to development region, Nepal, 2006 and 2011

| **NDHS 2006** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Dev Region** | **0** | **1-2** | **3-5** | **6-9** | **10-19** | **20+** | **Percent** | **Mean number of cig smoked** | **Number of cig smokers** |
| Eastern | 1.4 | 23.8 | 35.0 | 18.5 | 15.4 | 5.9 | 100.0 | 6.3 | 286 |
| Central | 1.6 | 13.2 | 41.1 | 20.3 | 17.3 | 6.5 | 100.0 | 6.9 | 567 |
| Western | 0.4 | 24.2 | 43.8 | 12.9 | 12.9 | 5.8 | 100.0 | 5.6 | 240 |
| Mid-western | 2.2 | 26.9 | 40.3 | 18.7 | 8.6 | 3.4 | 100.0 | 5.1 | 268 |
| Far-western | 2.5 | 18.5 | 41.6 | 14.9 | 16.0 | 6.4 | 100.0 | 6.3 | 281 |
| Total | 1.6 | 19.8 | 40.4 | 17.7 | 14.7 | 5.8 | 100.0 | 6.2 | 1,642 |
| **NDHS 2011** | | | | | | | | | |
| **Dev Region** | | | | | | | | | |
| Eastern | 4.6 | 21.2 | 34.4 | 14.6 | 21.2 | 4.0 | 100.0 | 6.5 | 151 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Central | 1.2 | 17.5 | 36.9 | 16.2 | 17.2 | 11.0 | 100.0 | 7.2 | 401 |
| Western | 1.6 | 25.7 | 33.5 | 13.1 | 15.2 | 11.0 | 100.0 | 6.8 | 191 |
| Mid-western | 5.2 | 21.6 | 41.4 | 14.2 | 11.6 | 6.0 | 100.0 | 5.6 | 232 |
| Far-western | 3.1 | 28.5 | 31.5 | 16.9 | 16.2 | 3.8 | 100.0 | 5.7 | 130 |
| Total | 2.8 | 21.5 | 36.3 | 15.1 | 16.1 | 8.1 | 100.0 | 6.5 | 1,105 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| **Dev Region** | | | | | | | | | |
| Eastern | 231.5 | (10.9) | (1.5) | (21.4) | 37.7 | (33.2) | | 2.1 | |
| Central | (21.4) | 32.0 | (10.2) | (20.1) | (0.4) | 68.1 | | 4.8 | |
| Western | 277.0 | 6.2 | (23.4) | 1.3 | 17.5 | 88.5 | | 20.7 | |
| Mid-western | 131.0 | (19.8) | 2.7 | (23.8) | 35.6 | 79.7 | | 10.7 | |
| Far-western | 23.5 | 53.8 | (24.3) | 13.2 | 0.9 | (40.0) | | (9.8) | |
| Total | 70.6 | 8.8 | (10.1) | (14.7) | 9.8 | 40.8 | | 5.0 | |

Table 7 Percent distribution of both sexes age 15-49 by number of cigarettes smoked in last 24 hours according to development region, Nepal, 2006 and 2011

| **NDHS 2006** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Dev Region** | **0** | **1-2** | **3-5** | **6-9** | **10-19** | **20+** | **Percent** | **Mean number of cig smoked** | **Number of cig smokers** |
| Eastern | 3.2 | 27.8 | 31.6 | 16.4 | 15.0 | 5.9 | 100.0 | 6.0 | 493 |
| Central | 1.6 | 18.4 | 35.9 | 15.3 | 19.0 | 9.7 | 100.0 | 7.3 | 1,041 |
| Western | 2.3 | 24.4 | 38.2 | 12.3 | 15.6 | 7.2 | 100.0 | 6.0 | 390 |
| Mid-western | 2.7 | 20.8 | 36.1 | 19.1 | 15.7 | 5.6 | 100.0 | 6.3 | 413 |
| Far-western | 2.1 | 25.2 | 37.4 | 14.1 | 15.0 | 6.2 | 100.0 | 6.0 | 468 |
| Total | 2.2 | 22.4 | 35.8 | 15.4 | 16.7 | 7.5 | 100.0 | 6.5 | 2,805 |
| **NDHS 2011** | | | | | | | | | |
| **Dev Region** | | | | | | | | | |
| Eastern | 9.0 | 21.3 | 33.7 | 12.6 | 16.2 | 7.2 | 100.0 | 6.4 | 446 |
| Central | 6.3 | 23.1 | 29.2 | 15.2 | 16.4 | 9.8 | 100.0 | 6.6 | 863 |
| Western | 5.6 | 24.9 | 31.3 | 15.9 | 11.7 | 10.6 | 100.0 | 6.4 | 379 |
| Mid-western | 3.5 | 21.6 | 38.0 | 12.4 | 15.9 | 8.7 | 100.0 | 6.5 | 402 |
| Far-western | 4.5 | 29.2 | 32.5 | 11.1 | 17.3 | 5.3 | 100.0 | 5.8 | 244 |
| Total | 6.0 | 23.5 | 32.2 | 13.9 | 15.6 | 8.8 | 100.0 | 6.4 | 2,334 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| **Dev Region** | | | | | | | | | |
| Eastern | 177.0 | (23.2) | 6.5 | (23.4) | 7.8 | 22.2 | | 7.4 | |
| Central | 282.7 | 25.5 | (18.8) | (0.7) | (13.6) | 1.4 | | (9.2) | |
| Western | 141.4 | 2.4 | (18.1) | 29.3 | (25.4) | 47.8 | | 6.3 | |
| Mid-western | 30.4 | 3.7 | 5.2 | (35.1) | 0.9 | 55.9 | | 3.4 | |
| Far-western | 111.9 | 15.9 | (13.1) | (21.2) | 15.6 | (13.7) | | (4.4) | |
| Total | 167.3 | 4.8 | (9.8) | (10.0) | (6.4) | 17.4 | | (0.9) | |

Table 8 Percent distribution of males age 15-49 by number of cigarettes smoked in last 24 hours according to sub-region, Nepal, 2006 and 2011.

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | Percent | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Eastern mountain | 7.1 | 28.6 | 42.9 | 7.1 | 14.3 | 0.0 | 100.0 | 5.1 | 14 |
| Central mountain | 3.2 | 3.2 | 16.1 | 12.9 | 35.5 | 29.0 | 100.0 | 12.0 | 31 |
| Western mountain | 1.9 | 7.4 | 25.9 | 16.7 | 40.7 | 7.4 | 100.0 | 9.1 | 54 |
| Eastern hill | 6.3 | 22.9 | 27.1 | 18.8 | 16.7 | 8.3 | 100.0 | 6.4 | 48 |
| Central hill | 2.1 | 18.5 | 33.3 | 10.7 | 18.1 | 17.3 | 100.0 | 8.6 | 243 |
| Western hill | 0.0 | 19.0 | 29.1 | 11.4 | 26.6 | 13.9 | 100.0 | 8.2 | 79 |
| Mid-western hill | 5.6 | 6.9 | 23.6 | 19.4 | 33.3 | 11.1 | 100.0 | 9.7 | 72 |
| Far-western hill | 2.6 | 12.8 | 17.9 | 17.9 | 30.8 | 17.9 | 100.0 | 9.6 | 39 |
| Eastern terai | 5.5 | 37.2 | 25.5 | 12.4 | 13.8 | 5.5 | 100.0 | 5.3 | 145 |
| Central terai | 1.5 | 35.3 | 27.4 | 7.0 | 22.4 | 6.5 | 100.0 | 6.2 | 201 |
| Western terai | 11.3 | 31.0 | 29.6 | 11.3 | 12.7 | 4.2 | 100.0 | 4.7 | 71 |
| Mid-western terai | 2.2 | 22.2 | 33.3 | 24.4 | 11.1 | 6.7 | 100.0 | 6.5 | 45 |
| Far-western terai | 1.6 | 45.5 | 37.4 | 9.8 | 3.3 | 2.4 | 100.0 | 3.8 | 123 |
| Total | 3.3 | 26.0 | 29.2 | 12.2 | 19.5 | 9.9 | 100.0 | 7.0 | 1,165 |
| **NDHS 2011** | | | | | | | | | |
| Eastern mountain | 15.0 | 20.0 | 25.0 | 15.0 | 10.0 | 15.0 | 100.0 | 7.2 | 20 |
| Central mountain | 4.2 | 8.3 | 12.5 | 20.8 | 29.2 | 25.0 | 100.0 | 11.1 | 24 |
| Western mountain | 3.6 | 10.7 | 28.6 | 7.1 | 25.0 | 25.0 | 100.0 | 10.2 | 56 |
| Eastern hill | 6.7 | 22.2 | 32.2 | 15.6 | 14.4 | 8.9 | 100.0 | 7.0 | 90 |
| Central hill | 5.4 | 14.6 | 26.3 | 19.5 | 21.5 | 12.7 | 100.0 | 7.7 | 205 |
| Western hill | 6.3 | 22.9 | 28.1 | 19.8 | 8.3 | 14.6 | 100.0 | 7.2 | 96 |
| Mid-western hill | 1.8 | 18.2 | 36.4 | 14.5 | 23.6 | 5.5 | 100.0 | 6.6 | 55 |
| Far-western hill | 5.9 | 29.4 | 20.6 | 11.8 | 26.5 | 5.9 | 100.0 | 6.6 | 34 |
| Eastern terai | 13.1 | 21.9 | 35.0 | 8.7 | 13.1 | 8.2 | 100.0 | 6.1 | 183 |
| Central terai | 15.9 | 42.1 | 19.7 | 9.0 | 9.4 | 3.9 | 100.0 | 4.2 | 233 |
| Western terai | 14.3 | 25.3 | 29.7 | 17.6 | 7.7 | 5.5 | 100.0 | 4.6 | 91 |
| Mid-western terai | 2.3 | 29.9 | 31.0 | 6.9 | 18.4 | 11.5 | 100.0 | 7.7 | 87 |
| Far-western terai | 7.5 | 35.8 | 45.3 | 0.0 | 11.3 | 0.0 | 100.0 | 3.5 | 53 |
| Total | 9.1 | 25.3 | 28.4 | 12.7 | 15.1 | 9.4 | 100.0 | 6.4 | 1227 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| Eastern mountain | 110.0 | (30.0) | (41.7) | 110.0 | (30.0) | NA | | 40.4 | |
| Central mountain | 29.2 | 158.3 | (22.5) | 61.5 | (17.8) | (13.9) | | (7.0) | |
| Western mountain | 92.9 | 44.6 | 10.2 | (57.1) | (38.6) | 237.5 | | 12.1 | |
| Eastern hill | 6.7 | (3.0) | 19.0 | (17.0) | (13.3) | 6.7 | | 10.2 | |
| Central hill | 160.8 | (21.0) | (21.0) | 82.4 | 18.5 | (26.6) | | (10.3) | |
| Western hill | NA | 21 | (3) | 74 | (69) | 5 | | (11.7) | |
| Mid-western hill | (67.3) | 161.8 | 54.0 | (25.2) | (29.1) | (50.9) | | (31.3) | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Far-western hill | 129.4 | 129.4 | 14.7 | (34.5) | (14.0) | (67.2) | (30.9) |
| Eastern terai | 137.7 | (41.3) | 37.1 | (29.6) | (4.9) | 48.6 | 13.9 |
| Central terai | 963.9 | 19.1 | (27.9) | 29.4 | (57.8) | (40.3) | (32.1) |
| Western terai | 26.8 | (18.4) | 0.3 | 56.0 | (39.3) | 30.0 | (1.9) |
| Mid-western terai | 3.4 | 34.5 | (6.9) | (71.8) | 65.5 | 72.4 | 17.9 |
| Far-western terai | 364.2 | (21.3) | 21.1 | (100.0) | 248.1 | (100.0) | (7.9) |
| Total | 179.8 | (2.9) | (2.5) | 4.3 | (22.6) | (5.1) | (9.1) |

Table 9 Percent distribution of females age 15-49 by number of cigarettes smoked in last 24 hours according to sub-region, Nepal, 2006 and 2011.

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | Percent | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Eastern mountain | 0.0 | 30.0 | 30.0 | 25.0 | 15.0 | 0.0 | 100.0 | 5.5 | 20 |
| Central mountain | 0.0 | 17.9 | 35.7 | 23.2 | 16.1 | 7.1 | 100.0 | 7.1 | 56 |
| Western mountain | 1.8 | 25.4 | 34.2 | 7.0 | 20.2 | 11.4 | 100.0 | 7.2 | 114 |
| Eastern hill | 2.1 | 18.9 | 30.5 | 21.1 | 17.9 | 9.5 | 100.0 | 7.6 | 95 |
| Central hill | 2.7 | 12.9 | 41.0 | 19.0 | 18.0 | 6.4 | 100.0 | 6.7 | 295 |
| Western hill | 0.0 | 23.4 | 40.7 | 14.4 | 15.0 | 6.6 | 100.0 | 5.9 | 167 |
| Mid-western hill | 3.0 | 24.2 | 35.8 | 23.0 | 9.7 | 4.2 | 100.0 | 5.4 | 165 |
| Far-western hill | 4.1 | 18.9 | 35.1 | 14.9 | 23.0 | 4.1 | 100.0 | 6.3 | 74 |
| Eastern terai | 1.2 | 25.9 | 37.6 | 17.1 | 13.5 | 4.7 | 100.0 | 5.7 | 170 |
| Central terai | 0.0 | 12.6 | 42.8 | 21.4 | 16.7 | 6.5 | 100.0 | 7.1 | 215 |
| Western terai | 1.4 | 25.0 | 51.4 | 9.7 | 9.7 | 2.8 | 100.0 | 4.9 | 72 |
| Mid-western terai | 1.8 | 21.1 | 50.9 | 17.5 | 7.0 | 1.8 | 100.0 | 4.7 | 57 |
| Far-western terai | 1.4 | 21.6 | 51.1 | 18.0 | 5.8 | 2.2 | 100.0 | 4.9 | 139 |
| Total | 1.6 | 19.8 | 40.3 | 17.8 | 14.7 | 5.7 | 100.0 | 6.2 | 1,639 |
| **NDHS 2011** | | | | | | | | | |
| Eastern mountain | 5.9 | 17.6 | 35.3 | 17.6 | 11.8 | 11.8 | 100.0 | 6.5 | 17 |
| Central mountain | 1.8 | 19.3 | 42.1 | 10.5 | 19.3 | 7.0 | 100.0 | 6.7 | 57 |
| Western mountain | 4.1 | 23.0 | 43.2 | 12.2 | 13.5 | 4.1 | 100.0 | 5.3 | 74 |
| Eastern hill | 5.7 | 25.7 | 28.6 | 18.6 | 15.7 | 5.7 | 100.0 | 6.8 | 70 |
| Central hill | 2.2 | 15.7 | 39.5 | 14.6 | 15.1 | 13.0 | 100.0 | 7.4 | 185 |
| Western hill | 1.5 | 24.8 | 32.3 | 12.0 | 18.0 | 11.3 | 100.0 | 6.9 | 133 |
| Mid-western hill | 3.6 | 20.5 | 38.4 | 16.1 | 14.3 | 7.1 | 100.0 | 6.2 | 112 |
| Far-western hill | 0.0 | 30.9 | 32.7 | 16.4 | 16.4 | 3.6 | 100.0 | 5.8 | 55 |
| Eastern terai | 3.1 | 17.2 | 40.6 | 9.4 | 29.7 | 0.0 | 100.0 | 6.1 | 64 |
| Central terai | 0.0 | 19.0 | 32.3 | 20.3 | 18.4 | 10.1 | 100.0 | 7.2 | 158 |
| Western terai | 0.0 | 27.6 | 36.2 | 15.5 | 10.3 | 10.3 | 100.0 | 6.5 | 58 |
| Mid-western terai | 6.8 | 24.3 | 37.8 | 14.9 | 10.8 | 5.4 | 100.0 | 5.6 | 74 |
| Far-western terai | 8.9 | 26.7 | 35.6 | 15.6 | 11.1 | 2.2 | 100.0 | 4.7 | 45 |
| Total | 2.7 | 21.6 | 36.4 | 15.1 | 16.2 | 8.1 | 100.0 | 6.5 | 1,102 |

| **Percent change 2006 and 2011** | | | | | | | |
|---|---|---|---|---|---|---|---|
| Eastern mountain | NA | (41.2) | 17.6 | (29.4) | (21.6) | NA | 16.8 |
| Central mountain | NA | 8.1 | 17.9 | (54.7) | 20.1 | (1.8) | (5.1) |
| Western mountain | 131.1 | (9.7) | 26.4 | 73.3 | (33.0) | (64.4) | (25.7) |
| Eastern hill | 171.4 | 35.7 | (6.4) | (11.8) | (12.2) | (39.7) | (10.2) |
| Central hill | (20.3) | 21.7 | (3.8) | (23.1) | (15.8) | 101.4 | 10.8 |
| Western hill | NA | 6.2 | (20.6) | (16.3) | 20.5 | 71.2 | 16.5 |
| Mid-western hill | 17.9 | (15.3) | 7.4 | (30.2) | 47.3 | 68.4 | 13.4 |
| Far-western hill | (100.0) | 63.4 | (6.9) | 10.1 | (28.8) | (10.3) | (7.6) |
| Eastern terai | 165.6 | (33.6) | 7.9 | (45.0) | 119.4 | (100.0) | 6.1 |
| Central terai | NA | 51.2 | (24.6) | (5.3) | 9.6 | 55.5 | 0.8 |
| Western terai | (100.0) | 10.3 | (29.5) | 59.6 | 6.4 | 272.4 | 32.1 |
| Mid-western terai | 285.1 | 15.5 | (25.6) | (15.3) | 54.1 | 208.1 | 17.5 |
| Far-western terai | 517.8 | 23.6 | (30.4) | (13.5) | 93.1 | 3.0 | (5.1) |
| Total | 71.6 | 8.9 | (9.8) | (15.4) | 9.9 | 40.8 | 5.0 |

Table 10 Percent distribution of respondents of both sexes age 15-49 by number of cigarettes smoked in last 24 hours according to sub-region, Nepal, 2006-2011.

| **NDHS 2006** | **0** | **1-2** | **3-5** | **6-9** | **10-19** | **20+** | **Percent** | **Mean number of cig smoked** | **Number of cig smokers** |
|---|---|---|---|---|---|---|---|---|---|
| Eastern mountain | 2.9 | 29.4 | 35.3 | 17.6 | 14.7 | 0.0 | 100.0 | 5.3 | 34 |
| Central mountain | 1.1 | 12.6 | 28.7 | 19.5 | 23.0 | 14.9 | 100.0 | 8.8 | 87 |
| Western mountain | 1.8 | 19.6 | 31.5 | 10.1 | 26.8 | 10.1 | 100.0 | 7.8 | 168 |
| Eastern hill | 3.5 | 20.3 | 29.4 | 20.3 | 17.5 | 9.1 | 100.0 | 7.2 | 143 |
| Central hill | 2.4 | 15.4 | 37.5 | 15.2 | 18.0 | 11.3 | 100.0 | 7.6 | 538 |
| Western hill | 0.0 | 22.0 | 37.0 | 13.4 | 18.7 | 8.9 | 100.0 | 6.7 | 246 |
| Mid-western hill | 3.8 | 19.0 | 32.1 | 21.9 | 16.9 | 6.3 | 100.0 | 6.7 | 237 |
| Far-western hill | 3.5 | 16.8 | 29.2 | 15.9 | 25.7 | 8.8 | 100.0 | 7.5 | 113 |
| Eastern terai | 3.2 | 31.1 | 32.1 | 14.9 | 13.7 | 5.1 | 100.0 | 5.5 | 315 |
| Central terai | 0.7 | 23.6 | 35.3 | 14.4 | 19.5 | 6.5 | 100.0 | 6.7 | 416 |
| Western terai | 6.3 | 28.0 | 40.6 | 10.5 | 11.2 | 3.5 | 100.0 | 4.8 | 143 |
| Mid-western terai | 2.0 | 21.6 | 43.1 | 20.6 | 8.8 | 3.9 | 100.0 | 5.5 | 102 |
| Far-western terai | 1.5 | 32.8 | 44.7 | 14.1 | 4.6 | 2.3 | 100.0 | 4.4 | 262 |
| Total | 2.3 | 22.4 | 35.7 | 15.5 | 16.7 | 7.5 | 100.0 | 6.5 | 2,804 |
| **NDHS 2011** | | | | | | | | | |
| Eastern mountain | 10.8 | 18.9 | 29.7 | 16.2 | 10.8 | 13.5 | 100.0 | 6.8 | 37 |
| Central mountain | 2.5 | 16.0 | 33.3 | 13.6 | 22.2 | 12.3 | 100.0 | 8.0 | 81 |
| Western mountain | 3.8 | 17.7 | 36.9 | 10.0 | 18.5 | 13.1 | 100.0 | 7.4 | 130 |
| Eastern hill | 6.3 | 23.8 | 30.6 | 16.9 | 15.0 | 7.5 | 100.0 | 6.9 | 160 |
| Central hill | 3.8 | 15.1 | 32.6 | 17.2 | 18.5 | 12.8 | 100.0 | 7.6 | 390 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Western hill | 3.5 | 24.0 | 30.6 | 15.3 | 14.0 | 12.7 | 100.0 | 7.0 | 229 |
| Mid-western hill | 3.0 | 19.8 | 37.7 | 15.6 | 17.4 | 6.6 | 100.0 | 6.3 | 167 |
| Far-western hill | 2.2 | 30.3 | 28.1 | 14.6 | 20.2 | 4.5 | 100.0 | 6.2 | 89 |
| Eastern terai | 10.5 | 20.6 | 36.4 | 8.9 | 17.4 | 6.1 | 100.0 | 6.1 | 247 |
| Central terai | 9.5 | 32.7 | 24.8 | 13.6 | 13.0 | 6.4 | 100.0 | 5.4 | 391 |
| Western terai | 8.7 | 26.2 | 32.2 | 16.8 | 8.7 | 7.4 | 100.0 | 5.3 | 149 |
| Mid-western terai | 4.3 | 27.3 | 34.2 | 10.6 | 14.9 | 8.7 | 100.0 | 6.7 | 161 |
| Far-western terai | 8.2 | 31.6 | 40.8 | 7.1 | 11.2 | 1.0 | 100.0 | 4.0 | 98 |
| Total | 6.1 | 23.5 | 32.2 | 13.8 | 15.6 | 8.8 | 100.0 | 6.4 | 2329 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| Eastern mountain | 267.6 | (35.7) | (15.8) | (8.1) | (26.5) | NA | | 27.6 | |
| Central mountain | 114.8 | 26.9 | 16.0 | (30.5) | (3.3) | (17.4) | | (9.1) | |
| Western mountain | 115.4 | (9.9) | 17.0 | (1.2) | (31.1) | 29.2 | | (4.8) | |
| Eastern hill | 78.8 | 17.1 | 4.3 | (16.8) | (14.2) | (17.5) | | (3.1) | |
| Central hill | 59.2 | (1.9) | (13.3) | 12.7 | 2.4 | 13.1 | | 0.1 | |
| Western hill | NA | 9.4 | (17.4) | 13.9 | (25.3) | 41.6 | | 5.5 | |
| Mid-western hill | (21.2) | 4.1 | 17.6 | (29.0) | 2.9 | 4.1 | | (5.6) | |
| Far-western hill | (36.5) | 80.4 | (3.8) | (8.3) | (21.2) | (49.2) | | (17.9) | |
| Eastern terai | 231.6 | (33.6) | 13.6 | (40.3) | 27.5 | 19.6 | | 9.3 | |
| Central terai | 1,212.2 | 39.0 | (29.8) | (6.0) | (33.0) | (1.5) | | (19.1) | |
| Western terai | 38.6 | (6.4) | (20.6) | 60.0 | (22.0) | 111.1 | | 11.2 | |
| Mid-western terai | 121.7 | 26.7 | (20.8) | (48.7) | 68.9 | 121.7 | | 20.7 | |
| Far-western terai | 434.7 | (3.6) | (8.6) | (49.4) | 145.1 | (55.4) | | (8.9) | |
| Total | 167.1 | 5.1 | (9.8) | (10.7) | (6.6) | 17.5 | | (1.5) | |

Table 11 Percent distribution of males age 15-49 by number of cigarettes smoked in last 24 hours according to education, Nepal, 2006 and 2011

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | % | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| No education | 2.5 | 22.6 | 27.0 | 13.6 | 21.7 | 12.5 | 100.0 | 8.0 | 359 |
| Primary | 2.9 | 23.9 | 27.8 | 15.3 | 20.3 | 9.8 | 100.0 | 7.2 | 416 |
| Some secondary | 2.6 | 32.6 | 37.7 | 5.1 | 14.3 | 7.7 | 100.0 | 5.7 | 273 |
| SLC and above | 7.8 | 27.8 | 22.6 | 13.0 | 21.7 | 7.0 | 100.0 | 6.2 | 116 |
| Total | 3.2 | 25.9 | 29.4 | 12.2 | 19.5 | 9.9 | 100.0 | 7.0 | 1164 |
| **NDHS 2011** | | | | | | | | | |
| No education | 7.4 | 29.1 | 24.2 | 11.6 | 15.4 | 12.3 | 100.0 | 6.8 | 285 |
| Primary | 4.6 | 17.9 | 32.2 | 16.4 | 16.4 | 12.5 | 100.0 | 7.5 | 329 |
| Some secondary | 12.4 | 25.1 | 29.4 | 11.6 | 14.3 | 7.1 | 100.0 | 5.8 | 378 |
| SLC and above | 11.4 | 30.1 | 27.1 | 11.0 | 14.8 | 5.5 | 100.0 | 5.2 | 236 |
| Total | 9.0 | 25.1 | 28.5 | 12.8 | 15.2 | 9.4 | 100.0 | 6.4 | 1,228 |

| **Percent change 2006 and 2011** | | | | | | | |
|---|---|---|---|---|---|---|---|
| No education | 193.9 | 29.1 | (10.4) | (15.2) | (28.9) | (2.0) | (14.5) |
| Primary | 58.8 | (25.0) | 16.1 | 7.2 | (19.3) | 27.1 | 3.6 |
| Some secondary | 384.9 | (22.9) | (22.2) | 127.0 | - | (7.1) | 2.1 |
| SLC and above | 46.2 | 8.1 | 19.9 | (15.5) | (31.8) | (20.8) | (15.9) |
| Total | 182.0 | (3.2) | (2.9) | 4.9 | (21.8) | (4.3) | (8.9) |

Table 12 Percent distribution of females age 15-49 by number of cigarettes smoked in last 24 hours according to education, Nepal, 2006 and 2011

| **NDHS 2006** | **0** | **1-2** | **3-5** | **6-9** | **10-19** | **20+** | **%** | **Mean number of cig smoked** | **Number of cig smokers** |
|---|---|---|---|---|---|---|---|---|---|
| No education | 1.5 | 19.3 | 40.0 | 18.0 | 15.1 | 6.1 | 100.0 | 6.3 | 1474 |
| Primary | 2.7 | 25.3 | 41.8 | 15.8 | 12.3 | 2.1 | 100.0 | 5.0 | 147 |
| Some secondary | 5.9 | 17.6 | 58.8 | 5.9 | 0.0 | 11.8 | 100.0 | 5.6 | 17 |
| SLC and above | 0.0 | 0.0 | 33.3 | 50.0 | 16.7 | 0.0 | 100.0 | 6.5 | 5 |
| Total | 1.6 | 19.8 | 40.4 | 17.8 | 14.7 | 5.8 | 100.0 | 6.2 | 1643 |
| **NDHS 2011** | | | | | | | | | |
| No education | 2.7 | 20.4 | 35.5 | 15.2 | 16.7 | 9.5 | 100.0 | 6.8 | 902 |
| Primary | 3.2 | 26.3 | 39.7 | 14.7 | 13.5 | 2.6 | 100.0 | 5.1 | 156 |
| Some secondary | 0.0 | 28.9 | 40.0 | 17.8 | 13.3 | 0.0 | 100.0 | 5.0 | 45 |
| SLC and above | 33.3 | 0.0 | 33.3 | 33.3 | 0.0 | 0.0 | 100.0 | 2.4 | 3 |
| Total | 2.7 | 21.5 | 36.3 | 15.3 | 16.1 | 8.1 | 100.0 | 6.5 | 1,106 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| No education | 78.3 | 5.5 | (11.4) | (15.5) | 11.2 | 56.2 | | 8.1 | |
| Primary | 17.0 | 3.7 | (4.9) | (6.4) | 9.2 | 24.8 | | 2.8 | |
| Some secondary | (100.0) | 63.7 | (32.0) | 202.2 | NA | (100.0) | | (10.1) | |
| SLC and above | NA | NA | 0.0 | (33.3) | (100.0) | NA | | (62.9) | |
| Total | 65.1 | 8.8 | (10.2) | (14.0) | 9.7 | 40.7 | | 5.0 | |

Table 13 Percent distribution of both sexes age 15-49 by number of cigarettes smoked in last 24 hours according to education, Nepal, 2006-2011

| **NDHS 2006** | **0** | **1-2** | **3-5** | **6-9** | **10-19** | **20+** | **%** | **Mean number of cig smoked** | **Number of cig smokers** |
|---|---|---|---|---|---|---|---|---|---|
| No education | 1.7 | 20.0 | 37.5 | 17.1 | 16.4 | 7.4 | 100.0 | 6.7 | 1,833 |
| Primary | 2.8 | 24.3 | 31.4 | 15.4 | 18.3 | 7.8 | 100.0 | 6.7 | 563 |
| Some secondary | 2.8 | 31.7 | 39.0 | 5.2 | 13.4 | 7.9 | 100.0 | 5.7 | 290 |
| SLC and above | 7.4 | 26.4 | 23.1 | 14.9 | 21.5 | 6.6 | 100.0 | 6.2 | 121 |
| Total | 2.3 | 22.3 | 35.8 | 15.5 | 16.7 | 7.5 | 100.0 | 6.5 | 2,807 |
| **NDHS 2011** | | | | | | | | | |
| No education | 3.8 | 22.5 | 32.8 | 14.3 | 16.4 | 10.2 | 100.0 | 6.8 | 1,187 |
| Primary | 4.1 | 20.6 | 34.6 | 15.9 | 15.5 | 9.3 | 100.0 | 6.7 | 485 |
| Some secondary | 11.1 | 25.5 | 30.5 | 12.3 | 14.2 | 6.4 | 100.0 | 5.7 | 423 |
| SLC and above | 11.7 | 29.7 | 27.2 | 11.3 | 14.6 | 5.4 | 100.0 | 5.1 | 239 |
| Total | 6.0 | 23.4 | 32.2 | 14.0 | 15.6 | 8.8 | 100.0 | 6.4 | 2,334 |

| **Percent change 2006 and 2011** | | | | | | | |
|---|---|---|---|---|---|---|---|
| No education | 124.2 | 12.7 | (12.6) | (16.4) | 0.4 | 38.4 | 2.8 |
| Primary | 45.4 | (15.1) | 10.4 | 2.9 | (15.3) | 18.9 | 1.2 |
| Some secondary | 302.8 | (19.5) | (21.7) | 137.7 | 5.5 | (19.5) | 0.8 |
| SLC and above | 57.5 | 12.3 | 17.5 | (24.1) | (31.8) | (17.7) | (16.7) |
| Total | 163.2 | 4.8 | (10.1) | (9.6) | (6.2) | 18.0 | (1.4) |

Table 14 Percent distribution of males age 15-49 by number of cigarettes smoked in last 24 hours according to wealth quintile, Nepal, 2006 and 2011

| **NDHS 2006** | **0** | **1-2** | **3-5** | **6-9** | **10-19** | **20+** | **%** | **Mean number of cig smoked** | **Number of cig smokers** |
|---|---|---|---|---|---|---|---|---|---|
| Poorest | 1.8 | 17.8 | 29.2 | 15.7 | 26.3 | 9.3 | 100.0 | 8.0 | 281 |
| Poorer | 1.6 | 29.0 | 31.0 | 12.9 | 16.9 | 8.5 | 100.0 | 6.5 | 248 |
| Middle | 4.4 | 32.0 | 26.2 | 11.7 | 15.5 | 10.2 | 100.0 | 6.8 | 206 |
| Richer | 4.6 | 27.8 | 27.3 | 6.7 | 19.1 | 14.4 | 100.0 | 7.3 | 194 |
| Richest | 4.3 | 25.8 | 31.8 | 12.4 | 18.0 | 7.7 | 100.0 | 6.4 | 233 |
| Total | 1.7 | 19.7 | 40.4 | 17.7 | 14.7 | 5.8 | 100.0 | 7.0 | 1162 |
| **NDHS 2011** | | | | | | | | | |
| Poorest | 2.1 | 21.8 | 25.9 | 15.9 | 18.8 | 15.5 | 100.0 | 8.3 | 239 |
| Poorer | 8.8 | 19.7 | 31.8 | 15.1 | 15.5 | 9.2 | 100.0 | 6.7 | 239 |
| Middle | 13.2 | 29.7 | 26.0 | 10.6 | 14.3 | 6.2 | 100.0 | 5.4 | 273 |
| Richer | 8.7 | 30.1 | 32.8 | 8.7 | 10.9 | 8.7 | 100.0 | 5.3 | 229 |
| Richest | 11.1 | 24.2 | 26.6 | 13.5 | 16.3 | 8.3 | 100.0 | 6.4 | 252 |
| Total | 8.9 | 25.2 | 28.5 | 12.7 | 15.2 | 9.5 | 100.0 | 6.4 | 1232 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| Males | | | | | | | | | |
| Poorest | 17.6 | 22.3 | (11.1) | 1.5 | (28.5) | 67.3 | | 4.2 | |
| Poorer | 444.8 | (32.3) | 2.4 | 16.7 | (8.6) | 8.7 | | 2.8 | |
| Middle | 201.8 | (7.4) | (0.8) | (8.8) | (8.0) | (38.9) | | (20.4) | |
| Richer | 88.3 | 8.2 | 19.9 | 30.3 | (42.8) | (39.5) | | (27.7) | |
| Richest | 158.9 | (6.0) | (16.3) | 8.4 | (9.7) | 7.9 | | 0.0 | |
| Total | 423.9 | 27.6 | (29.4) | (28.0) | 3.1 | 64.2 | | (9.1) | |

Table 15 Percent distribution of females age 15-49 by number of cigarettes smoked in last 24 hours according to wealth quintile, Nepal, 2006-2011

| **NDHS 2006** | **0** | **1-2** | **3-5** | **6-9** | **10-19** | **20+** | **%** | **Mean number of cig smoked** | **Number of cig smokers** |
|---|---|---|---|---|---|---|---|---|---|
| Poorest | 2.4 | 18.5 | 38.6 | 17.1 | 15.6 | 7.7 | 100.0 | 6.5 | 572 |
| Poorer | 1.3 | 19.7 | 42.1 | 18.1 | 13.6 | 5.1 | 100.0 | 6.1 | 375 |
| Middle | 0.6 | 21.8 | 37.8 | 21.8 | 13.7 | 4.4 | 100.0 | 6.0 | 344 |
| Richer | 1.3 | 20.4 | 46.2 | 14.7 | 13.8 | 3.6 | 100.0 | 5.6 | 225 |
| Richest | 3.1 | 18.1 | 39.4 | 13.4 | 18.9 | 7.1 | 100.0 | 6.7 | 127 |
| Total | 2.3 | 22.3 | 35.8 | 15.4 | 16.7 | 7.5 | 100.0 | 6.2 | 1643 |

| NDHS 2011 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Poorest | 2.6 | 21.4 | 36.2 | 13.8 | 16.9 | 9.2 | 100.0 | 6.8 | 426 |
| Poorer | 2.2 | 24.5 | 35.6 | 15.1 | 12.9 | 9.7 | 100.0 | 6.4 | 278 |
| Middle | 3.8 | 18.1 | 38.5 | 15.4 | 18.7 | 5.5 | 100.0 | 6.2 | 182 |
| Richer | 2.8 | 19.0 | 35.2 | 19.0 | 15.5 | 8.5 | 100.0 | 6.4 | 142 |
| Richest | 3.9 | 24.7 | 36.4 | 13.0 | 18.2 | 3.9 | 100.0 | 6.1 | 77 |
| Total | 2.8 | 21.5 | 36.3 | 15.0 | 16.1 | 8.2 | 100.0 | 6.5 | 1105 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| Poorest | 5.5 | 15.3 | (6.4) | (19.2) | 8.6 | 19.0 | | 4.0 | |
| Poorer | 61.9 | 24.0 | (15.5) | (16.7) | (4.8) | 91.7 | | 6.1 | |
| Middle | 561.5 | (16.8) | 1.8 | (29.4) | 36.7 | 26.0 | | 4.2 | |
| Richer | 111.3 | (7.0) | (23.8) | 29.6 | 12.4 | 137.7 | | 13.5 | |
| Richest | 23.7 | 36.3 | (7.6) | (3.0) | (3.8) | (45.0) | | (9.0) | |
| Total | 21.1 | (3.5) | 1.5 | (2.7) | (3.7) | 10.5 | | 5.0 | |

Table 16 Percent distribution of respondents of both sexes age 15-49 by number of cigarettes smoked in last 24 hours according to wealth quintile, Nepal, 2006 and 2011

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | % | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Poorest | 2.2 | 18.3 | 35.5 | 16.6 | 19.1 | 8.2 | 100.0 | 7.0 | 853 |
| Poorer | 1.4 | 23.4 | 37.7 | 16.1 | 14.9 | 6.4 | 100.0 | 6.3 | 623 |
| Middle | 2.0 | 25.6 | 33.5 | 18.0 | 14.4 | 6.5 | 100.0 | 6.3 | 550 |
| Richer | 2.9 | 23.9 | 37.5 | 11.0 | 16.2 | 8.6 | 100.0 | 6.4 | 419 |
| Richest | 3.9 | 23.1 | 34.4 | 12.8 | 18.3 | 7.5 | 100.0 | 6.5 | 360 |
| Total | 2.3 | 22.3 | 35.8 | 15.4 | 16.7 | 7.5 | 100.0 | 6.5 | 2805 |
| **NDHS 2011** | | | | | | | | | |
| Poorest | 2.4 | 21.5 | 32.5 | 14.6 | 17.6 | 11.4 | 100.0 | 7.3 | 665 |
| Poorer | 5.2 | 22.2 | 33.8 | 15.1 | 14.1 | 9.5 | 100.0 | 6.6 | 517 |
| Middle | 9.5 | 25.1 | 31.0 | 12.5 | 16.0 | 5.9 | 100.0 | 5.7 | 455 |
| Richer | 6.5 | 25.9 | 33.7 | 12.7 | 12.7 | 8.6 | 100.0 | 5.7 | 371 |
| Richest | 9.4 | 24.3 | 28.9 | 13.4 | 16.7 | 7.3 | 100.0 | 6.3 | 329 |
| Total | 6.0 | 23.4 | 32.2 | 13.8 | 15.6 | 8.9 | 100.0 | 6.4 | 2337 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| Males | | | | | | | | | |
| Poorest | 8.0 | 17.6 | (8.6) | (12.4) | (7.9) | 39.3 | | 4.5 | |
| Poorer | 261.5 | (5.1) | (10.3) | (6.0) | (5.4) | 47.6 | | 5.0 | |
| Middle | 372.5 | (2.3) | (7.4) | (30.4) | 11.7 | (9.3) | | (8.9) | |
| Richer | 125.9 | 8.4 | (10.1) | 15.4 | (21.9) | 0.4 | | (11.1) | |
| Richest | 142.3 | 5.5 | (16.2) | 4.7 | (8.8) | (2.7) | | (2.5) | |
| Total | 160.4 | 5.1 | (10.0) | (10.5) | (6.6) | 19.5 | | (1.5) | |

Table 17 Percent distribution of males age 15-49 by number of cigarettes smoked in last 24 hours according to broad caste/ethnicity, Nepal, 2006 and 2011

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | % | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Chhetri/Thakuri | 3.5 | 12.6 | 32.2 | 12.6 | 26.6 | 12.6 | 100.0 | 8.9 | 199 |
| Bahun/Sanyasi | 3.8 | 32.7 | 25.0 | 10.6 | 18.3 | 9.6 | 100.0 | 6.3 | 104 |
| Janjati | 2.1 | 27.0 | 34.0 | 11.6 | 15.6 | 9.7 | 100.0 | 6.6 | 474 |
| Dalit | 4.7 | 26.7 | 22.7 | 17.4 | 21.5 | 7.0 | 100.0 | 6.8 | 172 |
| Terai Other Castes | 4.3 | 40.7 | 26.4 | 12.1 | 12.9 | 3.6 | 100.0 | 4.7 | 140 |
| Muslim | 3.2 | 16.1 | 16.1 | 9.7 | 38.7 | 16.1 | 100.0 | 10.2 | 31 |
| Other | 2.2 | 17.8 | 20.0 | 2.2 | 33.3 | 24.4 | 100.0 | 10.1 | 45 |
| Total | 3.2 | 26.0 | 29.3 | 12.2 | 19.6 | 9.8 | 100.0 | 7.0 | 1,165 |
| **NDHS 2011** | | | | | | | | | |
| Chhetri/Thakuri | 9.1 | 13.5 | 30.7 | 14.6 | 21.9 | 10.2 | 100.0 | 7.4 | 274 |
| Bahun/Sanyasi | 9.9 | 32.2 | 19.8 | 17.4 | 14.9 | 5.8 | 100.0 | 5.4 | 121 |
| Janjati | 7.2 | 25.0 | 29.0 | 13.1 | 14.1 | 11.5 | 100.0 | 6.7 | 511 |
| Dalit | 5.3 | 30.5 | 30.0 | 9.5 | 14.7 | 10.0 | 100.0 | 6.4 | 190 |
| Terai Other Castes | 22.9 | 40.6 | 22.9 | 6.3 | 4.2 | 3.1 | 100.0 | 4.0 | 96 |
| Muslim | 11.4 | 22.9 | 34.3 | 20.0 | 8.6 | 2.9 | 100.0 | 4.2 | 35 |
| Other | 16.7 | 0.0 | 66.7 | 0.0 | 16.7 | 0.0 | 100.0 | 3.9 | 6 |
| Total | 9.0 | 25.1 | 28.5 | 12.9 | 15.1 | 9.5 | 100.0 | 6.4 | 1,233 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| Chhetri/Thakuri | 159.4 | 7.5 | (4.7) | 16.2 | (17.8) | (18.7) | | (17.4) | |
| Bahun/Sanyasi | 157.9 | (1.4) | (20.7) | 64.1 | (18.6) | (39.8) | | (13.6) | |
| Janjati | 243.2 | (7.2) | (14.7) | 13.0 | (9.7) | 19.0 | | 1.4 | |
| Dalit | 13.2 | 14.1 | 32.3 | (45.7) | (31.5) | 43.3 | | (6.6) | |
| Terai Other Castes | 434.7 | (0.2) | (13.3) | (48.5) | (67.6) | (12.5) | | (15.1) | |
| Muslim | 254.3 | 41.7 | 112.6 | 106.7 | (77.9) | (82.3) | | (58.4) | |
| Other | 650.0 | (100.0) | 233.3 | (100.0) | (50.0) | (100.0) | | (61.8) | |
| Total | 183.5 | (3.6) | (2.7) | 5.8 | (22.9) | (3.0) | | (9.0) | |

Table 18 Percent distribution of females age 15-49 by number of cigarettes smoked in last 24 hours according to broad caste/ethnicity, Nepal, 2006 and 2011

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | % | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Chhetri/Thakuri | 2.2 | 22.8 | 37.7 | 13.9 | 17.1 | 6.2 | 100.0 | 6.3 | 403 |
| Bahun/Sanyasi | 2.7 | 18.7 | 45.3 | 18.7 | 12.0 | 2.7 | 100.0 | 5.3 | 75 |
| Janjati | 1.1 | 17.5 | 44.0 | 17.5 | 13.7 | 6.2 | 100.0 | 6.2 | 663 |
| Dalit | 2.7 | 22.9 | 34.5 | 21.5 | 13.3 | 5.1 | 100.0 | 5.9 | 293 |
| Terai Other Castes | 0.9 | 23.6 | 38.7 | 17.0 | 17.0 | 2.8 | 100.0 | 5.9 | 106 |
| Muslim | 0.0 | 12.0 | 30.0 | 24.0 | 16.0 | 18.0 | 100.0 | 9.2 | 50 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Other | 0.0 | 7.8 | 54.9 | 23.5 | 13.7 | 0.0 | 100.0 | 5.8 | 51 |
| Total | 1.6 | 19.7 | 40.4 | 17.7 | 14.7 | 5.8 | 100.0 | 6.2 | 1,641 |
| **NDHS 2011** | | | | | | | | | |
| Chhetri/Thakuri | 1.2 | 20.9 | 41.4 | 14.3 | 17.2 | 4.9 | 100.0 | 6.0 | 244 |
| Bahun/Sanyasi | 3.0 | 27.3 | 34.8 | 12.1 | 15.2 | 7.6 | 100.0 | 5.9 | 66 |
| Janjati | 3.9 | 19.6 | 33.3 | 14.8 | 17.8 | 10.7 | 100.0 | 7.1 | 535 |
| Dalit | 1.8 | 25.8 | 38.0 | 15.4 | 11.8 | 7.2 | 100.0 | 6.1 | 221 |
| Terai Other Castes | 0.0 | 25.0 | 32.1 | 32.1 | 10.7 | 0.0 | 100.0 | 4.7 | 28 |
| Muslim | 0.0 | 0.0 | 54.5 | 27.3 | 18.2 | 0.0 | 100.0 | 5.7 | 11 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 |
| Total | 2.7 | 21.5 | 36.3 | 15.2 | 16.1 | 8.1 | 100.0 | 6.5 | 1,105 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| Chhetri/Thakuri | (44.9) | (8.4) | 9.7 | 3.2 | 0.5 | (20.7) | | (3.8) | |
| Bahun/Sanyasi | 13.6 | 46.1 | (23.1) | (35.1) | 26.3 | 184.1 | | 11.4 | |
| Janjati | 271.8 | 12.2 | (24.5) | (15.6) | 29.4 | 72.3 | | 14.0 | |
| Dalit | (33.7) | 12.8 | 10.3 | (28.4) | (11.6) | 41.4 | | 1.9 | |
| Terai Other Castes | (100.0) | 6.0 | (16.9) | 89.3 | (36.9) | (100.0) | | (19.6) | |
| Muslim | NA | (100.0) | 81.8 | 13.6 | 13.6 | (100.0) | | (37.7) | |
| Other | NA | (100.0) | (100.0) | (100.0) | (100.0) | 0.0 | | (100.0) | |
| Total | 65.0 | 9.1 | (10.2) | (14.3) | 9.7 | 40.7 | | 5.0 | |

Table 19 Percent distribution of both sexes age 15-49 by number of cigarettes smoked in last 24 hours according to broad caste/ethnicity, Nepal, 2006 and 2011

| NDHS 2006 | 0 | 1-2 | 3-5 | 6-9 | 10-19 | 20+ | % | Mean number of cig smoked | Number of cig smokers |
|---|---|---|---|---|---|---|---|---|---|
| Chhetri/Thakuri | 2.7 | 19.4 | 35.9 | 13.5 | 20.3 | 8.3 | 100.0 | 7.1 | 602 |
| Bahun/Sanyasi | 3.4 | 26.8 | 33.5 | 14.0 | 15.6 | 6.7 | 100.0 | 5.8 | 179 |
| Janjati | 1.5 | 21.5 | 39.8 | 15.0 | 14.5 | 7.7 | 100.0 | 6.4 | 1137 |
| Dalit | 3.4 | 24.3 | 30.1 | 20.0 | 16.3 | 5.8 | 100.0 | 6.3 | 465 |
| Terai Other Castes | 2.8 | 33.3 | 31.7 | 14.2 | 14.6 | 3.3 | 100.0 | 5.2 | 246 |
| Muslim | 1.2 | 13.6 | 24.7 | 18.5 | 24.7 | 17.3 | 100.0 | 9.5 | 81 |
| Other | 1.0 | 12.5 | 38.5 | 13.5 | 22.9 | 11.5 | 100.0 | 7.8 | 96 |
| Total | 2.3 | 22.3 | 35.8 | 15.4 | 16.7 | 7.4 | 100.0 | 6.5 | 2806 |
| **NDHS 2011** | | | | | | | | | |
| Chhetri/Thakuri | 5.4 | 17.0 | 35.7 | 14.5 | 19.7 | 7.7 | 100.0 | 6.7 | 518 |
| Bahun/Sanyasi | 7.5 | 30.5 | 25.1 | 15.5 | 15.0 | 6.4 | 100.0 | 5.6 | 187 |
| Janjati | 5.5 | 22.3 | 31.2 | 14.0 | 16.0 | 11.1 | 100.0 | 6.9 | 1,046 |
| Dalit | 3.4 | 28.0 | 34.3 | 12.7 | 13.1 | 8.5 | 100.0 | 6.2 | 411 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Terai Other Castes | 17.7 | 37.1 | 25.0 | 12.1 | 5.6 | 2.4 | 100.0 | 4.1 | 124 |
| Muslim | 8.7 | 17.4 | 39.1 | 21.7 | 10.9 | 2.2 | 100.0 | 4.6 | 46 |
| Other | 2.8 | 21.4 | 36.5 | 15.1 | 16.1 | 8.1 | 100.0 | 3.8 | 1,111 |
| Total | 9.0 | 25.1 | 28.5 | 12.9 | 15.1 | 9.5 | 100.0 | 6.4 | 1,233 |
| **Percent change 2006 and 2011** | | | | | | | | | |
| Chhetri/Thakuri | 103.4 | (12.6) | (0.5) | 7.6 | (2.8) | (7.0) | | (5.7) | |
| Bahun/Sanyasi | 123.4 | 13.7 | (25.0) | 11.0 | (4.3) | (4.3) | | (4.2) | |
| Janjati | 270.9 | 3.8 | (21.8) | (7.2) | 10.0 | 44.9 | | 8.1 | |
| Dalit | (1.0) | 15.1 | 13.9 | (36.7) | (19.6) | 46.7 | | (1.3) | |
| Terai Other Castes | 523.5 | 11.3 | (21.2) | (15.0) | (61.4) | (25.6) | | (20.2) | |
| Muslim | 604.3 | 28.1 | 58.5 | 17.4 | (56.0) | (87.4) | | (51.4) | |
| Other | 167.9 | 71.4 | (5.4) | 11.7 | (29.7) | (29.3) | | (51.0) | |
| Total | 294.7 | 12.2 | (20.4) | (16.4) | (9.7) | 27.4 | | (1.4) | |

Table 20 Among births in the last five years preceding the survey, percent distribution of births by mother's estimate of size of child at birth according to residence and tobacco use, Nepal, 2006 and 2011

| Residence | Size of child at birth. 2006 | | | | | Total percent | Number of births |
|---|---|---|---|---|---|---|---|
| | Tobacco use | Very small | Smaller than average | Average or larger | Don't know/missing | | |
| Urban | Any tobacco | 8.9 | 10.1 | 81.0 | 0.0 | 100.0 | 79 |
| | None | 4.9 | 8.5 | 86.3 | 0.3 | 100.0 | 597 |
| | Total | 5.3 | 8.7 | 85.7 | 0.3 | 100.0 | 676 |
| Urban | Size of child at birth. 2011 | | | | | | |
| | Any tobacco | 12.0 | 24.0 | 64.0 | 0.0 | 100.0 | 25 |
| | None | 3.6 | 10.9 | 85.5 | 0.0 | 100.0 | 477 |
| | Total | 4.0 | 11.6 | 84.5 | 0.0 | 100.0 | 502 |
| Urban | Size of child at birth: percent change 2006-2011 | | | | | | |
| | Any tobacco | 34.8 | 137.6 | -21.0 | NA | | |
| | None | -26.5 | 28.2 | -0.9 | -100.0 | | |
| | Total | -24.5 | 33.3 | -1.4 | -100.0 | | |
| Rural | Size of child at birth. 2006 | | | | | | |
| | Any tobacco | 6.2 | 18 | 75.8 | 0.0 | 100.0 | 1,004 |
| | None | 5.3 | 13.5 | 81.2 | 0.1 | 100.0 | 3,865 |
| | Total | 5.5 | 14.4 | 80.1 | 0.1 | 100.0 | 4,869 |
| Rural | Size of child at birth. 2011 | | | | | | |
| | Any tobacco | 6.8 | 16.5 | 76.2 | 0.5 | 100.0 | 661 |
| | None | 3.1 | 11.7 | 85.1 | 0.1 | 100.0 | 4,227 |
| | Total | 3.6 | 12.3 | 83.9 | 0.1 | 100.0 | 4,888 |
| Rural | Size of child at birth: percent change 2006-2011 | | | | | | |
| | Any tobacco | 9.7 | -8.3 | 0.5 | NA | | |
| | None | -41.5 | -13.3 | 4.8 | 0.0 | | |
| | Total | -34.5 | -14.6 | 4.7 | 0.0 | | |

Table 21 Among births in the last five years preceding the survey, percent distribution of births by mother's estimate of size of child at birth according to ecological region and tobacco use, Nepal, 2006 and 2011

| Ecological zone | Size of child at birth. 2006 | | | | | Total percent | Number of births |
|---|---|---|---|---|---|---|---|
| | Tobacco use | Very small | Smaller than average | Average or larger | Don't know/missing | | |
| Mountain | Any tobacco | 8.8 | 20.4 | 70.7 | 0.0 | 100 | 181 |
| | None | 7.3 | 19.9 | 72.8 | 0.0 | 100 | 302 |
| | Total | 7.9 | 20.1 | 72 | 0.0 | 100 | 483 |
| Mountain | Size of child at birth. 2011 | | | | | | |
| | Any tobacco | 5.3 | 21.9 | 72.8 | 0.0 | 100 | 114 |
| | None | 4.5 | 14.1 | 81.5 | 0.0 | 100 | 313 |
| | Total | 4.7 | 16.2 | 79.2 | 0.0 | 100 | 427 |
| Mountain | Size of child at birth: percent change 2006-2011 | | | | | | |
| | Any tobacco | -39.8 | 7.4 | 3.0 | NA | | |
| | None | -38.4 | -29.1 | 12.0 | NA | | |
| | Total | -40.5 | -19.4 | 10.0 | NA | | |
| Hill | Size of child at birth. 2006 | | | | | | |
| | Any tobacco | 7.2 | 17.3 | 75.4 | 0 | 100 | 594 |
| | None | 7.4 | 11.6 | 80.6 | 0.3 | 100 | 1,667 |
| | Total | 7.4 | 13.1 | 79.3 | 0.2 | 100 | 2,261 |
| Hill | Size of child at birth. 2011 | | | | | | |
| | Any tobacco | 8.3 | 19.4 | 72.3 | 0 | 100 | 386 |
| | None | 3.3 | 12.7 | 83.8 | 0.2 | 100 | 1745 |
| | Total | 4.2 | 13.9 | 81.7 | 0.2 | 100 | 2131 |
| Hill | Size of child at birth: percent change 2006-2011 | | | | | | |
| | Any tobacco | 15.3 | 12.1 | -4.1 | NA | | |
| | None | -55.4 | 9.5 | 4.0 | -33.3 | | |
| | Total | -43.2 | 6.1 | 3.0 | 0.0 | | |
| Terai | Size of child at birth. 2006 | | | | | | |
| | Any tobacco | 3.2 | 15.9 | 80.8 | 0 | 100 | 308 |
| | None | 3.6 | 12.7 | 83.7 | 0 | 100 | 2,493 |
| | Total | 3.5 | 13.1 | 83.4 | 0 | 100 | 2,801 |
| Terai | Size of child at birth. 2011 | | | | | | |
| | Any tobacco | 5.4 | 8.1 | 84.9 | 1.6 | 100 | 186 |
| | None | 2.9 | 10.6 | 86.5 | 0 | 100 | 2646 |
| | Total | 3.1 | 10.4 | 86.4 | 0.1 | 100 | 2832 |
| Terai | Size of child at birth: percent change 2006-2011 | | | | | | |
| | Any tobacco | 68.8 | -49.1 | 5.1 | NA | | |
| | None | -19.4 | -16.5 | 3.3 | NA | | |
| | Total | -11.4 | -20.6 | 3.6 | NA | | |

Table 22 Among births in the last five years preceding the survey, percent distribution of births with a reported birth weight according to residence and tobacco use, Nepal, 2006

| Residence | Reported birth weight: 2006 | | | | |
|---|---|---|---|---|---|
| | **Tobacco use** | **Less than 2.5 KG** | **2.5 KG or more** | **Total %** | **Number of births** |
| Urban | Any tobacco | 47.1 | 52.9 | 100.0 | 17 |
| | None | 10.8 | 89.2 | 100.0 | 295 |
| | Total | 12.8 | 87.2 | 100.0 | 312 |
| Urban | Reported birth weight: 2011 | | | | |
| | Any tobacco | 18.2 | 81.8 | 100.0 | 11 |
| | None | 11.8 | 88.2 | 100.0 | 347 |
| | Total | 12.0 | 88.0 | 100.0 | 358 |
| Urban | Reported birth weight: percent change 2006-2011 | | | | |
| | Any tobacco | -61.4 | 54.6 | | |
| | None | 9.3 | -1.1 | | |
| | Total | -6.3 | 0.9 | | |
| Rural | Reported birth weight: 2006 | | | | |
| | Any tobacco | 25 | 75 | 100.0 | 32 |
| | None | 14.5 | 85.5 | 100.0 | 612 |
| | Total | 15.1 | 84.9 | 100.0 | 644 |
| Rural | Reported birth weight: 2011 | | | | |
| | Any tobacco | 17.5 | 82.5 | 100.0 | 80 |
| | None | 12.3 | 87.7 | 100.0 | 1,518 |
| | Total | 12.6 | 87.4 | 100.0 | 1,598 |
| Rural | Reported birth weight: percent change 2006-2011 | | | | |
| | Any tobacco | -30.0 | 10.0 | | |
| | None | -15.2 | 2.6 | | |
| | Total | -16.6 | 2.9 | | |