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## **GHAR GHAR MAA SWASTHYA**

**Family Planning (FP), Reproductive Health (RH), Maternal and Child Health (MCH), Disinfection of Drinking Water, and Menstrual Hygiene Baseline Knowledge, Attitudes and Practices Survey in 49 Hill and Mountain Districts of Nepal**

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## Abbreviations

<b>AED</b>	Academy for Educational Development
<b>BCC</b>	Behavior Change Communication
<b>CDK</b>	Clean Delivery Kit
<b>CEB</b>	Children Ever Born
<b>CRS</b>	Nepal Contraceptive Sales Company
<b>DHS</b>	Demographic and Health Survey
<b>FCHV</b>	Female Community Health Volunteer
<b>FP</b>	Family Planning
<b>FPAN</b>	Family Planning Association of Nepal
<b>GGMS</b>	Ghar Ghar Ma Swasthya
<b>HIV/AIDS</b>	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
<b>IUD</b>	Intrauterine devices
<b>KAP</b>	Knowledge, Attitudes and Practice
<b>MCH</b>	Maternal and Child Health
<b>NGO</b>	Non-Governmental Organization
<b>NRs</b>	Nepali Rupees
<b>NS</b>	Not Significant
<b>OCPs</b>	Oral Contraceptive Pills
<b>ORS</b>	Oral Rehydration Solution
<b>PCA</b>	Principal Component Analysis
<b>PHCC</b>	Primary Health Care Center
<b>PSU</b>	Primary Sampling Unit
<b>RH</b>	Reproductive Health
<b>SD</b>	Standard Deviation
<b>SES</b>	Socio-economic Status
<b>SLC</b>	School Leaving Certificate
<b>STI</b>	Sexually Transmitted Infection
<b>TV</b>	Television
<b>UMN</b>	United Mission to Nepal
<b>USAID</b>	United States Agency for International Development
<b>VaRG</b>	Valley Research Group
<b>VDC</b>	Village Development Committee
<b>WRA</b>	Women of Reproductive Age

# Chapter 1: Introduction

## 1.1 Background

Some challenges the Government of Nepal (GON) faces today in the health sector are high child and maternal mortality rates, low prevalence of contraceptive use, limited access to reproductive health services and the emerging threat of HIV infections. Considering the extent of health issues to be addressed and increasing demand for health services, the Government of Nepal has involved the private sector in delivery of health services, including preventive public health services. The Nepal CRS Company, established in 1978 by USAID, has employed a social marketing approach to expand usage of contraceptive products such as condoms, oral and injectable contraceptives, as well as ORS and other MCH products.

USAID's Healthy Homes or *Ghar Ghar Ma Swasthya (GGMS)* Project (2010-2015) initiative consists of two components: 1) funding to CRS for social marketing activities, focusing on sustainability through commercial marketing in the urban areas and promoting subsidized products in the rural, hard-to-reach areas and 2) support to FHI 360 (activities formerly managed by AED) to assist CRS to develop and implement marketing plans and design and implement behavioral change communication (BCC) activities, such as campaigns promoting FP best practices.

The GGMS Project aims to increase the use of high-quality FP, RH and MCH products and services in 49 hill and mountain districts through private sector distribution, contributing to the Government's efforts to reduce the number of unwanted pregnancies and to improve maternal and child health. The 2011 Demographic and Health Survey indicates that only 43% of the currently married women were using a modern contraceptive method at national level with 43% in the hills and 41% in the mountain regions.

FHI360 contracted VaRG to conduct this baseline survey of Knowledge, Attitude and Practices (KAP) among women of reproductive age (15-49 years) in selected hill and mountain districts regarding contraception, reproductive health, maternal and child health, water disinfection and menstrual hygiene behaviors and related health products. VaRG is also asked to provide input to develop appropriate strategies to increase the use of FP, RH and MCH products in these areas.

## 1.2 Objectives of the study

The overall objective of the study was to assess the knowledge, attitudes, and practices (KAP) among women of reproductive age regarding family planning, reproductive health, maternal and child health services in selected 49 mountain and hill districts.

The specific objectives of the study were to:

- identify the proportion of currently married women of reproductive age (MWRA) who know at least three modern methods of contraception;
- identify the proportion of currently married women of reproductive age (MWRA) who are currently using a modern contraceptive method;
- identify the percentage of women with at least one child under the age of five who know where selected MCH commodities can be obtained;
- assess KAP related to selected FP and MCH products and services including water disinfectants and sanitary napkins;

- explore the willingness to pay for selected FP and MCH products, including water disinfectants and sanitary napkins;
- assess the menstrual hygiene practices; and
- identify the media habits and characteristics of Women of Reproductive Age.

### **1.3 Methodology of the study**

Primary data was collected using quantitative survey technique. The study was carried out in close coordination with FHI 360 in clusters selected from the 49 hills and mountain districts covered by GGMS Project.

#### **1.3.1 The study population**

The population for this study constituted currently married and single women of reproductive age between 15-49 years of age in the 49 'hard-to-reach' hills and mountain districts selected by the project. There were two sub-populations: currently married women and unmarried women.

#### **1.3.2 Sample size**

The sample size was 1800 women - 1400 currently married and 400 unmarried - aged 15-49 years old.

#### **1.3.3 Sampling design**

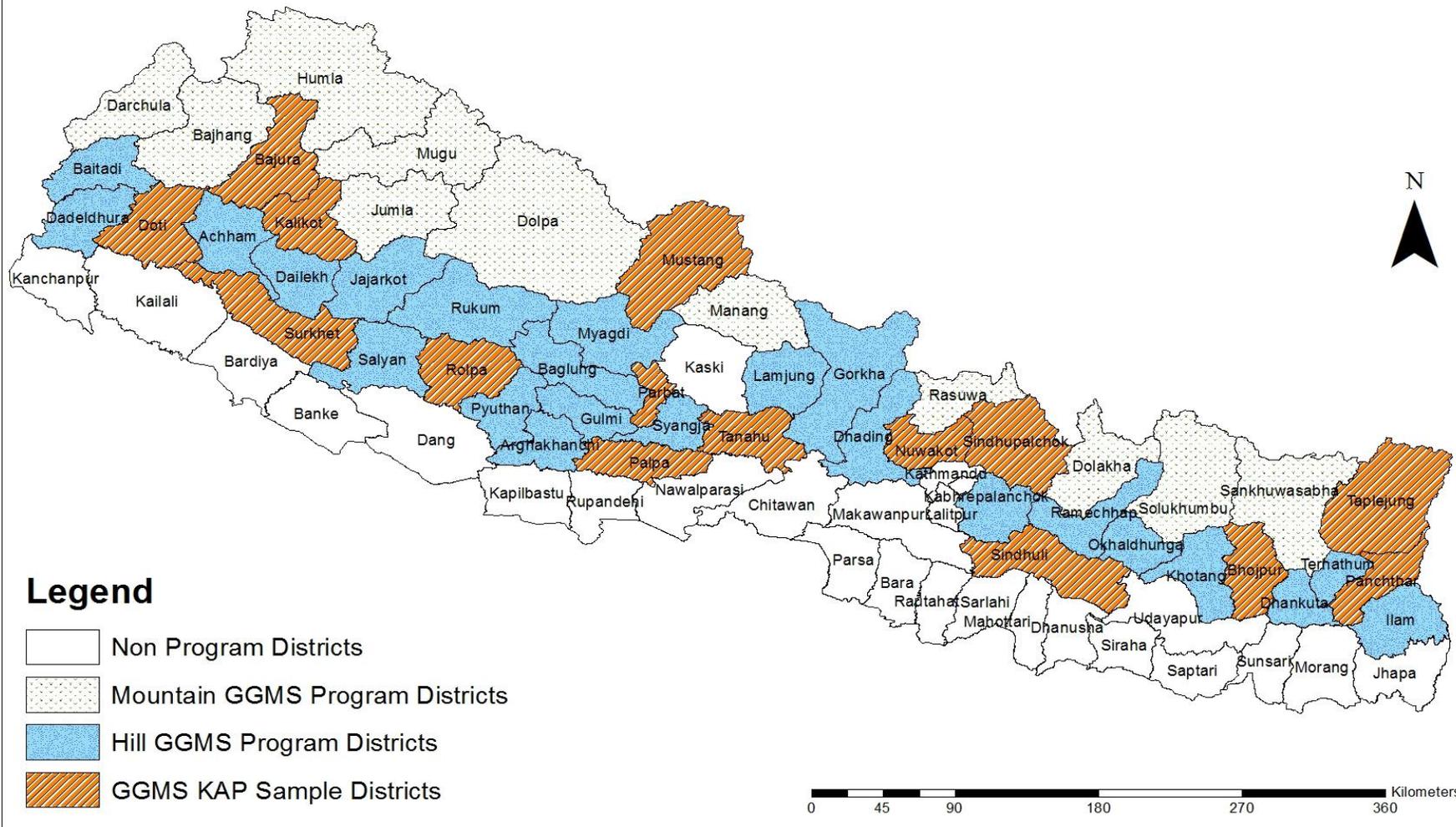
A three stage stratified cluster sampling was employed including selection of districts, clusters and households. The study covered both the mountain and hill strata of all five development regions. The necessary sample was drawn from both the strata. Sixty clusters were selected randomly from the 49 mountain and hill districts.

#### **1.3.4 Selection of districts**

The GGMS program covers 49 districts: 16 mountain and 33 hill districts. From these districts, five districts from mountain stratum and 10 from hills were selected systematically. For selecting the districts from each of the mountain and hills areas, districts were listed separately in numerical order starting from the eastern development region to the far western development region. Then required numbers of districts were selected using systematic random technique from each of the mountain and hills stratum. A list of the fifteen districts selected through this process is given in Table 1.1.

# FP/MCH KAP Study Districts

## From 49 GGMS Hard to Reach Prohram Districts, Nepal



**Table 1.1 Distribution of sampled districts by development and ecological regions**

S. No.	Development region	Ecological region	Number of hard to reach districts	Number of sampled districts	Name of sampled districts
1	Eastern	Mountain Hills	3	1	Taplejung
			7	2	Panchthar Bhojpur
2	Central	Mountain Hills	3	1	Sindhupalchowk
			5	2	Sindhuli Nuwakot
3	Western	Mountain Hills	2	1	Mustang
			10	3	Tanahun Parbat Palpa
4	Mid-western	Mountain Hills	5	1	Kalikot
			7	2	Rolpa Surkhet
5	Far Western	Mountain Hills	3	1	Bajura
			4	1	Doti
	<b>Total</b>	<b>10</b>	<b>49</b>	<b>15</b>	

### 1.3.5 Selection of clusters (wards)

Sixty clusters (wards) – 13 from mountain and 47 from hills - were selected randomly from the previously identified 15 districts (5 mountain and 10 hills). A ward was considered as the primary sampling unit (PSU) for the study. A ward in a Village Development Committee (VDC) or municipality (MCs) was treated as a cluster. Therefore, in selecting the wards (clusters), all the VDCs/MCs of the previously selected five mountain and 10 hills districts were listed separately in alphabetical order together with the number of households in each ward. Then 60 clusters (13 clusters from mountain and 47 from hills) were selected following probability proportional to size (PPS) method from the list prepared for the study purpose. Selection of the clusters was done in Kathmandu using the 2001 Census Data of the Central Bureau of Statistics.

A total of 1800 women of reproductive age (1400 currently married and 400 unmarried) were interviewed from these 60 sampled clusters (wards). On average 30 women (approximately 23 currently married and 7 unmarried) aged 15-49 were intercepted from each cluster to collect necessary information.

### 1.3.6 Selection of households and women aged 15-49 years old

In the field, the team prepared a sketch map of each sampled cluster (ward/s) in consultation with the local leaders and key informants of the sampled cluster. Following this, a complete list of households, including the status of availability of women aged 15-49 yrs., was prepared in each settlement of the sampled cluster with the help of the key informants including school teachers, local leader, FCHVs, etc. This list was used to sample the required number (n=30) of households and eligible respondents. Then one WRA aged 15-49 years old was selected from each household. Where more than one eligible woman was present in the sampled household, one woman was chosen from the available number of eligible women for interview using a KISH Grid.

The screening questionnaire was used to determine the availability of eligible women residing in the sampled household. The screening questionnaire contained information on name of women, age, marital status, etc. When an eligible woman was found there, she was asked to participate. When an eligible woman was not available in the sampled household, replacement was made by visiting the

next nearest household. In clusters where adequate numbers of women were not available to interview, the adjoining ward was merged with the sampled ward and treated as one cluster for study purpose. The number of clusters and respondents included for the study is given in Table 1.2.

**Table 1.2 Sample sizes in the mountain and hill districts by type of respondents**

S. No.	Description	Mountain	Hills	Total
1	Number of sampled districts	5	10	15
2	Number of clusters	13	47	60
3	Number of women of reproductive age (approx.)	390	1410	1800
	a) Currently Married women	299	1081	1380
	b) Unmarried women	91	329	420

#### **1.4 Informed consent**

Each eligible woman was given or read the informed consent form. Those who agreed to participate and signed the form were interviewed. A parent/guardian also had to approve participation for selected participants less than 16 years of age.

#### **1.5 Design and pre-testing of survey questionnaire**

The draft English version of the survey questionnaire prepared earlier by FHI 360 was reviewed by the study team and further refined in consultation with FHI 360. The final draft of the survey instruments was translated into Nepali. The translated version of the questionnaire was pretested with 42 currently married and 12 unmarried women in rural areas of Lalitpur district. Upon reviewing the pre-test results, the survey questionnaire was modified and finalized in consultation with FHI 360.

#### **1.6 Field organization and data collection**

The study was carried out under the overall supervision of the senior team members from VaRG. Six teams, consisting of one supervisor and three female interviewers in each team, were mobilized to collect information from the study areas. Field work was conducted during July and August 2011.

Most of the field staff had previous experience in conducting field research. Prior to field mobilization, they were given a weeklong training in Kathmandu. Training topics included a brief introduction of the program, objectives and methodology of the study including sampling technique, questionnaire presentation and discussion, role-play and field practice. The Monitoring and Evaluation Advisor of FHI 360 also participated the field staff training and pretest.

During the data collection, senior officials of GGMS (both from FHI 360 and the CRS Company) and Senior Researchers of VaRG closely monitored the data collection procedure by visiting to data collection sites and provided necessary guidance where needed.

#### **1.7 Data processing and analysis**

Upon completion of the field activities, secondary checking of the filled questionnaires was performed by trained data editors and coders at VaRG office before entering them into computer. The edited questionnaires were coded for computer entry, entered and validated by a data processing team consisting of a computer programmer and data entry personnel. The data processing was done in FoxPro software to generate a cleaned data set. The cleaned data was transferred to SPSS and a SPSS system file was prepared for output generation.

Data are presented in the forms of tables and graphs. Basic statistical tools including percentage, measures of central tendency, measures of dispersion and degree of relationship between the selected variables have been used in the analysis. In addition, Pearson's Chi-square tests have also been performed to see if the observed differences were statistically significant.

## Chapter 2: Characteristics of Respondents

Eighteen hundred (1400 currently married and 400 unmarried) women of reproductive age (15-49 years old) were successfully interviewed from the study areas. This chapter presents the socio-demographic characteristics of these women. Aspects such as household possessions, water and sanitation and housing conditions are also discussed in this chapter. Married women here after refer to currently married women. Similarly mountains ecological region represents the 16 hard to reach mountain districts and hills ecological region represents the 33 hard to reach hill districts (see table 1.1).

### 2.1 Characteristics of respondents

#### 2.1.1 Age, ethnicity and religion

##### 2.1.1.1 Age

Table 2.1 presents the age distribution of married and unmarried respondents across the ecological regions. The great majority (82%) of the unmarried respondents were between 15-19 years, with most of the rest in their 20s. Almost all the married women were over 20, with more than half aged 30 to 49 years. The median age of married women was 29 years and the corresponding figure for the unmarried ones was 17 years (Table 1). Respondents from the hills were more likely to be aged 20-29 (40.4 %) than those from the mountains (34.6 %), whereas those from the mountains were more likely to be 30 and above (40.3 %). These differences are statistically significant at 5 % level.

**Table 2.1 Percent distribution of unmarried and currently married women aged 15-49 years by age group and ecological regions**

Age group	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
15-19	89.4	7.2	25.1	79.7	5.9	22.4	81.8	6.2	23.0
20-29	9.4	41.6	34.6	19.0	46.6	40.4	17.0	45.5	39.2
30-49	1.2	51.1	40.3	1.3	47.5	37.2	1.3	48.3	37.8
<b>Median</b>	<b>17.0</b>	<b>30.0</b>	<b>26.0</b>	<b>17.0</b>	<b>29.0</b>	<b>26.0</b>	<b>17.0</b>	<b>29.0</b>	<b>26.0</b>
<b>Mean</b>	<b>17.3</b>	<b>30.9</b>	<b>28.0</b>	<b>17.9</b>	<b>30.2</b>	<b>27.4</b>	<b>17.7</b>	<b>30.3</b>	<b>27.5</b>
<b>SD</b>	<b>2.7</b>	<b>8.9</b>	<b>9.8</b>	<b>3.2</b>	<b>8.0</b>	<b>8.8</b>	<b>3.1</b>	<b>8.2</b>	<b>9.1</b>
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

##### 2.1.1.2 Ethnicity and religion

Table 2.2 shows the ethnic composition and religion of the respondents included in the study. For the purposes of the analysis, ethnicity/caste has been divided in four broad categories namely, Hill Brahmin or Chhetri, Hill Janajati, Hill Dalit and Newar. The highest proportion (44%) of the unmarried and married women in both the mountain and hill regions were from the Hill Janajati group, followed by over one-third from Hill Brahmin or Chhetri groups. 15% (28% in mountains), were Dalit and about 6% were Newar.

Three-fourths of respondents 77.4% (66% in mountains) were Hindu followed by 14% (27% in mountains) who reported following Buddhism and 8% Kirat (5% in mountains<sup>1</sup>). Almost all (99%

<sup>1</sup> The differences of 9 % Kirat in the hill and 5 % in mountain is statistically significant at 5 % level, which means more Kirats lives in hills than mountains.

in mountain and 97% in hills) the respondents also considered themselves as a religious person (Table not shown).

**Table 2.2 Percent distribution of unmarried and currently married women aged 15-49 years by ethnicity, religion and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Caste/ethnicity</b>									
Hill Janajati	41.2	42.3	42.1	45.7	44.2	44.5	44.8	43.8	44.0
Hill	18.8	20.7	20.3	39.4	38.9	39.0	35.0	34.9	34.9
Brahmin/Chhetri									
Hill Dalit	29.4	27.2	27.7	9.8	12.1	11.6	14.0	15.4	15.1
Newar	10.6	9.8	10.0	5.1	4.7	4.8	6.3	5.9	5.9
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>
<b>Religion</b>									
Hindu	65.9	65.6	65.6	79.7	80.9	80.6	76.8	77.6	77.4
Buddhist	25.9	27.2	26.9	9.2	10.0	9.8	12.8	13.7	13.5
Kirat	4.7	5.2	5.1	10.5	8.4	8.9	9.3	7.7	8.1
Christian	3.5	2.0	2.3	0.6	0.7	0.7	1.3	1.0	1.1
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

### 2.1.2 Literacy and Educational attainment

Table 2.3 shows the literacy status and educational attainment of respondents. Overall, almost half (47%) of the respondents were not able to read a sentence given to them. By region, more respondents (60%) from mountains were illiterate than those from hills (43%). Only 10% of the unmarried women were illiterate compared to 57% of married women.

Over 2-in-5 respondents, with a higher percentage (57%) in mountain region, had never attended school. One-fourth had some secondary level of education and 16 % were high school graduates (SLC passed). Over three-fourths of unmarried women had at least some secondary education (more than a quarter had SLC or above), compared to over 72% of married women who had no schooling or just primary level.

**Table 2.3 Percent distribution of unmarried and currently married women aged 15-49 years by literacy status and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Literacy status</b>									
Illiterate	11.8	72.8	59.5	9.5	53.2	43.4	10.0	57.4	46.9
Literate	88.2	27.2	40.5	90.5	46.8	56.6	90.0	42.6	53.1
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>
<b>Level of education</b>									
No schooling/illiterate	10.6	69.5	56.7	6.7	49.0	39.6	7.5	53.5	43.3
Some primary	21.2	13.8	15.4	14.0	19.0	17.9	15.5	17.9	17.3
Some secondary	49.4	9.5	18.2	48.6	18.7	25.4	48.8	16.7	23.8
SLC or above	18.8	7.2	9.7	30.8	13.2	17.2	28.3	11.9	15.6
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

### 2.1.3 Occupation

All the respondents were engaged in some occupation at the time of survey. Overall, more than two-thirds of the married women were engaged in household work while over three-quarters of unmarried women were students. More than one-fourth of the married women reported themselves to be engaged in farm work or herding. Very small proportions (<4%) of the respondents in both areas were engaged in non-agriculture sectors (Table 2.4).

**Table 2.4 Percent distribution of unmarried and currently married women aged 15-49 years by occupation and ecological regions**

Occupation	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Housewife/home worker	15.3	64.9	54.1	10.8	67.6	54.9	11.8	67.0	54.7
Farmer/ herder	10.6	28.2	24.4	7.6	26.7	22.4	8.3	27.0	22.8
Student	72.9	1.3	16.9	78.7	1.6	18.9	77.5	1.6	18.4
Retail seller	-	4.3	3.3	-	1.6	1.3	-	2.2	1.7
Self-employed / small business owner	1.2	0.7	0.8	1.0	0.6	0.7	1.0	0.6	0.7
Government employee	-	0.3	0.3	-	0.9	0.7	-	0.8	0.6
Unemployed /looking for work	-	-	-	1.6	0.2	0.5	1.3	0.1	0.4
Skilled/ technical worker	-	-	-	-	0.1	0.1	-	0.1	0.1
Maid	-	0.3	0.3	-	0.1	0.1	-	0.1	0.1
Executive/ managerial/ professional	-	-	-	-	0.1	0.1	-	0.1	0.1
Other (social work)	-	-	-	0.3	0.5	0.4	0.3	0.4	0.3
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1400</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

### 2.1.4 Migration

Respondents were also asked about the duration of stay in their current place of residence (i.e., in the study district). Almost all (97%) the unmarried and the great majority (85%) of the married women reported that they had been staying in the study district since birth. Three percent of unmarried and 15% married women had migrated from other districts (Table 2.5)

**Table 2.5 Percent distribution of unmarried and currently married women aged 15-49 years by duration of stay in the study ecological regions**

Duration of stay in this district	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Less than one year	-	1.6	1.3	-	0.9	0.7	-	1.1	0.8
1-4 years	-	3.0	2.3	0.3	3.7	3.0	0.3	3.6	2.8
5-9 years	-	2.3	1.8	0.6	3.7	3.0	0.5	3.4	2.8
10 years or more	2.4	6.2	5.4	2.2	7.5	6.3	2.3	7.2	6.1
All my life	97.6	86.9	89.2	96.5	83.5	86.7	96.8	84.5	87.2
Do not know	-	-	-	0.3	0.3	0.3	0.3	0.2	0.2
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

Nearly two-fifths of the married respondents (24% in mountains), reported husbands not living at this location all year round. Almost all (91%) of these husbands were reported to be gone at least half of last year; nearly one-third reported that their husbands lived there less than one month and another third mentioned he was there 1-2 months of the last year (Table 2.6).

**Table 2.6 Percent distribution of currently married women aged 15-49 by migration status of their husbands and ecological regions**

Description	Mountain	Hills	Both
<b>Whether husband live in this area all year round</b>			
Yes	76.1	57.4	61.4
No	23.9	42.6	38.6
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>
<b>Number of months of the last year husband living in this area</b>			
Less than one month	24.7	31.9	30.9
1-2 months	30.1	30.2	30.2
3-4 months	17.8	18.2	18.1
5-6 months	15.1	11.8	12.2
7 months or more	8.2	6.2	6.5
Do not know	4.1	1.7	2.0
<b>Total</b>	<b>73</b>	<b>467</b>	<b>540</b>

## 2.2 Household characteristics

Information regarding the household characteristics of the responding women was also collected in the survey. This section presents findings on these aspects

### 2.2.1 Socio-economic status index

The socio-economic status (SES) index of the households of the sampled women was constructed using *principal component analysis* (PCA). The PCA is a multivariate statistical technique, which uses household asset data, such as ownership of durable assets, infrastructure and housing characteristics, to create the SES indices. PCA is used to determine the weights for the various asset variables that are used to calculate the value of the asset index. The weights are the standardized first principal component of the variance-covariance matrix of the observed household assets.

**Table 2.7 Percent distribution of unmarried and currently married women aged 15-49 years by their socio-economic status index and ecological regions**

SES Index	Mountain		Hills		Both	
	%	Number	%	Number	%	Number
Lowest	22.1	86	19.4	274	20.0	360
Second	18.5	72	20.4	288	20.0	360
Middle	22.8	89	19.2	271	20.0	360
Fourth	25.4	99	18.6	262	21.1	361
Highest	11.3	44	22.3	315	19.9	359
<b>Total</b>	<b>100.0</b>	<b>390</b>	<b>100.0</b>	<b>1410</b>	<b>100.0</b>	<b>1800</b>

For this, the STATA statistical software package was used. The wealth index was constructed by considering specific variables such as housing characteristics (drinking water source, type of toilet, type of fuel used for cooking, existence of a separate kitchen, floor and wall materials in the household) and ownership of selected household items (radio, television, mobile telephone, electricity, non-mobile telephone, refrigerator, computer, clock, fan and different types of furniture). Based on the value of socio-economic index calculated for the household of each respondent, they were ranked into wealth quintiles. The socio-economic index of the respondents is presented in Table 2.7.

Note that there are twice as many respondents from the hills as from the mountains in the highest SES quintile.

## 2.2.2 Possession of household items

Table 2.8 presents data on possession of household items among respondents of both the mountain and hills regions. Overall, two-thirds of the respondents (56% in mountains) reported having a radio in their homes. Similarly, over 7-in-10 respondents (61% in mountains and 75% in hills) reported having a cell phone in their homes. Unmarried respondents were more likely to have radios and cell phones in their residence than married respondents.

Television ownership among respondents was rather limited in both regions as only about a quarter of respondents affirmed that they had a television set in their house; this was somewhat higher (32%) among unmarried respondents. About half of respondents claimed to have electricity. The other types of household items possessed by the respondents of both the mountain and hills regions are shown in Table 2.8.

**Table 2.8 Percent distribution of unmarried and currently married women aged 15-49 years having different types of household items by ecological regions**

Household items	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Bed	83.5	75.1	76.9	90.2	86.8	87.6	88.8	84.3	85.3
Clock	71.8	60.0	62.6	82.9	72.4	74.8	80.5	69.7	72.1
Mobile telephone	71.8	58.0	61.0	83.8	72.1	74.7	81.3	69.0	71.7
Dhiki/janto§	58.8	49.5	51.5	74.6	70.4	71.3	71.3	65.9	67.1
Radio	72.9	51.5	56.2	78.7	65.8	68.7	77.5	62.6	65.9
Electricity	54.1	50.8	51.5	54.0	50.0	50.9	54.0	50.2	51.1
Table	42.4	26.6	30.0	47.3	34.2	37.1	46.3	32.5	35.6
Chair	42.4	30.2	32.8	42.5	34.1	36.0	42.5	33.2	35.2
Television	35.3	20.7	23.8	30.8	24.7	26.0	31.8	23.8	25.6
Sofa	5.9	4.6	4.9	10.2	9.0	9.3	9.3	8.1	8.3
Fan	3.5	2.0	2.3	12.7	8.8	9.6	10.8	7.3	8.1
Non-mobile telephone	8.2	4.6	5.4	5.4	4.3	4.5	6.0	4.4	4.7
Refrigerator	1.2	1.3	1.3	5.1	3.8	4.1	4.3	3.3	3.5
Computer	-	0.3	0.3	3.8	2.1	2.5	3.0	1.7	2.0
<b>Total (n)</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

§Dhiki= wooden equipment use for husking rice; Janto= traditional stone grinder

## 2.2.3 Source of drinking water

The source of drinking water for the highest proportion of respondents (45%) was public tap, followed by piped to yard or into house (24% in both areas). Protected spring was another important source of water for 21% of respondents (29% in mountains). (Table 2.9). Almost all respondents (94%) reported that their water source was located outside their yard or plot. (Table not shown).

**Table 2.9 Percent distribution of unmarried and currently married women aged 15-49 years by main source of drinking water in their households and ecological regions**

Source of drinking water	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<u>Piped water</u>									
Public tap/standpipe	43.5	43.9	43.8	45.7	44.8	45.0	45.3	44.6	44.8
Piped to yard/plot	23.5	23.0	23.1	24.1	23.7	23.8	24.0	23.5	23.6
Tube well or borehole	-	-	-	2.2	1.8	1.9	1.8	1.4	1.5
Piped into house	-	-	-	1.0	0.8	0.9	0.8	0.6	0.7
<u>Dug well</u>									
Protected well	-	-	-	-	0.1	0.1	-	0.1	0.1
<u>Water from spring</u>									
Protected spring	28.2	29.5	29.2	17.8	18.7	18.5	20.0	21.1	20.8
Unprotected spring	-	0.3	0.3	8.3	7.9	8.0	6.5	6.3	6.3
<u>Surface water (river/dam)</u>									
Lake/pond/stream/canal/irrigation canal)	2.4	2.6	2.6	0.6	1.1	1.0	1.0	1.4	1.3
Stone tap/dhara	2.4	0.7	1.0	-	0.3	0.2	0.5	0.4	0.4
Other (spring water; stream water)	-	-	-	0.3	0.7	0.6	0.3	0.6	0.5
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

## 2.2.4 Sanitation

Overall, nearly two-thirds (approximately 65%) of respondents reported that their family members use some kind of pit latrine for defecation (Table 2.10). The highest proportion of households (42% in mountain and 39% in hills) in both regions claimed to use a ventilated improved latrine followed by approximately 23% reported using pit latrines (with or without slab). However, over one-third of the respondents in both mountain and hills regions reported that they defecate in open space such as in bush or field, with the unmarried respondents LESS likely to do so and MORE likely to use a ventilated pit latrine than married.

**Table 2.10 Percent distribution of unmarried and currently married women aged 15-49 years by type of toilet facilities in their households and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Type of toilet facility use in the household									
<u>Flush or pour flush toilet</u>									
Flush to piped sewer	-	-	-	-	0.2	0.1	-	0.1	0.1
Flush to septic tank	-	-	-	0.6	0.6	0.6	0.5	0.5	0.5
Flush to pit latrine	-	0.3	0.3	1.0	0.6	0.7	0.8	0.6	0.6
Flush to somewhere else	-	-	-	0.3	0.6	0.6	0.3	0.5	0.4
Flush, do not know where	-	-	-	-	0.2	0.1	-	0.1	0.1
<u>Pit latrine</u>									
Ventilated improved pit latrine	47.1	40.3	41.8	44.8	37.1	38.8	45.3	37.8	39.4
Pit latrine with slab	16.5	12.1	13.1	9.5	10.2	10.1	11.0	10.6	10.7
Pit latrine without slab	9.4	10.8	10.5	14.3	12.4	12.8	13.3	12.1	12.3
Composting toilet	-	-	-	1.3	1.4	1.3	1.0	1.1	1.1
<u>No facility/bush/field</u>	27.1	36.4	34.4	28.3	36.6	34.8	28.0	36.6	34.7
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

## 2.2.5 Cooking behaviors

All the respondents in mountain and nearly 93% in hills reported that they use wood for cooking purposes. Only -7% of respondents (all in hill region) reported using LPG or biogas. Seven-tenths of respondents, with slightly a higher percentage in hills than mountains, reported cooking foods in a *Chulo* (locally made brick and clay stove). A sizeable proportion (31% in mountain and 21% in hills) of the respondents in both areas also reported cooking their foods on an open fire. Approximately 3-in-5 respondents, with a somewhat higher percentage in mountain than hills, had a separate kitchen in their houses (Table 2.11).

**Table 2.11 Percent distribution of unmarried and currently married women aged 15-49 years by type of fuel used for cooking and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Type of fuel used for cooking</b>									
Wood	100.0	100.0	100.0	93.0	92.7	92.8	94.5	94.3	94.3
LPG	-	-	-	4.8	5.4	5.2	3.8	4.2	4.1
Biogas	-	-	-	1.9	1.6	1.7	1.5	1.3	1.3
Coal, lignite	-	-	-	0.3	0.1	0.1	0.3	0.1	0.1
Other (husk)	-	-	-	-	0.2	0.1	-	0.1	0.1
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>
<b>Ways of cooking foods</b>									
Chulo	69.4	67.5	67.9	72.1	71.1	71.3	71.5	70.4	70.6
Open fire	29.4	31.1	30.8	20.0	21.4	21.1	22.0	23.5	23.2
Gas stove	-	-	-	6.7	7.0	7.0	5.3	5.5	5.4
Stove	1.2	1.3	1.3	1.3	0.5	0.6	1.3	0.6	0.8
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>
<b>Is separate room used for kitchen</b>									
Yes	70.6	59.3	61.8	62.9	54.9	56.7	64.5	55.9	57.8
No	29.4	40.7	38.2	37.1	45.1	43.3	35.5	44.1	42.2
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

## 2.2.6 Housing condition

Information regarding the housing conditions of the respondents was also collected in the survey. Almost all (91%, 96% in mountains) respondents had an earth or mud floor in their houses (Table 2.12). The most commonly used materials for walls were stone with mud in both areas (93% in mountain and 74% in hills). Those in the hills were somewhat more likely than those in the mountains to have finished walls and/or finished floors, but less than 15% of those in hills had finished walls and only 9% had cement floors.

**Table 2.12 Percent distribution of unmarried and currently married women aged 15-49 years by the type of materials used to construct their houses and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Main material used for the floor (observed)</b>									
<u>Natural floor</u>									
Earth/mud	96.5	96.5	96.2	89.5	89.3	89.4	91.0	90.8	90.8
With dung	1.2	1.3	1.3	-	1.1	0.9	0.3	1.1	0.9
<u>Rudimentary floor</u>									
Wood planks	-	0.3	0.3	0.3	0.5	0.5	0.3	0.5	0.4
<u>Finished floor</u>									
Cement	2.4	2.3	2.3	10.2	9.0	9.3	8.5	7.6	7.8
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>
<b>Main material of the exterior walls (observed)</b>									
<u>Natural walls</u>									
Mud/sand	-	0.7	0.5	1.9	2.7	2.6	1.5	2.3	2.1
No walls	-	-	-	0.3	0.3	0.3	0.3	0.2	0.2
<u>Rudimentary walls</u>									
Stone with mud	97.6	92.1	93.3	74.9	74.2	74.4	79.8	78.1	78.5
Bamboo with mud	-	3.3	2.6	6.0	7.9	7.5	4.8	6.9	6.4
Reused wood	-	-	-	1.3	1.2	1.2	1.0	0.9	0.9
<u>Finished walls</u>									
Cement	1.2	2.0	1.8	4.8	3.7	3.9	4.0	3.3	3.4
Wood planks	-	0.3	0.3	5.4	3.7	4.1	4.3	3.0	3.3
Stone with lime/cement	1.2	1.3	1.3	1.9	2.3	2.2	1.8	2.1	2.0
Bricks	-	-	-	1.6	1.9	1.8	1.3	1.5	1.4
Cement blocks	-	-	-	1.6	1.5	1.5	1.3	1.1	1.2
corrugated iron sheet; wood with mud	-	0.3	0.3	0.3	0.5	0.5	0.3	0.5	0.4
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

## Chapter 3: Media Exposure and Habits

Information regarding the exposure of respondents to electronic and other media was collected in the survey. This chapter presents findings on exposure and preferred programs and stations for various media.

### 3.1 Radio

Both married and unmarried respondents were asked how frequently they listened to radio during a week. Overall, slightly over one quarter of the respondents listened to the radio every day. By ecological regions, respondents in hills (30%) were twice as likely as those in the mountains (15%) to listen to the radio every day. In addition, unmarried respondents were twice as likely as married ones (44% vs. 22%) to listen every day – in both regions.

An additional one-fourth of respondents (about 14% in mountains) listened to radio between 2 and 5 times a week.

However, more than half (54%) of the respondents in mountain and approximately one-third (32%) in hills reported that they never listened to the radio.

**Table 3.1 Percent distribution of unmarried and currently married women aged 15-49 years by the frequency of listening to radio and ecological regions**

Frequency of listening to the radio	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Not at all	40.0	58.0	54.1	18.1	36.5	32.4	22.8	41.2	37.1
Less than once in 2 weeks	3.5	7.5	6.7	1.3	6.4	5.2	1.8	6.6	5.6
About once every 2 weeks	5.9	3.0	3.6	3.5	2.0	2.3	4.0	2.2	2.6
About once a week	5.9	6.9	6.7	2.9	3.7	3.5	3.5	4.4	4.2
2-3 times a week	12.9	7.9	9.0	14.6	16.4	16.0	14.3	14.6	14.5
4-5 times a week	9.4	4.3	5.4	10.5	10.4	10.4	10.3	9.1	9.3
Everyday	22.4	12.5	14.6	49.2	24.6	30.1	43.5	21.9	26.7
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

NOTE: The rest of the data for radio is calculated only among the 1132 listeners reported in the above table.

Among those who listened to radio, the hour with the highest listening audience was from 4-5 pm (19%) followed closely by 10-11 am (18%), 6-7am (17%), 8-9 pm (16%) and 5-6 pm (16%). The key hours vary by region; in the mountains 8-9 pm had the highest audience, followed by 3-4pm, 7-8am, 5-6pm and 7-8pm. In the hills, 4-5pm had the highest audience, followed by 10-11am and 6-7am. The key hours also varied by marital status, with unmarried women most likely to listen at 8-9 pm, followed by 4-5pm and 5-6 pm and married women most likely to listen at 6-7 am and 4-5 pm, followed by 10-11am. (Table 3.2).

**Table 3.2 Percent distribution of unmarried and currently married women aged 15-49 years by the time of listening to radio and ecological regions**

Timing of listening	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
4-5 am	-	-	-	0.8	0.1	0.3	0.6	0.1	0.3
5-6 am	3.9	7.0	6.1	1.6	3.2	2.7	1.9	3.8	3.3
6-7 am	7.8	15.6	13.4	17.8	18.3	18.2	16.2	17.9	17.4
7-8 am	25.5	10.9	15.1	10.5	8.9	9.3	12.9	9.2	10.2
8-9 am	15.7	10.2	11.7	11.2	10.2	10.5	12.0	10.2	10.7
9-10 am	7.8	10.2	9.5	20.2	13.1	15.0	18.1	12.6	14.1
10-11 am	11.8	8.6	9.5	19.8	18.7	19.0	18.4	17.1	17.5
11-12 am	7.8	4.7	5.6	8.5	9.2	9.0	8.4	8.5	8.5
12-1 noon	11.8	7.8	8.9	8.1	7.6	7.8	8.7	7.7	8.0
1-2 pm	3.9	9.4	7.8	8.9	8.2	8.4	8.1	8.4	8.3
2-3 pm	9.8	12.5	11.7	10.5	11.1	10.9	10.4	11.3	11.0
3-4 pm	21.6	13.3	15.6	14.7	9.8	11.1	15.9	10.3	11.8
4-5 pm	9.8	7.0	7.8	22.1	19.9	20.5	20.1	17.9	18.5
5-6 pm	17.6	13.3	14.5	20.2	14.7	16.2	19.7	14.5	15.9
6-7 pm	9.8	11.7	11.2	15.9	11.8	12.9	14.9	11.8	12.6
7-8 pm	17.6	13.3	14.5	15.1	12.8	13.4	15.5	12.9	13.6
8-9 pm	31.4	17.2	21.2	18.2	13.8	15.0	20.4	14.3	16.0
9-10 pm	7.8	12.5	11.2	8.9	4.3	5.6	8.7	5.6	6.4
10-11 pm	2.0	-	0.6	0.4	0.6	0.5	0.6	0.5	0.5
<b>Total</b>	<b>51</b>	<b>128</b>	<b>179</b>	<b>258</b>	<b>695</b>	<b>953</b>	<b>309</b>	<b>823</b>	<b>1132</b>

Almost all (94%) listened to radio at their homes. Approximately one-fifth of radio listeners also listened at their friend's and/or relative's homes. Around one-tenth also reported listening to the radio at the workplace. Mountain radio listeners were more likely than hill listeners to mention listening to radio outside the home (both at friend/relative and at work) (Table 3.3). This is likely due to the lower level of radio ownership in the mountains than in hills as reported in chapter 2.

**Table 3.3 Percent distribution of unmarried and currently married women aged 15-49 years by the place of listening to the radio and ecological regions**

Place of listening to the radio (Multiple answers possible)	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
At home	90.2	90.6	90.5	94.6	93.8	94.0	93.9	93.3	93.5
Work place	25.5	16.4	19.0	12.0	9.2	10.0	14.2	10.3	11.4
At friend's/relatives house	27.5	21.1	22.9	19.0	17.3	17.7	20.4	17.9	18.6
<b>Total</b>	<b>51</b>	<b>128</b>	<b>179</b>	<b>258</b>	<b>695</b>	<b>953</b>	<b>309</b>	<b>823</b>	<b>1132</b>

5.3% of the radio listeners mentioned listening most often to Kantipur Radio and 5.1 % said they listened most often to Radio Nepal. There were more than 100 local FM stations mentioned as being listened to by a small percentage of the respondents (Table not shown).

Respondents (n=1132) who had access to the radio were asked (unaided) which ONE radio program they listened the most. The most mentioned radio program in both regions was *lok lahari* (51% in mountain and 45% in hills), followed distantly by *sathi sanga man ka kura* (chatting with my best friends) with 19% in mountain and 11% in hills) and *folk songs* (5% in mountain and 10% in hills). *Filmy gauf* (Talking about cinema) was more popular than *folk songs* among mountain listeners. The survey results further show that *lok lahari* was more popular among married as compared to

unmarried listeners, while *sathi sanga man ka kura* was somewhat more popular with unmarried women (Table 3.4).

**Table 3.4 Percent distribution of unmarried and currently married women aged 15-49 years by types of programs listened on the radio and ecological regions**

Kinds of radio programs listened to	Mountain			Hills			Both		
	Unm arried	Marri ed	Total	Unm arried	Marri ed	Total	Unm arried	Marri ed	Total
Lok Lahari	45.1	53.9	51.4	34.5	49.4	45.3	36.2	50.1	46.3
Sathi sanga man ka kura ( <i>chatting with my best friends</i> )	23.5	17.2	19.0	16.3	9.4	11.2	17.5	10.6	12.5
Folk songs ±	3.9	4.7	4.5	10.5	9.9	10.1	9.4	9.1	9.2
Cine song; modern song	-	1.6	1.1	5.0	2.2	2.9	4.2	2.1	2.7
Filmy gauf	7.8	4.7	5.6	2.3	1.3	1.6	3.2	1.8	2.2
Suva din	5.9	3.9	4.5	0.8	1.7	1.5	1.6	2.1	1.9
Swastha nai dharm ho	-	1.6	1.1	1.6	1.0	1.2	1.3	1.1	1.1
Lok Susheli	-	-	-	1.2	1.3	1.3	1.0	1.1	1.1
Lok Sansar	-	-	-	0.8	0.9	0.8	0.6	0.7	0.7
Phone in; Phone dial	-	0.8	0.6	2.3	-	0.6	1.9	0.1	0.6
Radio filmy	-	0.8	0.6	0.4	-	0.1	0.3	0.1	0.2
Sangini Dial a Doctor	-	0.8	0.6	-	0.1	0.1	-	0.2	0.2
Other §	13.7	8.6	10.1	19.8	15.1	16.4	18.8	14.1	15.4
Do not know	-	1.6	1.1	4.7	7.8	6.9	3.9	6.8	6.0
<b>Total</b>	<b>51</b>	<b>128</b>	<b>179</b>	<b>258</b>	<b>695</b>	<b>953</b>	<b>309</b>	<b>823</b>	<b>1132</b>

Notes: ± Folk song includes: Tamang Geet; Lok Bihani; Lok Dohori; Lok Geet; Lek Beshi; Lok Bhaka; Lok Top Ten; Tamang Selo; Lok Manjari; Lok Gunjan; Lok Chautari; Deuda Geet; Lok Jhadka.

§ Other includes: literacy program; Question Answer; Pakha Pakhera; Aada Aakash; Man Bhitra Ko Man; Jindagi Ka Katha Haru; Timi Mero Saathi Banna Sakchhau; Mero Euta Sathi; Sima Pari Ko Sandes; Quez; Rashi Phal; Ukali Orali; Bhajan; Lok Priya Bhanjyang; Shuva Sanjh; Kun Geet Sunau; Deurali; Colgate Mero Rojai; Phulbari; Giti Katha; Katha Mitho Sarangi Ko; SMS; Shuvakamana; Mridula Ko Taal; Sandesh; Saino; Hygiene and Sanitation; Bal Karyakram; Jhajalko; Patra Mitrata; Smiriti Ka Plahari; Krishi Karyakram; Gaun Khane Katha; Sikchhak Chautari; Dawali; Aaphanta Ko Sandesh; Chautari; Hamro Madal Hamro Samagri; Sunaulo Bihani.

After being read a list of radio programs, two-thirds (67%) of radio listeners (82% in mountains) reported that they listened to *Lok Lahari* radio program at least once a week. Other programs listened to at least once a week by a good portion of listeners were *sathi sanga man ka kura* (37%, 47% in mountains and 49% among the unmarried in both regions), *Suva din* (*lucky day*- 21%), *filmy gauf* (15%, 24% in mountains, and 21% among unmarried listeners in both regions) and *folk songs* (12%, 5% in mountains and 13% in hills) and *Swastha nai dharm* ( 9%, 6% in mountains and 9% in hills) (Table 3.5).

**Table 3.5 Percent distribution of unmarried and currently married women aged 15-49 years by types of programs listened on the radio at least once a week and ecological regions**

Kinds of radio program listened at least once a week (Multiple Response)	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Lok Lahari	82.4	82.0	82.1	60.5	65.5	64.1	64.1	68.0	67.0
Sathi sanga man ka kura	56.9	43.0	46.9	46.9	30.2	34.7	48.5	32.2	36.7
Suva din	31.4	18.8	22.3	22.5	20.6	21.1	23.9	20.3	21.3
Filmy gauf	33.3	20.3	24.0	18.6	10.6	12.8	21.0	12.2	14.6
Folk songs±	3.9	4.7	4.5	14.0	12.4	12.8	12.3	11.2	11.5
Swastha nai dharma ho	7.8	5.5	6.1	12.4	8.1	9.2	11.7	7.7	8.7
Radio filmy	23.5	7.0	11.7	10.1	3.5	5.2	12.3	4.0	6.3
Cine song; modern song	-	2.3	1.7	5.8	3.0	3.8	4.9	2.9	3.4
Sangini Dial a doctor	3.9	2.3	2.8	3.5	1.0	1.7	3.6	1.2	1.9
Lok Susheli	-	-	-	1.6	1.6	1.6	1.3	1.3	1.3
Love showcase	3.9	0.8	1.7	3.5	0.1	1.0	3.6	0.2	1.1
Phone in; Phone dial	-	0.8	0.6	3.5	0.3	1.2	2.9	0.4	1.1
Guest appearance	2.0	0.8	1.1	1.2	0.9	0.9	1.3	0.9	1.0
Lok Sansar	-	-	-	1.2	1.0	1.0	1.0	0.9	0.9
Other§	17.6	12.5	14.0	27.5	18.6	21.0	25.9	17.6	19.9
<b>Total</b>	<b>51</b>	<b>128</b>	<b>179</b>	<b>258</b>	<b>695</b>	<b>953</b>	<b>309</b>	<b>823</b>	<b>1132</b>

Notes: ± Folk song includes: Tamang Geet; Lok Bihani; Lok Dohori; Lok Geet; Lek Beshi; Lok Bhaka; Lok Top Ten; Tamang Selo; Lok Manjari; Lok Gunjan; Lok Chautari; Deuda Geet; Lok Jhadka.

§ Other includes: literacy program; Question Answer; Pakha Pakhera; Aada Aakash; Man Bhitra Ko Man; Jindagi Ka Katha Haru; Timi Mero Saathi Banna Sakchhau; Mero Euta Sathi; Sima Pari Ko Sandes; Quez; Rashi Phal; Ukali Orali; Bhajan; Lok Priya Bhanjyang; Shuva Sanjh; Kun Geet Sunau; Deurali; Colgate Mero Rojai; Phulbari; Giti Katha; Katha Mitho Sarangi Ko; SMS; Shuvakamana; Mridula Ko Taal; Sandesh; Saino; Hygiene and Sanitation; Bal Karyakram; Jhajalko; Patra Mitrata; Smiriti Ka Plahari; Krishi Karyakram; Gaun Khane Katha; Sikchhak Chautari; Dawali; Aaphanta Ko Sandesh; Chautari; Hamro Madal Hamro Samagri; Sunaulo Bihani.

### 3.2 Television

Approximately 3-in-10 respondents, with a higher percentage in hills (32%) than in the mountains (17%), said they watched television. However, only 12% of respondents (7% in mountain and 13% in hills) reported watching television every day. Another 11% of respondents (4% in mountain and 13% in hills) reported to watch television 2-5 times a week.

Nearly 71% of respondents (83% in mountain and 68% in hills) reported never watching television; this was higher for married women than for unmarried (74% vs. 61%). These results indicate that TV will not reach the majority of population in these areas.

**Table 3.6 Percent distribution of unmarried and currently married women aged 15-49 years by frequency of watching television and ecological regions**

Frequency of watching television	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Not at all	69.4	86.6	82.8	58.4	70.3	67.7	60.8	73.9	70.9
Less than once in 2 weeks	5.9	2.6	3.3	3.2	2.5	2.6	3.8	2.5	2.8
About once every 2 weeks	2.4	0.7	1.0	0.3	0.9	0.8	0.8	0.9	0.8
About once a week	4.7	1.3	2.1	4.8	1.7	2.4	4.8	1.6	2.3
2-3 times a week	2.4	2.3	2.3	12.1	8.7	9.4	10.0	7.3	7.9
4-5 times a week	3.5	0.7	1.3	3.5	3.9	3.8	3.5	3.2	3.3
Everyday	11.8	5.9	7.2	17.8	12.0	13.3	16.5	10.6	11.9
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

Note: The rest of the data for television is calculated only among the 523 watchers reported in the above table.

The most popular hour to watch TV was 9-10 pm, when 76% of watchers claimed to watch (78 % mountain and 76 % in hill) and the second most popular hour was 8-9 pm (46 % : 22% in mountains and 49 % in hill). 7-8 pm was the only other hour with greater than 8% of watchers watching (15% total, 9% in mountains and 16% in hills) (Table 3.7).

**Table 3.7 Percent distribution of unmarried and currently married women aged 15-49 years by time of watching television and ecological regions**

Timing of watching TV	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
5-6 am	-	-	-	0.8	2.2	1.8	0.6	1.9	1.5
6-7 am	-	-	-	2.3	1.2	1.5	1.9	1.1	1.3
7-8 am	7.7	-	3.0	6.1	4.3	4.8	6.4	3.8	4.6
8-9 am	7.7	-	3.0	3.1	5.2	4.6	3.8	4.6	4.4
9-10 am	-	-	-	3.1	2.8	2.9	2.5	2.5	2.5
10-11 am	-	-	-	3.1	2.5	2.6	2.5	2.2	2.3
11-12 am	-	-	-	1.5	2.2	2.0	1.3	1.9	1.7
12-1 noon	-	-	-	3.8	1.5	2.2	3.2	1.4	1.9
1-2 pm	.0	2.4	1.5	1.5	2.2	2.0	1.3	2.2	1.9
2-3 pm	11.5	7.3	9.0	4.6	6.5	5.9	5.7	6.6	6.3
3-4 pm	-	-	-	0.8	1.8	1.5	0.6	1.6	1.3
4-5 pm	3.8	2.4	3.0	3.1	1.5	2.0	3.2	1.6	2.1
5-6 pm	3.8	2.4	3.0	9.2	2.8	4.6	8.3	2.7	4.4
6-7 pm	15.4	4.9	9.0	10.7	6.2	7.5	11.5	6.0	7.6
7-8 pm	19.2	2.4	9.0	14.5	16.9	16.2	15.3	15.3	15.3
8-9 pm	26.9	19.5	22.4	48.9	48.9	48.9	45.2	45.6	45.5
9-10 pm	73.1	80.5	77.6	77.9	74.8	75.7	77.1	75.4	75.9
10-11 pm	3.8	-	1.5	6.9	4.3	5.0	6.4	3.8	4.6
11-12 pm	-	-	-	0.8	-	.2	0.6	-	0.2
<b>Total</b>	<b>26</b>	<b>41</b>	<b>67</b>	<b>131</b>	<b>325</b>	<b>456</b>	<b>157</b>	<b>366</b>	<b>523</b>

About three-fourths of TV-watchers (69% in mountains) reported watching television at their homes and nearly two-fifths in both areas said that they watched it at the homes of neighbors, friends and/or relatives (Table 3.8).

**Table 3.8 Percent distribution of unmarried and currently married women aged 15-49 years by place of watching television and ecological regions**

Place of watching television (Multiple Response)	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
At home	65.4	70.7	68.7	74.0	75.1	74.8	72.6	74.6	74.0
Neighbor/relative/friend	42.3	34.1	37.3	37.4	36.0	36.4	38.2	35.8	36.5
Parent's house	-	2.4	1.7	-	-	-	-	0.3	0.2
<b>Total</b>	<b>26</b>	<b>41</b>	<b>67</b>	<b>131</b>	<b>325</b>	<b>456</b>	<b>157</b>	<b>366</b>	<b>523</b>

Over 90% of TV-watchers said they watched Nepal Television most often. Kantipur TV was mentioned by 5% of respondents (only in the hills) as the channel most watched. No other channel was mentioned by more than 1% of respondents. (Table 3.9).

**Table 3.9 Percent distribution of unmarried and currently married women aged 15-49 years by most frequently watched television channel and ecological regions**

TV station that was watched the most	Mountain			Hills			Both		
	Unm arried	Marri ed	Total	Unm arried	Marri ed	Total	Unm arried	Marri ed	Total
Nepal TV	96.2	95.1	95.5	90.1	92.3	91.7	91.1	92.6	92.2
Kantipur TV	-	-	-	7.6	5.5	6.1	6.4	4.9	5.4
Nepal TV 2	-	4.9	3.0	2.3	0.6	1.1	1.9	1.1	1.3
Sagarmatha TV	3.8	-	1.5	-	-	-	0.6	-	0.2
Image channel	-	-	-	-	0.3	0.2	-	0.3	0.2
AV News TV	-	-	-	-	0.3	0.2	-	0.3	0.2
Byas Channel	-	-	-	-	0.6	0.4	-	0.5	0.4
Do not know	-	-	-	-	0.3	0.2	-	0.3	0.2
<b>Total</b>	<b>26</b>	<b>41</b>	<b>67</b>	<b>131</b>	<b>325</b>	<b>456</b>	<b>157</b>	<b>366</b>	<b>523</b>

*Meri Bassai* was the program watched by the highest percentage of TV-watchers (51%, 63% in mountains), followed by *Tito Satya* (25%), and *Jire Khursani* (13%). It is to be noted that all these three programs are comedy serials. Only a small proportion of the respondents watched non-comedy programs as depicted in Table 3.10.

All the listed programs are shown from Nepal TV. The *Meri Bassai* is shown on Saturday at 8.30 PM and 12.00 mid-night and on Monday at 1.05 PM; *Tito Satya* is shown on Thursday at 8.30 PM and 12.00 mid- night and Friday 1.05 PM; and, *Jire Khursani* is shown on Monday at 8.30 PM; 12.00 mid-night and Tuesday 1.05 PM.

**Table 3.10 Percent distribution of unmarried and currently married women aged 15-49 years by types of programs watched the most on television and ecological regions**

TV program that was watched the most	Mountain			Hills			Both		
	Unm arried	Marri ed	Total	Unm arried	Marri ed	Total	Unm arried	Marri ed	Total
Meri bassai	65.4	61.0	62.7	51.1	49.2	49.8	53.5	50.5	51.4
Tito Satya	19.2	26.8	23.9	22.1	27.1	25.7	21.7	27.0	25.4
Jire Khursani	7.7	9.8	9.0	12.2	13.5	13.2	11.5	13.1	12.6
Harke Hawaldar	-	-	-	-	1.8	1.3	-	1.6	1.1
Chham Chhami	-	-	-	2.3	0.9	1.3	1.9	0.8	1.1
Pilley in on	-	-	-	2.3	0.3	0.9	2.5	0.3	1.0
Jhyaikuti	-	-	-	2.3	0.6	1.1	1.9	0.5	1.0
Karuna	3.8	-	1.5	0.8	0.3	0.4	0.6	0.3	0.4
Kantipur Aaja	-	-	-	-	0.6	0.4	-	0.5	0.4
Rajatpat	-	-	-	0.8	0.3	0.4	0.6	0.3	0.4
Chalchitra	3.8	2.4	3.0	-	-	-	0.6	0.3	0.4
Woodkandu	-	-	-	-	0.3	0.2	-	0.3	0.2
Other±	-	-	-	5.3	3.1	3.7	4.5	2.7	3.3
Not stated	-	-	-	-	0.3	0.2	-	0.3	0.2
Do not know	-	-	-	0.8	1.5	1.3	0.6	1.4	1.1
<b>Total</b>	<b>26</b>	<b>41</b>	<b>67</b>	<b>131</b>	<b>325</b>	<b>456</b>	<b>157</b>	<b>366</b>	<b>523</b>

Notes: ± Other includes: songs; film songs; Hamro College; Aaba Ke Hunchha; Lok Dohori; Sangeet Lahar; Drishti; Jana Chetana; Kal Kantipur; Samaya Sambad; Singing Star; Lok Susheli; Yatra Jindagi Ko; Aaphanta; Sanskritik Karyakram.

After being read a list of TV programs, over 83% said they watched three programs - *Meri Bassi* (91%), *Tito Satya* (90%) and *Jire Khursani* (83%) - at least once a week. Region-wise, women in hills were somewhat more likely to report watching each of these programs than their counterparts from mountain region. Lagging far behind these three programs, at about 10% weekly viewership, the fourth and fifth most often mentioned shows were *Chalachitra* and *Hamro Kathmandu* – both

slightly more popular with respondents in the mountains and with unmarried respondents. (Table 3.11).

**Table 3.11 Percent distribution of unmarried and currently married women aged 15-49 years by types of programs watched on television at least once a week**

Kinds of TV programs watched on TV at least once a week	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Meri bassi	84.6	85.4	85.1	93.9	91.7	92.3	92.4	91.0	91.4
Tito Satya	84.6	85.4	85.1	90.1	91.1	90.8	89.2	90.4	90.1
Jire Khursani	69.2	73.2	71.6	82.4	85.5	84.6	80.3	84.2	83.0
Chalachitra	23.1	7.3	13.4	16.0	6.5	9.2	17.2	6.6	9.8
Hamro Kathmandu	30.8	4.9	14.9	14.5	6.5	8.8	17.2	6.3	9.6
Chham Chhami	-	-	-	9.9	5.2	6.6	8.3	4.6	5.7
Rajatpat	11.5	-	4.5	6.9	4.9	5.5	7.6	4.4	5.4
Lagan Jurla jasto chha	-	4.9	3.0	7.6	4.6	5.5	6.4	4.6	5.2
Khabar bhitra ko khabar	3.8	2.4	3.0	7.6	4.6	5.5	7.0	4.4	5.2
Kantipur Aaja	7.7	2.4	4.5	7.6	3.4	4.6	7.6	3.3	4.6
Clapboards	3.8	2.4	3.0	8.4	1.5	3.5	7.6	1.6	3.4
Namaste kaliwood	7.7	-	3.0	8.4	1.2	3.3	8.3	1.1	3.3
Swasthwa sawal	3.8	-	1.5	7.6	1.5	3.3	7.0	1.4	3.1
Jhyaikuti	3.8	4.9	4.5	3.1	2.8	2.9	3.2	3.0	3.1
Harke Hawaldar	-	-	-	2.3	3.7	3.3	1.9	3.3	2.9
Pilley in on	3.8	-	1.5	3.8	2.2	2.6	3.8	1.9	2.5
Khichadi	-	2.4	1.5	3.8	0.6	1.5	3.2	0.8	1.5
Karuna	-	4.9	3.0	2.3	0.6	1.1	1.9	1.1	1.3
Rat pare paachi	-	-	-	3.1	0.9	1.5	2.5	0.8	1.3
Woodkandu	-	-	-	2.3	0.9	1.3	1.9	0.8	1.1
Hari Bahadur Ra Madan Bahadur	-	-	-	1.5	1.2	1.3	1.3	1.1	1.1
Hello doctor	3.8	-	1.5	1.5	-	0.4	1.9	-	0.6
Khota Baji	-	2.4	1.5	-	-	-	-	0.3	0.2
Other±	-	2.4	1.5	17.6	6.2	9.4	14.6	5.7	8.4
<b>Total</b>	<b>26</b>	<b>41</b>	<b>67</b>	<b>131</b>	<b>325</b>	<b>456</b>	<b>157</b>	<b>366</b>	<b>523</b>

Notes: ± Other includes: (songs; film songs; Hamro College; Aaba Ke Hunchha; Lok Dohori; Sangeet Lahar; Drishti; Jana Chetana; Kal Kantipur; Samaya Sambad; Singing Star; Lok Susheli; Yatra Jindagi Ko; Aaphanta; Sanskritik Karyakram)

### 3.3 Exposure to other media

53% (n=956) of all respondents were literate. Among these literate women, 44% (only 34% in the mountains and 46 % in hill) claimed to ever read newspapers or magazines. A very small proportion of literate women (3% in mountain and 9% in hills) reported reading a newspaper or magazine at least once a week. The unmarried literate women were somewhat more likely to read newspapers or magazines than the married ones (Table 3.12).

**Table 3.12 Percent distribution of literate unmarried and currently married women aged 15-49 years by frequency of reading a newspaper or magazine**

Frequency of reading a newspaper or magazine	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Not at all	66.7	63.9	65.2	47.7	58.1	54.4	51.7	58.9	56.2
Less than once a week	29.3	32.5	31.0	39.3	32.7	35.1	37.2	32.7	34.4
At least once a week	4.0	2.4	3.2	12.3	7.4	9.1	10.6	6.7	8.2
Everyday	-	-	-	0.7	1.6	1.3	0.6	1.3	1.0
Do not know	-	1.2	0.6	-	0.2	0.1	-	0.3	0.2
<b>Total</b>	<b>75</b>	<b>83</b>	<b>158</b>	<b>285</b>	<b>513</b>	<b>798</b>	<b>360</b>	<b>596</b>	<b>956</b>

Respondents were also asked about the frequency of watching cinema. Data presented in Table 3.13 shows that the vast majority of respondents never go to the cinema.

Approximately 13% of the respondents (9% in mountains and 14 % in hill) ever watch movies in a theatre or cinema hall. Unmarried respondents were more than twice as likely to go the cinema (25% vs. 9% of married). Almost all of these who said they go to movie indicated they went less than once in two weeks.

**Table 3.13 Percent distribution of unmarried and currently married women aged 15-49 years by frequency of watching a movie**

Frequency of watching a movie in a theatre or cinema hall	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Not at all	80.0	93.4	90.5	73.0	90.0	86.2	74.5	90.7	87.1
Less than once in 2 weeks	17.6	6.6	9.0	26.7	9.8	13.5	24.8	9.1	12.6
About once every 2 weeks	-	-	-	-	0.2	0.1	-	0.1	0.1
About once a week	1.2	-	0.3	0.3	0.1	0.1	0.5	0.1	0.2
Do not know	1.2	-	0.3	-	-	-	0.3	-	0.1
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

Table 3.14 shows exposure of respondents to any of the three main media, namely radio, television and newspaper or magazine. Overall, 13% of the respondents are exposed to all three media (25% of unmarried respondents), 19% were exposed to only two of the three media and 36% had exposure to only one medium.

Nearly one-third of all respondents and about half of those in mountains are not exposed to ANY of these three media.

**Table 3.14 Percent distribution of unmarried and currently married women aged 15-49 years by exposure to one or more of media: radio, television and newspaper or magazine**

Exposure to media	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
None	34.1	53.1	49.0	12.1	30.3	26.2	16.8	35.3	31.2
Only one	24.7	31.8	30.3	33.0	38.9	37.6	31.3	37.4	36.0
Only two	28.2	12.1	15.6	27.0	18.5	20.4	27.3	17.1	19.4
All three	12.9	3.0	5.1	27.9	12.2	15.7	24.8	10.2	13.4
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

### 3.4 Summary of findings

#### 3.4.1 Introduction

USAID's Healthy Homes or *Ghar Ghar Ma Swasthya (GGMS)* Project aims to increase the use of high-quality Family Planning, Reproductive Health and Maternal and Child Health products and services in 49 hill and mountain districts through private sector distribution, contributing to the Government's efforts to reduce the number of unwanted pregnancies and to improve maternal and child health.

The overall objective of the study was to assess the knowledge, attitudes, and practices (KAP) among women of reproductive age regarding contraceptive, reproductive health, maternal and child

health services and products, including water disinfectants and sanitary napkins in the program areas.

The study covered both the mountain and hills strata of all five development regions. A three-stage stratified cluster sampling was employed to select districts, clusters and households. The population for this study included both married and unmarried women of reproductive age (i.e., between 15-49 years old) in the 49 'hard-to-reach' hills and mountain districts supported by the project. A total of 60 clusters (13 from mountain and 47 from hills) were selected from the program districts using probability proportionate to size method. Altogether 1800 women of reproductive age (1400 married and 400 unmarried) were included in the study. Field work was carried out during July and August 2011.

### **3.4.2 Socio-demographic information**

#### **3.4.2.1 Characteristics of respondents**

The great majority (82%) of the unmarried respondents were between 15-19 years, with most of the rest in their 20s, with a median age of 17. The median age of married women was 29 years, with almost all the married women over 20; almost half were aged 30 to 49 years.

The highest proportion (44%) of the unmarried and married women in both the mountain and hill regions were from the Hill Janajati group, followed by over one-third from Hill Brahmin or Chhetri groups. 15% (28% in mountains), were Dalit and about 6% were Newar.

Three-fourths of respondents (66% in mountains) were Hindu followed by 14% (27% in mountains) who reported following Buddhism and 8% Kirat (5% in mountains). Almost all (99% in mountain and 97% in hills) the respondents also considered themselves as a religious person.

Almost half (47%) of the respondents (60% in mountain) were not able to read a sentence given them. 43% of respondents (57% in mountain) had never attended school. 72% of married women had no schooling or just primary level compared to over three-fourths of unmarried women who had at least some secondary education; only 10% of unmarried women were illiterate.

Two-thirds of the married women were engaged in household work and just over three-quarters of unmarried women were students.

The great majority of respondents (87%) had lived in the district where they were interviewed all of their life. However, nearly two-fifths of the married respondents reported husbands not living at this location during the last year, with over 90% reporting them being away for more than half the last 12 months.

#### **3.4.2.2 Household characteristics**

In terms of overall socio-economic status, twice as many respondents from the hills as from the mountains were in the highest SES quintile.

Two-thirds of the respondents (56% in mountains), reported having a radio set in their homes. Similarly, over 7-in-10 respondents (61% in mountain and 75% in hills) reported having a cell phone in their homes. Unmarried respondents were more likely than married to have a radio or a cell phone in their residence. Television ownership among respondents was rather limited in both regions as only about a quarter of respondents said they had one. About half of the households had electricity in their homes.

The source of drinking water for the highest proportion of respondents (45%) was the public tap, followed by piped to yard or into house (25%) and protected spring (21%, 29% in mountains). For almost all (90+%) respondents their water source is located outside their yard or plot.

All the respondents in mountains and nearly 93% in hills reported that they use wood for cooking purposes. Seven-tenths of respondents, with slightly a higher percentage in hills than mountains, reported cooking foods in a *Chulo* (locally made brick and clay stove) and 23% (31% in mountains) reported using an open fire.

### **3.4.2.3 Hygiene and sanitation**

Overall, nearly two-thirds (approximately 63%) of respondents reported that their family members use a latrine for defecation, with 39% reporting to use a ventilated improved latrine and 23% a pit latrine. However, over one-third of the respondents in both mountain and hills regions reported that they defecate in the open, such as in bush or field. Almost all the respondents reported that other households shared the toilet facilities, meaning they were not private.

### **3.4.2.4 Housing condition**

The vast majority (90%, 96% in mountains) of respondents' houses had an earth or mud floor. Walls were most commonly made of stone with mud in both areas (93% in mountain and 74% in hills).

## **3.4.3 Media exposure and usage**

### **3.4.3.1 Radio**

Radio is the only mass media that reaches the majority of respondents: 73% overall, but only 46% in mountains. However, only 27% (15% in the mountains) listen to the radio on a daily basis. More than 90% of the radio listeners in both regions listened to radio at their homes, 19% listened at houses of friends and/or relatives and 11% listened at work.

Overall, the most popular hour for radio listening was between 4-5 pm (18.5% of radio listeners, only 8% in mountains), followed closely by 10-11 am, 6-7am, 8-9 pm and 5-6 pm (15.9%). Key hours vary region and by marital status. The stations listened to most mentioned most often were Kantipur Radio (19%) and Radio Nepal (12%).

*Lok lahari* was the radio program mentioned most frequently when asked which program they listened to most (46%), followed by *sathi sanga man ka kura* (13%) and *folk songs* (9%). After being read a list of programs and asked which they listened to at least once a week, *Lok Lahari* was again most mentioned (67% with 82% in mountains), followed by *sathi sanga man ka kura* (37% with 47% in mountains, and 49% among unmarried), *suva din (lucky day -21%)*, *filmy gauf* (15% , 24% in mountains and 21% among unmarried) and *folk songs* (12%, 5% in mountains).

### **3.4.3.2 Television**

71% (83% in mountains) of respondents said they NEVER watch television and only 12% said they watch daily. 74% of watchers reported watching television at their homes and nearly two-fifths said that they watched it the homes of neighbors, friends and/or relatives.

Over 90% of the TV-watchers of both regions said they watch Nepal Television station most with 5% saying Kantipur TV. 76% of watchers watch between 9 and 10pm, followed by 46% between 8 and 9 pm, and 15% between 7 and 8pm.

After being read a list of TV programs, over 83% said, they watched three programs - *Meri Bassi* (91%), *Tito Satya* (90%) and *Jire Khursani* (83%) - at least once a week, indicating that comedy serials are the most popular TV programs among the respondents of both the mountain and hill regions.

### 3.4.3.3 Other media

Overall, only 44% of the literate respondents (or 30% of total sample) ever read newspapers or magazines, and most of those read them less than once a week. Similarly, only 13% of total respondents ever go to the cinema.

## 3.5. Conclusions

Given the low exposure to television (30% ever watch, only 18% in mountains) in these areas, television advertising will not likely be effective.

Based on the demographics and the media exposure and preferences, there are clear differences by region and by marital status. (See table below).

- In summary, unmarried women are younger, have higher education, more likely to have a mobile phone and radio, and have higher exposure to all three main media than married women.
- Overall, women in mountains are more likely to be Dalit and Buddhist, have less education, lower economic status, less likely to own a phone or radio, and have lower exposure to all three main media than women in the hills.

**Table 3.15 Differentials in the selected characteristics by respondent's category**

Characteristics	How Unmarried women differ from married women	How Mountain women differ from Hill women
Age	Younger	-
Ethnicity	-	More Dalit/ less Brahmin/Chetri
Religion	-	More Buddhist
Literacy status	Higher	Lower
Education Level	Higher	Lower
Occupation	Students rather than homemakers	-
Husband presence	NA	Lower absentee husbands
SES Quintile	Higher	Lower
Mobile Telephone ownership	Higher	Lower
Radio ownership	Higher	Lower
Radio listening	Higher overall and everyday exposure	Lower overall and everyday exposure
Key hours listen to radio	Unmarried: 8-9pm, 4-5pm, 10-11am, 9-10am Married: 4-5pm, 6-7am, 10-11am	Mountain: 8-9pm, 3-4pm, 7-8am Hill: 4-5pm, 10-11am, 6-7am,
Radio programs listen to at least weekly (among those exposed)	More likely to listen to Sathi sanga man ka kura and filmy gauf	More likely to listen to Lok Lahari, Sathi sanga man ka kura, and filmy gauf
TV listening	Higher overall and everyday exposure	Lower overall and everyday exposure
Magazines/newspapers	Higher overall exposure to magazines/newspapers	Lower overall exposure to magazines/newspapers
Exposure to 3 mass media	Higher exposure to all 3	Lower exposure to all 3

## 3.6 Recommendations

It is important to design and use appropriate content and communication method which are better suited to specific segments of the audiences.

### 3.6.1 How to reach audiences/channels

Given the low usage of broadcast media by women in these areas, marketing strategy should focus on non-media channels for key communication, especially for married women and in the mountain areas.

- However, this approach can be reinforced through overarching radio programming and mobile phone usage, especially for hill residents and unmarried women.
  - For mobile phones:
    - Develop text messages for relevant products. For example, to maximize effectiveness, ORS messages could be used to create awareness during the diarrhea season. Text messages in Nepali script will be more effective.
    - CRS should consider a hotline strategy for people to get advice related to products; this could be particularly useful for retaining contraceptive users when people are experiencing side effects or when women need Emergency Contraception
  - For radio:
    - Consider using mini-dramas (like the programs that are most watched/listened to) and/or songs to attract attention. These mini-dramas can also be used during group meetings.
    - Likewise, the most popular channels, times and programs should be used to place radio spots, for example: a) Lok lahari and Sathi sanga man ka kura (both especially to reach those in mountains) and suva din, filmy gauf; b) Radio Nepal and Kantipur Radio, and c) key times: 4-5 pm (top slot for married and hill women and second for unmarried) and 8-9 pm (top slot for unmarried and mountain women).

### **3.6.2 Positioning/Promotion**

- Given the high level of illiteracy among the women of mountains and among married women in both areas, ensure that brand names and vocabulary and language used in marketing and counseling materials are easy to understand and that images and concepts are clear and concrete.
- Marketing and communication strategy for all products should address the high degree of religious and ethnic diversity in these regions. This is important for both interpersonal and mass communications; people often respond more positively if they feel that images and activities relate more directly to them and their belief and background.
- As almost 40% (lower in the mountains) of married women have husbands that live away most of the (or all) year, marketing and communication strategy for all products should utilize this situation.

## Chapter 4 Contraception

Information regarding the knowledge, attitudes and practices (KAP) of contraception among the responding married women was collected in the survey. This chapter discusses respondent's knowledge, attitudes and use of contraception. Similarly, respondents' awareness regarding the specific brands of contraceptives including intention for future use and willingness to pay for the specific contraceptive products are also discussed in this chapter.

### 4.1 Marriage and fertility and opinions on number and spacing of children

The median age at marriage was estimated at 17 years for the women of both mountain and hills with the standard deviation of 3.1 in mountain and 2.7 in hills. A little more than one-fifth of the respondents with a higher percentage in mountain region (28%) reported their age at first marriage was less than 16 years. Nearly a quarter of the respondents reported that their first marriage was held at the age of 20 years or more (Table 4.1).

**Table 4.1 Percent distribution of currently married women aged 15-49 years by age at first marriage and ecological regions**

Age at first marriage	Mountain	Hills	Total
<16 years	28.2	19.5	21.4
16-17 years	22.3	31.4	29.4
18-19 years	24.9	27.8	27.1
20+ years or more	24.6	21.3	22.0
<b>Median</b>	<b>17.0</b>	<b>17.0</b>	<b>17.0</b>
<b>SD</b>	<b>3.1</b>	<b>2.7</b>	<b>2.8</b>
<b>Range</b>	<b>12-28</b>	<b>10-28</b>	<b>10-28</b>
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>

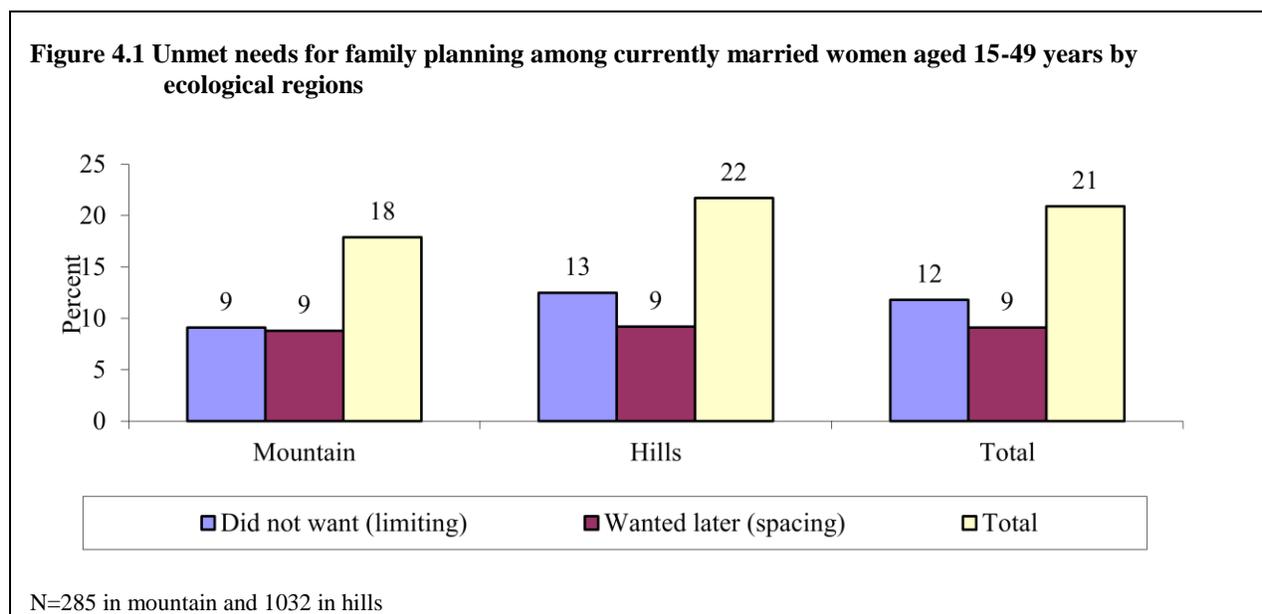
Of the 1400 married women included in the study 92% (n=1293) had given a birth to a child (Table not shown). The mean number of children ever born (CEB) by gender (Table 4.2) was found to be 2.73 while that of children currently living was found to be 2.53 which is lower than the national average (3.04 CEB and 2.66 currently living) (DHS 2006), mostly due to lower numbers in the hills: the corresponding numbers for mountains are very close to national average. On average, women in the study areas experienced the loss of 0.20 children (0.28 children in mountain and 0.18 in hills).

**Table 4.2 Mean number of children ever born and currently living children among currently married women by ecological regions**

Description	Mountain (n=305)		Hills (n=1095)		Total (n=1400)	
Mean number of children ever born CEB (SD)	3.00	(2.10)	2.66	(1.77)	2.73	(1.85)
Mean number of living children (SD)	2.71	(1.83)	2.48	(1.60)	2.53	(1.65)
Mean number of sons ever born (SD)	1.41	(1.16)	1.24	(1.05)	1.28	(1.07)
Mean number of daughters ever born (SD)	1.30	(1.20)	1.24	(1.17)	1.25	(1.17)
Mean number of sons not alive now (SD)	0.15	(0.42)	0.10	(0.36)	0.11	(0.37)
Mean number of daughters not alive now (SD)	0.13	(0.44)	0.08	(0.33)	0.09	(0.36)

In order to examine the need for family planning services all respondents who had ever given birth or were pregnant at the time of survey were asked whether for their current or last pregnancy was planned. Overall, 21% of the respondents (18% in mountain and 22% in hills) reported that their last pregnancy was unwanted at all (12%) or not wanted at that time (9%). Thus, the unmet need for

family planning is estimated at 21% of which 9% was for spacing and 12% was for limiting births (Figure 4.1).



Opinions of both the unmarried and married respondents about the ideal number of children were assessed during the survey. The results are presented in Table 4.3. The mean number of children considered to be ideal 2.3 was slightly higher among the women of mountain (2.5 children) than those of hills (2.2 children). Three-fourths (76%) of respondents considered 2 children as ideal followed by 17% (22% in the mountains) who thought 3 children was ideal. Only a small proportion (5%, 11% in the mountains) considered 4 children to be ideal. A higher proportion of unmarried hill women considered 2 children as ideal compared to unmarried women in the mountain.

**Table 4.3 Percentage distribution of unmarried and currently married women aged 15-49 years by opinion on the ideal number of children a couple should have**

Ideal number of children a couple should have	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
1	2.4	1.0	1.3	3.8	2.1	2.5	3.5	1.9	2.2
2	75.3	62.6	65.4	88.3	75.6	78.4	85.5	72.8	75.6
3	17.6	23.6	22.3	7.0	18.3	15.7	9.3	19.4	17.2
4	3.5	10.8	9.2	1.0	3.2	2.7	1.5	4.9	4.1
5+	1.2	1.9	1.8	-	0.8	0.6	0.3	1.1	0.9
<b>Mean</b>	<b>2.26</b>	<b>2.50</b>	<b>2.45</b>	<b>2.05</b>	<b>2.25</b>	<b>2.21</b>	<b>2.10</b>	<b>2.31</b>	<b>2.26</b>
<b>SD</b>	<b>0.62</b>	<b>0.79</b>	<b>0.76</b>	<b>0.38</b>	<b>0.59</b>	<b>0.60</b>	<b>0.45</b>	<b>0.65</b>	<b>0.61</b>
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

Short birth intervals are generally associated with an increased risk for the lives of both the mothers and newborns. Data showed that on average women indicated an interval of 4.1 years (4.0 in mountains and 4.2 among unmarried) would be ideal from one birth to another, with 40% saying 5 years (Table 4.4).

**Table 4.4 Percent distribution of unmarried and currently married women aged 15-49 years by opinion regarding birth spacing, best ways to space and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Opinion on ideal number of years to wait between births</b>									
1	-	-	-	0.3	0.3	0.3	0.3	0.2	0.2
2	10.6	13.4	12.8	6.3	10.2	9.4	7.3	10.9	10.1
3	22.4	22.6	22.6	19.7	21.2	20.9	20.3	21.5	21.2
4	15.3	28.5	25.6	24.8	23.0	23.4	22.8	24.2	23.9
5	44.7	31.5	34.4	44.4	41.2	41.9	44.5	39.1	40.3
6	7.1	3.9	4.6	2.9	3.4	3.3	3.8	3.5	3.6
7	-	-	-	1.6	0.7	0.9	1.3	0.6	0.7
<b>Mean</b>	<b>4.15</b>	<b>3.90</b>	<b>3.95</b>	<b>4.22</b>	<b>4.07</b>	<b>4.11</b>	<b>4.20</b>	<b>4.04</b>	<b>4.07</b>
<b>SD</b>	<b>1.17</b>	<b>1.11</b>	<b>1.13</b>	<b>1.07</b>	<b>1.12</b>	<b>1.11</b>	<b>1.09</b>	<b>1.12</b>	<b>1.11</b>
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>
<b>Opinion on the best way to space births</b>									
Female Sterilization	-	2.0	1.5	2.2	4.6	4.0	1.8	4.0	3.5
Male Sterilization	-	3.9	3.1	3.2	8.2	7.1	2.5	7.3	6.2
IUD	9.4	5.9	6.7	11.7	8.2	9.0	11.3	7.7	8.5
Injectable	51.8	54.8	54.1	34.0	38.4	37.4	37.8	41.9	41.0
Implants	9.4	7.2	7.7	12.1	10.6	10.9	11.5	9.9	10.2
Pills	15.3	14.1	14.4	8.6	8.3	8.4	10.0	9.6	9.7
Male Condoms	10.6	3.9	5.4	15.9	6.8	8.8	14.8	6.1	8.1
Rhythm/periodic abstinence	-	0.7	0.5	1.0	1.1	1.1	0.8	1.0	0.9
Withdrawal	-	3.6	2.8	-	3.7	2.9	-	3.7	2.9
13= Avoid sex	2.4	1.0	1.3	0.6	3.6	2.9	1.0	3.0	2.6
Other (to be used whatever method suitable for whomever)	-	0.3	0.3	-	0.1	0.1	-	0.1	0.1
Do not know; have not thought yet	1.2	2.6	2.3	10.8	6.5	7.4	8.8	5.6	6.3
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

When asked about the best way to space births, 41% of respondents (54% in mountains) chose injectable contraceptives. Nearly one-tenth of the women also chose oral pills, implants, IUDs and male condoms as the best way to space births, with unmarried women more likely to mention each of these – and less likely to mention injectable - than married women (Table 4.4). A further one-tenth (10%) of the respondents mentioned that the best way to space births is male or female sterilization, indicating some confusion about the differences between permanent and temporary methods of contraception. And six percent said they did not know.

## 4.2 Knowledge and use of contraception

### 4.2.1 Knowledge of contraception among MWRA

All the married women included in the survey were asked if they had heard of any ways or methods a person could use to avoid getting pregnant. Each method not mentioned spontaneously was read to them, so the following results include the total responses. Almost all the MWRA respondents in both mountain and hills reported having heard of at least one contraceptive method and 94% reported to have heard of at least three modern methods.

More than 9-in-10 respondents were found to be aware of three contraceptive methods, namely female sterilization, male sterilization and injectable. Similarly, about 90% of the respondents said they were aware of oral pills and condoms. Approximately three quarters of the respondents also

reported having heard of IUD and Implants. Region-wise data shows that women in the hills were more likely to be aware of all seven of these contraceptive methods than the women of mountain areas (Table 4.5). Awareness of each the other three methods asked – female condom, rhythm and withdrawal – was below 40%, but higher in the hills than in the mountains.

**Table 4.5 Percent distribution of currently married women aged 15-49 years by knowledge of different contraceptive methods and ecological regions**

Contraceptive methods	Mountain (n=305)	Hills (n=1095)	Total (n=1400)
Female Sterilization	83.3	93.4	91.2
Male sterilization	83.9	94.3	92.1
Injectable	91.5	97.7	96.4
Pills	77.7	90.0	87.3
Condom-	77.0	91.4	88.3
Implants	63.9	82.0	78.1
IUD	60.0	82.3	77.4
Female condom	13.1	31.6	27.6
Rhythm method	22.3	32.5	30.3
Withdrawal	26.6	39.8	36.9
<b>At least one method</b>	<b>98.4</b>	<b>99.2</b>	<b>99.0</b>
<b>At least three modern methods</b>	<b>86.6</b>	<b>96.3</b>	<b>94.2</b>

## 4.2.2 Use of contraception

### 4.2.2.1 Ever use and current use of contraceptive methods

Approximately two-thirds (68%) of the respondents reported using a contraceptive method at some point, with 61% reported having used a modern method (Table 4.4). Injectable (35%) was reported as the most ever used method in both the mountain and hill regions followed by oral pills (13%), withdrawal (12%), male sterilization (9%), condom (8%) and female sterilization (7%). The ever use of IUDs and Implants was only about 3%. There was not much variation between mountains and hills on ever use by method.

Overall, 45% of these married women said they were using a modern contraceptive at the time of survey which is slightly higher than that of the national average of 43%<sup>2</sup>. Injectable were the most currently used contraceptives (17%), followed by male sterilization (9%) and female sterilization (7%). Approximately 5% of the women were currently using oral pills. The current use of other spacing methods such as condoms, IUDs and implants were each less than 4% in both the mountain and hills regions (Table 4.6).

<sup>2</sup> Nepal Demographic and Health Survey 2011 (Preliminary Report).

**Table 4.6 Percent distribution of currently married women aged 15-49 years by ever use and current use of contraceptive methods and ecological regions**

Contraceptive methods	Mountain (n=305)		Hills (n=1095)		Total (n=1400)	
	Ever use	Current use	Ever use	Current use	Ever use	Current use
Female Sterilization	3.9	3.9	7.4	7.4	6.6	6.6
Male sterilization	11.1	11.1	8.8	8.8	9.3	9.3
IUD	5.2	2.6	2.3	2.0	2.9	2.1
Injectable	37.0	18.0	34.5	16.4	35.1	16.8
Implants	2.6	1.3	2.5	2.1	2.5	1.9
Pills	13.4	6.2	12.8	5.2	12.9	5.4
Condom	3.0	0.7	9.9	3.7	8.4	3.1
Rhythm method/ periodic	3.6	0.3	2.4	0.5	2.6	0.5
Withdrawal	10.2	4.3	12.6	5.4	12.1	5.1
<b>Use of any FP method</b>	<b>66.6</b>	<b>48.5</b>	<b>68.3</b>	<b>50.7</b>	<b>67.9</b>	<b>50.2</b>
<b>Use of modern FP method</b>	<b>59.0</b>	<b>43.9</b>	<b>62.0</b>	<b>45.5</b>	<b>61.4</b>	<b>45.1</b>

Table 4.7 shows the number of women according to the method they are currently using by method they reported to have ever used. This table explores about the method switch. The shaded diagonal cell implies for those women who have not switched a method, that is, these women are currently using the same method which they reported to have ever used. For example, there were 91 women who reported to have ever used female sterilization are also using female sterilization. None of those who have reported to have used female sterilization and the male sterilization have switched the method of contraceptive use between the first time they have used these method to the survey date.

**Table 4.7 Numbers of currently married women aged 15-49 years who have ever used a family planning method by contraceptive method they are currently using**

Method Ever use	Method currently using									Total
	Currently Not Using	FS	MS	IUD	Injectable	Implant	OCP	Condom	Natural	
FS	0	91	0	0	0	0	0	0	0	91
MS	0	0	129	0	0	0	0	0	0	129
IUD	3	2	0	30	2	0	0	1	0	38
Injectable	145	0	0	0	231	0	23	5	7	411
Implant	3	0	0	0	2	27	0	1	0	33
OCP	38	0	1	0	0	0	53	2	3	97
Condom	24	0	0	0	0	0	0	32	4	60
Natural	35	0	0	0	0	0	0	0	57	92
<b>Total</b>	<b>248</b>	<b>93</b>	<b>130</b>	<b>30</b>	<b>235</b>	<b>27</b>	<b>76</b>	<b>41</b>	<b>71</b>	<b>951</b>

Note: Women with respect to ever use have reported more than one method. For the purpose of the analysis, the method that was the highest was considered as the single method reported for ever use category. For example if a woman has reported two methods as ever use: condom and IUD, then IUD is considered as the method reported for ever use in the analysis in table 4.7.

For IUD, total 38 women reported to have ever used this method, among which 30 are still (at the time of survey) using IUD while of the remaining 8, 2 women are using Injectable, 2 have switched to female sterilization, 1 has switched to condom and three have stopped using any method.

The highest method switchers were the women who reported to have ever used injectable. For example, there were 411 women who reported to have ever used injectable. Of them only 321 were using injectable at the time of the survey. The remaining reported to have switched their method of

contraceptive, among which 7 switched to natural method, 5 to Condom, 23 to OCP, and 145 stopped using any method.

The majority of the women who switched their method were the one who reported to have ever used injectable followed by OCP. Majority of the switchers among natural method users and condom users have switched to no method at the time of survey.

#### 4.2.2.2 Current user's profile

Differentials according to the selected background characteristics on the current use of any modern contraceptive methods, injectable and other non-permanent modern methods are presented in Table 4.8.

**Table 4.8 Percent distribution of currently married women aged 15-49 years by their contraceptive use status and selected background characteristics**

Background characteristics	Percent				Number
	Any modern method users	Injectable Users	Other non-permanent users	Non-users	
<b>Region of residence</b>	<b>ns</b>	ns	Ns		
Mountain	43.9	18.0	10.8	56.1	305
Hills	45.5	16.4	13.1	54.5	1095
<b>Age of women (in years)</b>	<b>*</b>	ns	*		
15-24	32.2	16.6	15.1	67.8	385
25-34	46.5	17.8	12.7	53.5	568
35-44	58.9	17.9	12.6	41.1	341
45-49	40.6	8.5	2.8	59.4	106
<b>Level of education</b>	<b>ns</b>	ns	*		
No schooling/illiterate	46.5	17.5	9.1	53.5	749
Some primary	45.2	17.6	12.8	54.8	250
Some secondary	41.5	12.8	17.9	58.5	234
SLC or above	44.3	18.0	20.4	55.7	167
<b>Religion</b>	<b>ns</b>	ns	Ns		
Hindu	46.3	16.4	12.8	53.7	1086
Non-Hindu	41.1	18.2	11.8	58.9	314
<b>Caste/ethnicity</b>	<b>*</b>	*	Ns		
Hill Brahmin/Chhetri	47.4	12.5	14.9	52.6	489
Hill Janajati	39.5	15.7	11.6	60.5	613
Hill Dalit	47.7	21.8	10.2	52.3	216
Newar	67.1	37.8	12.2	32.9	82
<b>Migration status</b>	<b>ns</b>	ns	Ns		
Non-migrant	44.5	16.1	12.3	55.5	1183
Migrant	48.8	20.3	14.3	51.2	217
<b>Exposure to media</b>	<b>ns</b>	ns	*		
None	45.1	17.4	9.5	54.9	494
Only one	43.4	17.6	11.9	56.6	523
Only two	46.7	14.6	12.9	53.3	240
All three	49.0	15.4	25.2	51.0	143
<b>SES Index</b>	<b>*</b>	ns	*		
Lowest	36.5	12.4	11.4	63.5	315
Second	44.3	20.6	9.1	55.7	287
Middle	47.2	18.8	11.1	52.8	271
Fourth	47.1	17.1	15.6	52.9	263
Highest	52.3	15.5	16.3	47.7	264
<b>Total</b>	<b>45.1</b>	<b>16.8</b>	<b>12.6</b>	<b>54.9</b>	<b>1400</b>

\*Significant at <.05 level  
ns= Not significant

Use of modern contraceptives was highest among women aged 35-44 years and lowest among women of 15-19 years. Similarly, women with the highest SES quintile were significantly more likely to currently use contraceptives than the women of lower quintiles. Hills *Janajati* women were significantly less likely to be current users of modern contraceptives than the women of other caste groups. However, no significant difference was observed on the current use of modern contraceptives across the region of residence, literacy status, religion, migration and media exposure of the respondents. The only significant differences for current injectable users was for caste/ethnicity – where both hill Brahmi/Chhetri and Hill *Janajati* were less likely to use injectable than Hill Dalit and Newar. Women over 45 were less likely to use other non-permanent methods as were those with less schooling, lower SES and less exposure to media. This indicates that injectable is used, instead of other non-permanent methods, not only by more people but also by a broader group of people (Table 4.8).

#### 4.2.2.3 Source of supply of current methods

All the respondents who were currently using any contraceptive methods were asked about the sources from where they first obtained their current method. The major source of supply of mentioned was government health sectors (78%) followed distantly by private sector (11%) and non-government sectors (6%), (Table 4.9).

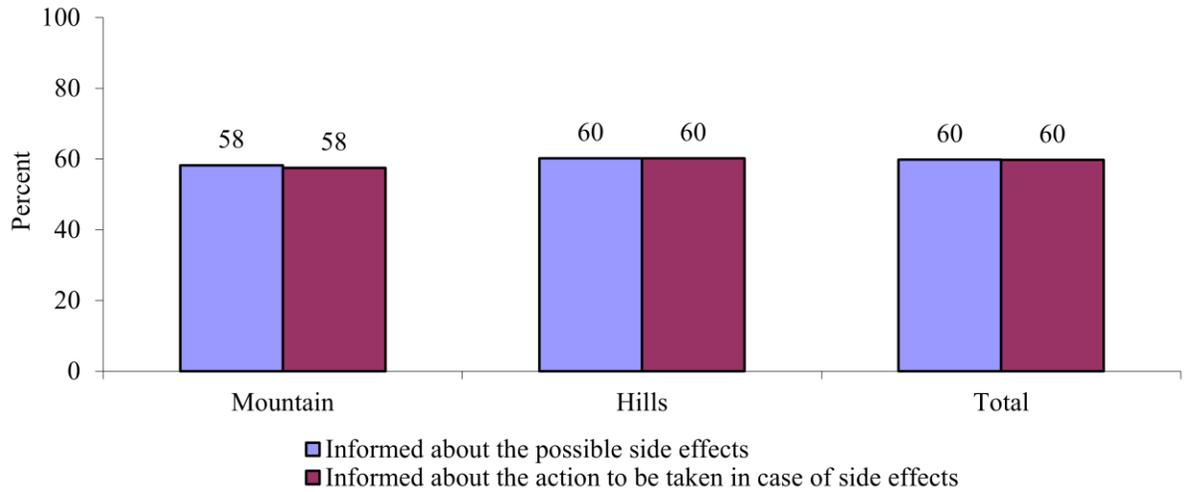
**Table 4.9 Percent distribution of currently married women aged 15-49 years who are currently using a modern method of contraceptives by sources from where they first obtained their contraceptives and ecological regions**

Source first obtained the method that were currently using	Mountain	Hills	Total
<b>Government sector</b>	<b>80.6</b>	<b>76.9</b>	<b>77.7</b>
Government hospital/clinic	23.9	27.1	26.4
Health post	35.1	18.3	21.8
Sub-health post	13.4	18.3	17.2
Mobile clinic	3.7	9.0	7.9
FCHV	0.7	2.0	1.7
PHC center	2.2	1.2	1.4
PHC outreach	1.5	1.0	1.1
<b>Non-government (NGO) Sector</b>	<b>5.2</b>	<b>5.6</b>	<b>5.5</b>
FPAN	4.5	3.2	3.5
UMN	-	1.8	1.4
Marie Stopes	0.7	0.6	0.6
<b>Private medical sector</b>	<b>9.0</b>	<b>11.4</b>	<b>10.9</b>
Pharmacy	0.7	6.8	5.5
Private hospital/clinic	8.2	4.4	5.2
Sangini outlet	-	0.2	0.2
<b>Other source</b>	<b>4.5</b>	<b>3.6</b>	<b>3.8</b>
Camps; sterilization camp	4.5	1.2	1.9
In India	-	2.2	1.7
Shop	-	0.2	0.2
<b>Total</b>	<b>134</b>	<b>498</b>	<b>632</b>

#### 4.2.2.4 Information received on side effect and instructions for its remedy

The current users were also asked if, when they first got their current method, they were told about the possible side effects or problems they might experience from its use including the actions to be taken for its remedy. The results are presented in Figure 4.2.

**Figure 4.2 Percentage of currently married women aged 15-49 years who are currently using a modern method of contraceptives and informed about the possible side effects of current method and actions to be taken in case of problems by ecological regions**



n=134 in mountain and 498 in hills

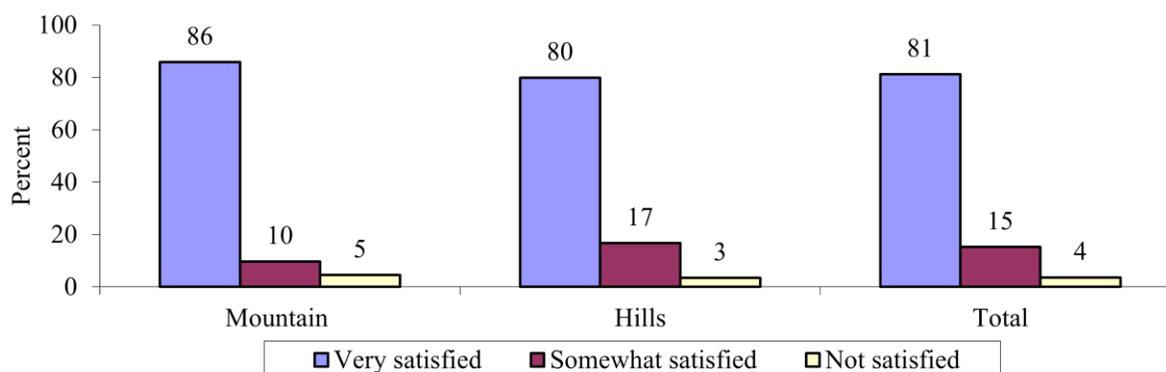
Almost equal proportions of the respondents from both the mountain and hills (approximately 60%) reported that they were told about the possible side-effects from the method selected, including actions to be taken in case of problems. Further analysis shows that nearly two-thirds (66%) of the injectable users were informed by the service providers about the possible side-effects including action to be taken in case of side-effects from the use of injectable (Table not shown).

#### 4.2.3 Satisfaction with and reasons for using current method

##### 4.2.3.1 Satisfaction with current method and reasons

Respondents' level of satisfaction with the contraceptive method that they were currently using was also assessed during the survey. Overall, 4-in-5 respondents said they were very satisfied with the current method followed by about 15% who were somewhat satisfied. Only about 4% of the respondents indicated dissatisfaction with their current method (Figure 4.3). While a higher percentage of mountain users said they were very satisfied, no significant difference was observed across the respondents' region of residence at 5 % level.

**Figure 4.3 Percentage of currently married women aged 15-49 years who are currently using a modern method of contraceptives by level of satisfaction**



n=134 in mountain and 498 in hills

The main reasons stated for satisfaction (very and somewhat) of current users (all methods combined) were: effectiveness, lack of side effects and easy to take. These are the key to satisfying clients. The main reason for not being satisfied is side effects. Satisfaction can be increased by proper explanation of possible side effects beforehand plus what to do if they occur (Table 4.10).

**Table 4.10 Percent distribution of currently married women aged 15-49 years who are currently using contraceptives by reasons for satisfaction and dissatisfaction from current method**

Reason for satisfaction	Level of satisfaction from current method (including traditional method) [Multiple Responses]					
	Very		Somewhat		Not	
	n	%	n	%	n	%
Effective	450	86.7	63	63.0	0	0.0
No side effects	342	65.9	34	34.0	0	0.0
Easy to take	147	28.3	44	44.0	0	0.0
Inexpensive	34	6.6	11	11.0	0	0.0
Permanent method; long lasting method; confirm for 3 month	10	1.9	3	3.0	0	0.0
Other reasons for satisfaction(no desire for children)	8	1.5	0	0.0	0	0.0
Reason for dissatisfaction	Level of dissatisfaction from current method (including traditional method) [Multiple Responses]					
Ineffective	0	0.0	0	0.0	3	16.7
Side effect	0	0.0	0	0.0	18	100.0
Difficult to use	0	0.0	0	0.0	3	16.7
Expensive	0	0.0	0	0.0	2	11.1
Service centre too far	0	0.0	0	0.0	3	16.7
<b>Total</b>	<b>519</b>	<b>100.0</b>	<b>100</b>	<b>100.0</b>	<b>18</b>	<b>100.0</b>

For each of the five main methods currently used, effectiveness is mentioned most as why people are satisfied for four of the five methods, and second-most for condoms, where “no side effects” was mentioned more often. Lack of side effects was also the second most mentioned reason for female and male sterilization as well as pills. Easy to use was second-most mentioned for injectable and third for pills and male condoms (Table 4.11).

**Table 4.11 Percent distribution of currently married women aged 15-49 years who are using five methods of contraceptives by reasons for satisfaction with the method they are currently using**

Reasons for satisfaction (Multiple Response)	F.Ster.	M. Ster	Inject	Pills	M.Cond
Effective	88.2	95.4	76.2	82.9	70.7
No side effects	59.1	67.7	40.4	68.4	78.0
Easy to use	6.5	6.2	56.2	25.0	36.6
Inexpensive	10.8	3.1	7.7	15.8	9.8
Permanent, long lasting	1.1	1.5	2.6	0.0	0.0
Other	2.2	0.8	0.0	0.0	7.3
Total	93	130	235	76	43

#### 4.2.3.2 Reasons for deciding to use current method

Those who were currently using any modern method were further asked about the reasons for deciding to use the particular method instead of using other methods.

**Table 4.12 Percent distribution of currently married women aged 15-49 years who are currently using a contraceptive by reasons for reasons for choosing it and ecological regions**

Reasons for deciding to use the particular method instead of using other methods of contraception (Multiple Response)	Reasons (multiple response)			Most important reason		
	Mountain	Hills	Total	Mountain	Hills	Total
Very effective to prevent pregnancy	85.8	80.1	81.3	50.0	53.8	53.0
Safe/few side effects	54.5	44.0	46.2	13.4	11.6	12.0
Easy to use	46.3	36.1	38.3	20.9	14.7	16.0
Disliked other methods	14.2	9.0	10.1	1.5	2.6	2.4
Recommended by service provider	11.9	6.2	7.4	3.0	2.0	2.2
Recommended by friends/relatives	9.0	2.4	3.8	0.7	1.0	0.9
Recommended by husband	40.3	16.9	21.8	9.7	6.2	7.0
Do not know about other method	1.5	1.2	1.3	0.7	0.2	0.3
Desire for no more children	-	4.8	3.2	-	3.8	3.0
Permanent/long lasting method; confirm for 3 month	-	3.8	3.0	-	2.6	2.1
Other±	-	1.8	1.4	-	1.4	1.1
<b>Total</b>	<b>134</b>	<b>498</b>	<b>632</b>	<b>134</b>	<b>498</b>	<b>632</b>

± Other includes: other methods not effective; easy to use and can get freely; no hurdle in using; lack of time.

The most frequently cited reasons for choosing a particular method were effectiveness in preventing births, safe or few side effects and ease of use (Table 4.12). About two-fifths of respondents (40% in the mountain region) reported their husband’s recommendation as a reason for using this particular method.

Respondents were also asked for the ONE most important reason for choosing the current method instead of other contraceptives. The same responses were mentioned, with over half giving “effectiveness” as the main reason. The most important reasons cited by the majority of the respondents from both areas were (Table 4.13):

- Very effective to prevent pregnancy (50% in mountain and 54% in hills)
- Easy to use (21% in mountain and 15% in hills)
- Safe or few side effects (13% in mountain and 12% in hills)
- Recommended by husband (10% in mountain and 6% in hills)

When looking by current method used, the number one answer: (at least 44% of all answers) for “ONE most important reason you decided to use” for each of the five methods was effectiveness. Again, a key reason for injections was ease of use and for condoms was a safe/few side effect (Table 4.13).

**Table 4.13 Percent distribution of currently married women aged 15-49 years who are currently using a contraceptive by primary reason for choosing it**

What was the <b>ONE</b> most important reason (you decided to use this method instead of other methods)?	Female sterilization	Male sterilization	Injectable	Pills	Male condom
Very effective to prevent pregnancy	55.9	65.4	44.4	57.9	51.2
Safe/few side effects	9.7	12.3	9.8	11.8	23.3
Easy to use	-	2.3	32.5	18.4	14.0
Recommended by husband	16.1	6.2	5.1	2.6	7.0
Desire for no more children	10.8	6.2	-	-	-
<b>Total</b>	<b>93</b>	<b>130</b>	<b>235</b>	<b>76</b>	<b>43</b>

When further asked if their husbands were in favor or not of the idea of using their current method, all the respondents in mountains and almost all (97%) in hills responded affirmatively that their husbands were in favor of using the method. Only 1% of the respondents in hills reported that their husbands had opposed to the idea of using the current method (Table not shown).

#### 4.2.4 First use of contraceptive method, among MWRA who ever used contraception

The median age for first using any contraceptive method was 23, with 81% starting under age 30; 37% started between 20 and 24 years, 23% between 25-29 years, and 21% between 14 and 19 years. The highest percentage (47%, 52% in the mountains) first used injectable, followed by oral pills (12%), withdrawal (11%) and condoms (9%). A considerable proportion (16%) of the respondents also reported using sterilization as their first method (Table 4.14).

**Table 4.14 Percent distribution of currently married women aged 15-49 years who ever used a contraceptive by age at first using it, method first used and ecological regions**

Description	Mountain	Hills	Total
<b>Age at first started using any method to delay or space births</b>			
14-19 years	21.2	20.9	20.9
20-24 years	35.5	37.6	37.1
25-29 years	22.7	23.4	23.2
30-34 years	11.8	12.4	12.3
35 years or more	8.9	5.7	6.4
<b>Median (SD)</b>	<b>23 (6)</b>	<b>23 (6)</b>	<b>23 (6)</b>
<b>Range</b>	<b>14-41</b>	<b>14-41</b>	<b>14-41</b>
<b>Total</b>	<b>203</b>	<b>748</b>	<b>951</b>
<b>Method first used</b>			
Female Sterilization	3.4	6.8	6.1
Male Sterilization	9.4	9.8	9.7
IUD	4.9	2.3	2.8
Injectable	52.2	44.9	46.5
Implants	2.0	1.3	1.5
Pills	12.8	12.3	12.4
Male Condoms	3.4	11.0	9.4
Rhythm/periodic abstinence	1.0	0.8	0.8
Withdrawal	10.8	10.8	10.8
<b>Total</b>	<b>203</b>	<b>748</b>	<b>951</b>

On average, the women had 2 children at the time they first used contraception: 31% of women had one child, followed by 22% who had two children, 15% three children, and 15% no children. The median age of their youngest child at the time of first use was 8 months (0.6 years); 62% said their youngest child was below one year of age, followed by 23% whose youngest child was one year old, and 9% whose child was two years old (table 4.15).

**Table 4.15 Percent distribution of respondents by number of children and age of the youngest child at the time of first using contraceptive**

Description	Mountain	Hills	Total
<b>Number of living children at the time of first started using a method</b>			
None	13.3	15.8	15.2
1	34.0	29.7	30.6
2	19.7	22.5	21.9
3	11.3	16.3	15.2
4	10.8	9.5	9.8
5 or more	10.8	6.3	7.2
<b>Median (SD)</b>	<b>2.0 (1.5)</b>	<b>2.0 (1.4)</b>	<b>2.0 (1.4)</b>
<b>Range</b>	<b>0-7</b>	<b>0-7</b>	<b>0-8</b>
<b>Total (Currently married women aged 15-49 years who have ever used a contraceptive)</b>	<b>203</b>	<b>748</b>	<b>951</b>
<b>Age of the youngest child at the time of first use</b>			
Less than one year	59.7	63.0	62.3
1 year	26.1	22.4	23.2
2 years	9.1	9.4	9.3
3 years	1.7	3.3	3.0
4 years or more	3.4	1.9	2.2
<b>Median (in month) (SD)</b>	<b>6 (14)</b>	<b>8 (11)</b>	<b>8 (12)</b>
<b>Total (Currently married women aged 15-49 years who had at least one child)</b>	<b>176</b>	<b>630</b>	<b>806</b>

#### 4.2.5 Future use of contraceptive methods

All married women (excluding those using a permanent method of contraception) were asked about their desire for (additional) children. Data presented in Table 4.16 shows that about one-third of the women wanted to have (more) children in the future slightly more in the mountain than in the hills. As expected, women who are younger and those with lower parity were significantly more likely to desire (more) children in the future. In addition, a higher proportion of women with SLC and above level of education and exposed to all three media wanted to have (more) children than their respective counterpart; these SES characteristics are consistent with the younger, lower parity women.

**Table 4.16 Percent distributions of currently married women aged 15-49 years not using permanent method and want to have children in the future by selected background characteristics**

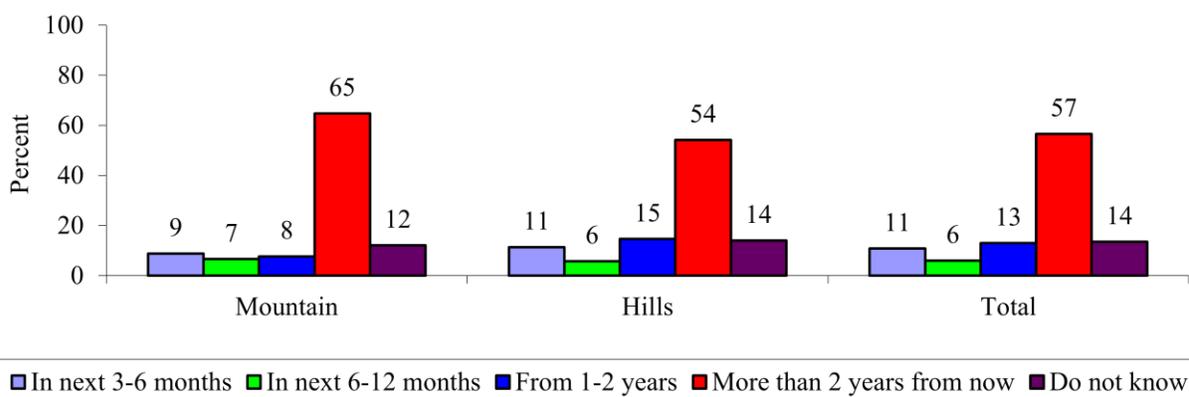
Background characteristics	Percent		Number
	Yes	No	
<b>Region: Region of residence</b>	<b>Ns</b>		
Mountain	35.1	64.9	259
Hills	33.6	66.6	918
<b>Age of women (in years)</b>	*		
15-19	95.4	4.6	87
20-29	46.3	53.7	596
30-49	8.1	91.9	494
<b>Number of living children</b>	*		
0	95.5	4.5	110
1	79.7	20.3	276
2	14.5	85.5	332
3	9.4	90.6	203
4	5.0	95.0	121
5 or more	0.7	99.3	135
<b>Level of education</b>	*		
No schooling/illiterate	22.8	77.2	600
Some primary	36.2	63.8	213
Some secondary	48.8	51.2	209
SLC or above	53.5	46.5	155
<b>Religion</b>	<b>Ns</b>		
Hindu	34.0	66.0	898
Non-Hindu	33.7	66.3	279
<b>Caste/ethnicity</b>	<b>Ns</b>		
Hill Brahmin/Chhetri	33.8	66.2	390
Hill Janajati	33.5	66.5	538
Hill Dalit	36.5	63.5	181
Newar (6)	30.9	69.1	68
<b>Migration status</b>	<b>Ns</b>		
Non-migrant	34.4	65.6	992
Migrant	31.4	68.6	185
<b>Exposure to media</b>	*		
None	30.2	69.8	404
Only one	30.2	69.8	450
Only two	42.3	57.7	194
All three	45.7	54.3	129
<b>SES Index</b>	<b>Ns</b>		
Lowest	30.2	69.8	275
Second	33.1	66.9	245
Middle	31.3	68.8	224
Fourth	39.7	60.3	224
Highest	36.4	63.6	209
<b>Total</b>	<b>33.9</b>	<b>66.1</b>	<b>1177</b>

\*Significant at <.05 level

ns= Not significant

More than half (57%) of the respondents (65% in the mountains) who wanted (more) children said they wanted to become pregnant after more than two years from the survey date. 13% (8% in mountains) said they wanted to become pregnant between 1 and 2 years from now, and 17% said they wanted to become pregnant sooner, within one year (Figure 4.4).

**Figure 4.4 Percentage of currently married women aged 15-49 who are not using a permanent method of contraceptives and want to have more children in future by desired time for becoming pregnant again and ecological regions**



n= 91 in mountain and 308 in hills

Eighty-four percent of MWRA (excluding those who used sterilization) said they intend to use a modern method in the future (Table 4.17), with injectable the method mentioned most often (41%, 61% in the mountains). Other methods mentioned for future/continued use were sterilization (14% female and 10% male), oral pills (13%, 19% in mountains), IUD (11%) and implants (10%) This is similar to the percentages of current method usage.

**Table 4.17 Percent distribution of currently married women aged 15-49 years who are not using a permanent method of contraceptives by intention to use or continue to use any modern contraceptive methods in future, method intend to use and ecological regions, FP/RH/MCH survey, 2011**

Description	Mountain	Hills	Total
<b>Intention to use any modern method</b>			
Yes	84.2	83.3	83.5
No	15.8	16.7	16.5
<b>Total</b>	<b>259</b>	<b>918</b>	<b>1177</b>
<b>Type of method intend to use (Multiple Response)</b>			
Female Sterilization	5.0	11.4	10.0
Male Sterilization	9.2	15.8	14.3
IUD	10.6	10.8	10.8
Injectable	61.0	35.7	41.3
Implants	8.7	10.7	10.3
Pills	18.8	11.4	13.0
Male Condoms	12.4	6.3	7.6
Rhythm/periodic abstinence	0.5	1.4	1.2
Withdrawal	4.6	3.7	3.9
Locational amenorrhea	0.5	-	0.1
Avoid sex	-	0.9	0.7
Do not know	1.8	5.2	4.5
<b>Total</b>	<b>218</b>	<b>765</b>	<b>983</b>

Most of the current users said they will continue with their current method (Table 4.18). This is indicated by the shaded diagonal cells in the table. For example, among current users, 83 % of the IUD users, 63 % of the injectable users, 85 % implant users, 53 % OCP users and 40 % condom users reported to continue to use the method which they are currently using.

Among non-users, majority (31 %) plan to use Injectable, followed by male sterilization, female sterilization, IUD, Pills and condoms. Similarly, among injectable users, majority plan to use sterilization (Male: 15 % and female: 9 %), followed by implants and IUD. Among implant users, 7 % intend to switch to female sterilization followed by 4 % intending to switch to male sterilization and IUD. Similarly, among pills users, 12 % are intending to use female sterilization followed by male sterilization (11 %), IUD (7 %) and Implants (1.3 %). Furthermore, 13 % among the pills users also reported that they intend to switch to Injectable in future.

Among condom users, 22% reported to intend to switch to male sterilization, followed by injectable (13%), IUD (10%) and implants (3%). The interesting point the table reveals is that quite large proportion of the natural family planning users reported to intend to use injectable in future (27 %) followed by male sterilization (10%), IUD (9%), female sterilization, male condom and implants (3 %).

**Table 4.18 Percent distribution of currently married women aged 15-49 years not using permanent contraceptive method but intend to use in future by spacing method of FP currently using and the method they intend to use in future**

Future method intended to use	Current FP method Used						
	Currently not using	IUD	Injectable	Implant	OCP	Condom	Natural
Female Sterilization	11.9	0.0	8.6	7.4	12.0	7.5	3.4
Male Sterilization	15.2	3.4	14.7	3.7	10.7	22.5	10.2
IUD	9.8	82.8	5.6	3.7	6.7	10.0	8.5
Injectable	31.3	3.4	62.5	0.0	13.3	12.5	27.1
Implants	8.3	3.4	6.0	85.2	1.3	2.5	3.4
Pills	9.2	0.0	0.4	0.0	53.3	0.0	1.7
Male Condoms	4.4	0.0	1.7	0.0	0.0	40.0	3.4
Natural	2.7	0.0	0.0	0.0	1.3	0.0	42.4
Do not know	7.3	6.9	0.4	0.0	1.3	5.0	0.0
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (n)	521	29	232	27	75	40	59

Note: Women with respect to method intended to use in future have reported more than one method. For the purpose of the analysis, the method that was the highest was considered as the single method reported as method intended to use in future.

#### 4.2.6 Reasons for non-use of contraceptive methods – future, present, ever

Respondents (n=194) who did not intend to use any modern methods in the future were asked about the reason(s) for not intending to use. Infrequent sex or husband away from home (34%) followed by menopausal or hysterectomy (31%, 54% in mountains) and health concerns/side effects/interference with the body (28%) were the most frequently cited reasons for not intending to use contraceptives. Desire for (more) children (19%) was also mentioned by a sizeable proportion of respondents of both regions. About 14% mentioned that either the respondents or their husband was opposed to using modern methods of contraception (Table 4.19).

**Table 4.19 Percent distribution of currently married women aged 15-49 years not using permanent method and reporting to have no intention to use a method in future by reasons and ecological regions**

Reasons for not planning to use any modern method in the future (Multiple Response)	Mountain	Hills	Total
Infrequent sex/ husband away from home or stays outside	26.8	35.9	34.0
Menopausal, hysterectomy/sub-fecund, in-fecund	53.7	24.8	30.9
Wants more children	9.8	20.9	18.6
Health concern/fear side effects/ interfere with body	26.8	28.1	27.8
Husband opposed	4.9	7.8	7.2
Respondent opposed	2.4	7.8	6.7
Fatalistic/up to God	-	2.0	1.5
Knows no source	4.9	0.7	1.5
Inconvenient to use	-	1.3	1.0
Knows no method	-	0.7	0.5
Other (using natural method)	-	0.7	0.5
Do not know	2.4	0.7	1.0
<b>Total (n)</b>	<b>41</b>	<b>153</b>	<b>194</b>

A total of 435 out of 1400 married respondents reported not using any contraceptives in their life time and another 248 had used before but were currently not using any methods. These women were asked about the reasons for non-use or never use. *Husband away from home* and *infrequent sex* were the main reasons (46% and 21%) given for not using contraceptives by the current non-users and 2<sup>nd</sup> and 3<sup>rd</sup> highest responses from never users, where desire for more children was the most frequently given reason (39%). About 18% said that they never used because they or their husband are opposed. About 14% mentioned health concerns/side effects/interference with body as reasons for both never using and currently not using (Table 4.20).

**Table 4.20 Percent distribution of currently married women aged 15-49 years by reasons for not currently using (among those who used in the past) and never using contraceptive methods, and ecological regions**

Reasons for not currently using and never using any modern contraceptive methods	Not currently using, but have used in the past (n=248)			Never using (n=435)		
	Mountain	Hills	Total	Mountain	Hills	Total
<b>Reproductive health cycle issues</b>						
Menopausal, hysterectomy	14.5	7.3	8.9	9.3	4.4	5.5
Sub-fecund, in-fecund	9.1	1.6	3.2	5.2	1.8	2.5
Pregnant	5.5	6.2	6.0	-	-	-
Child too young/ no resumption of menses	7.3	6.7	6.9	-	-	-
<b>Spousal issues</b>						
Infrequent sex	21.8	20.7	21.0	28.9	32.5	31.7
Husband away from home	32.7	50.3	46.4	10.3	21.3	18.9
<b>Method dissatisfaction or health issues</b>						
Health concern/fear of side effects/ interfere with body	18.2	10.4	12.1	7.2	15.7	13.8
Inconvenient to use	1.8	-	0.4	2.1	1.2	1.4
<b>Access issues</b>						
Knows no method	-	-	-	9.3	2.1	3.7
Lack of access	1.8	-	0.4	3.1	1.8	2.1
Knows no source	-	0.5	0.4	2.1	0.6	0.9
<b>Opposition</b>						
Husband opposed	5.5	2.6	3.2	14.4	9.8	10.8
Respondent opposed	3.6	0.5	1.2	7.2	6.5	6.7
<b>Other issues</b>						
Wants more children	14.5	7.3	8.9	45.4	37.6	39.3
Fatalistic/up to God	-	-	-	1.0	1.8	1.6
Other*	-	-	-	2.1	4.7	4.1
Do not know	-	-	-	4.1	0.9	1.6
<b>Total (n)</b>	<b>55</b>	<b>193</b>	<b>248</b>	<b>97</b>	<b>338</b>	<b>435</b>

\* Other includes: child too young; not necessary; using traditional method; shameful.

### 4.3 Injectable contraceptives

Information regarding level of knowledge and use of injectable contraceptives among MWRA, including brand awareness, exposure to messages, future use intention and willingness to pay for the product, was collected in the survey. This section presents findings on these issues.

#### 4.3.1 Exposure to messages in the last 6 months

All MWRA were asked if they had heard or seen any messages or information about injectable contraceptives in the 6 months preceding the survey (Table 4.21). Nearly 3-in-5 respondents reported to have heard or seen some message or information about injectable. 56% (74% in mountains) of those who heard or saw any message reported that they obtained information about injectable from their friends and 55% (39% in mountains) from the radio. 28% stated they heard from neighbors, 18 % (27% in mountains) reported obtaining information about injectable from FCHVs, 14% from the health facility and/or health worker (only 6% in mountains) and 11% (only 3% in mountains) mentioned television as their information source about injectable.

**Table 4.21 Percent distribution of currently married women aged 15-49 years who have heard or seen a messages or information on injectable contraceptives in the last 6 months by source and ecological regions**

Description	Mountain	Hills	Total
<b>Exposure to any messages or information from any source about <u>injectable</u> over the last 6 months</b>			
Yes	57.7	58.7	58.5
No	42.0	38.4	39.2
Do not know/ cannot remember	0.3	2.8	2.3
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>
<b>Source of information on <u>injectable</u> in the last 6 months (Multiple Response)</b>			
Friends/Relatives	73.9	51.6	56.4
Radio	38.6	59.1	54.7
Neighbors	29.5	27.4	27.8
FCHV	27.3	15.6	18.1
Health facility; health worker	5.7	16.3	14.0
Television	3.4	13.5	11.4
Newspaper/magazine/broacher	2.8	1.9	2.1
Poster/Hoarding Board	2.3	0.8	1.1
In a shop	0.6	1.6	1.3
Husband	-	0.3	0.2
Other±	0.6	0.5	0.5
<b>Total</b>	<b>176</b>	<b>643</b>	<b>819</b>

± Other includes: community meeting; office, women development training; children; school.

Table 4.22 shows data on the exposure of respondents to any messages or information from any sources about injectable in the past six months according to selected background characteristics. A strong positive association was observed between the level of exposure to messages or information on injectable and education and socio-economic status of the women. Respondents who belonged to Hill Janajati caste group and non-Hindu were significantly more likely to have exposure to messages or information about injectable than those of other groups. Similarly, respondents with exposure to more media were significantly more likely to have exposure to injectable contraceptives than those of unexposed ones.

**Table 4.22 Percent distribution of currently married women aged 15-49 years who were exposed to any messages or information on injectable contraceptives in the last 6 months by selected background characteristics**

Background characteristics	Percent exposed to message		Number
	Yes	No	
<b>Region of residence</b>	ns		
Mountain	57.7	42.3	305
Hills	58.7	41.3	1095
<b>Age of women (in years)</b>	ns		
15-19	54.0	46.0	87
20-29	60.4	39.6	637
30-49	57.2	42.8	676
<b>Level of education</b>	*		
No schooling/illiterate	49.3	50.7	749
Some primary	63.6	36.4	250
Some secondary	69.7	30.3	234
SLC or above	76.6	23.4	167
<b>Religion</b>	*		
Hindu	52.9	47.1	1086
Non-Hindu	78.0	22.0	314
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	46.4	53.6	489
Hill Janajati	71.6	28.4	613
Hill Dalit	44.4	55.6	216
Newar	69.5	30.5	82
<b>Migration status</b>	ns		
Non-migrant	57.5	42.5	1183
Migrant	64.1	35.9	217
<b>Exposure to media</b>	*		
None	35.0	65.0	494
Only one	63.9	36.1	523
Only two	76.3	23.8	240
All three	90.2	9.8	143
<b>SES Index</b>	*		
Lowest	31.4	68.6	315
Second	57.5	42.5	287
Middle	62.4	37.6	271
Fourth	75.3	24.7	263
Highest	71.2	28.8	264
<b>Total</b>	<b>58.5</b>	<b>41.5</b>	<b>1400</b>

\*Significant at <.05 level

ns= Not significant

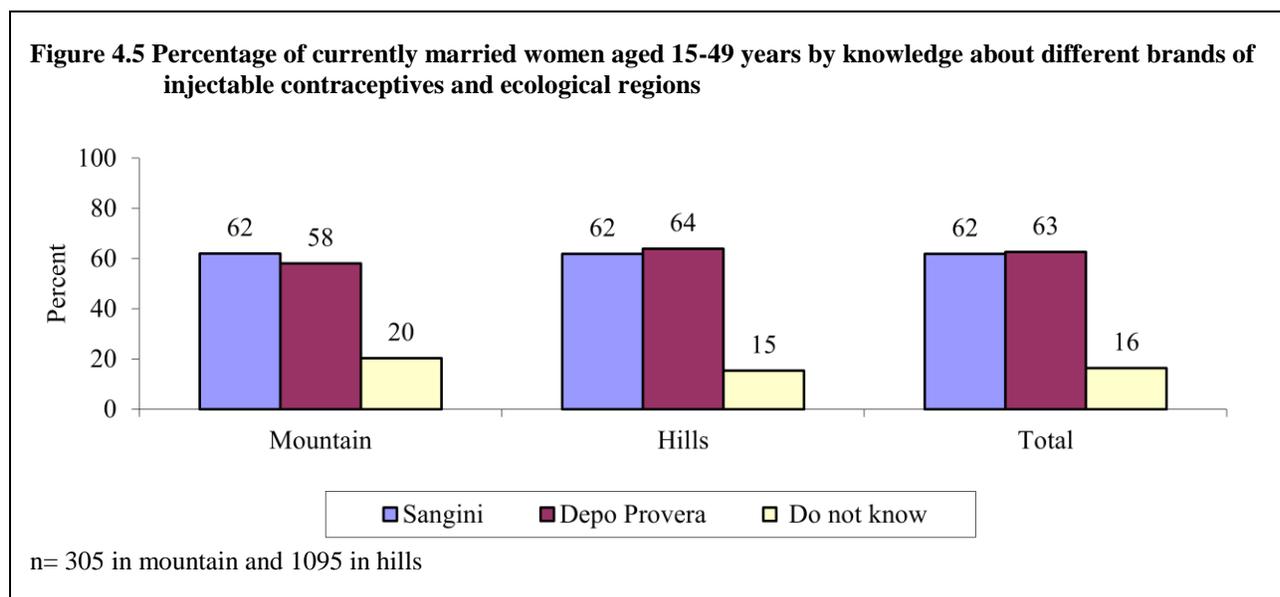
Respondents (n=819) who had exposure to the information on injectable in the last 6 months were asked about the information they obtained. Almost all (96%) the respondents reported at least one message they had heard or seen in the last six months; the commonly cited were: (Table not shown):

- *Ek patak lagae pachi tin mahina dhukka* (one dose guarantees for three months) (78% in mountains and 66% in hills)
- *Sangini tin mahine sui* (*Sangini: the injection for three months*) (64% in mountains and 55% in hills)
- Pregnancy preventing medicine (<1% in each region)
- Depo (<1% in each region)

#### 4.3.2 Awareness of brands and sources of supply and opinion on method

Approximately 85% of all MWRA respondents in the hills and 80% in mountain were able to recall at least one brand of injectable contraceptives, with 62% each recalling Sangini. There was no

marked difference on the level of knowledge about these two brands of injectable across the region of residence of respondents (Figure 4.5).



Respondents were also asked where one could get or buy injectable contraceptives (Table 4.23). The vast majority (94%) of the respondents, with a higher percentage in the hills (95%), mentioned at least one place to acquire injectable contraceptives. The most frequently cited sources in both regions were health post (59%) and pharmacy (55%, only 42% in the mountains, where there are fewer pharmacies). About two-fifths of the respondents mentioned a government hospital or clinic.

**Table 4.23 Percent distribution of currently married women aged 15-49 years by knowledge of sources of supply of injectable contraceptives and ecological regions**

Source to get/buy injection (Multiple Response)	Mountain	Hills	Total
<u>Public sector</u>			
Health post	59.0	58.6	58.7
Government hospital/clinic	40.7	39.4	39.6
Sub-health post	15.1	23.7	21.9
PHC center	6.9	8.4	8.1
FCHV	8.2	2.1	3.4
PHC outreach	0.7	3.0	2.5
Mobile clinic	0.3	-	0.1
Other government	-	0.1	0.1
<u>Non-government (NGO) Sector</u>			
FPAN	3.0	3.5	3.4
Marie Stopes	-	0.2	0.1
UMN	-	0.1	0.1
Other NGO	-	0.1	0.1
<u>Private medical sector</u>			
Pharmacy	42.0	59.0	55.3
Private hospital/clinic	35.4	23.6	26.1
Sangini outlet	3.3	4.6	4.3
Other private	-	0.1	0.1
<u>Other source</u>			
Shop	-	0.5	0.4
Friend/relative	0.3	0.2	0.2
Do not know/no answer	11.1	4.7	6.1
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>

Married respondents were also asked about the benefits and disadvantages of using injectable contraceptives. More than 85% of the respondents in both regions mentioned at least one benefit of injectable contraceptives and 34% (56% in the mountains -  $p < .001$ ) mentioned at least two benefits (Table 4.24). *Can be discontinued if desired to have another child* (45%) followed by *easy to use* (36%) and *effective method* (33%, 48% in mountains) were the most frequently cited benefits of injectable.

70% of respondents mentioned at least one disadvantage of injectable contraceptives, with 51% (41% in mountains) mentioning “many side effects”, followed distantly by “requires several visits to a doctor” (22%, 29% in mountains), “difficult to use” (8%, 17% in mountains) and “causes infertility 4%, 12% in the mountains). (Table 4.24).

**Table 4.24 Percent distribution of currently married women aged 15-49 years by knowledge of benefits and disadvantages of injectable contraceptives and ecological regions**

Description	Mountain	Hills	Total
<b>Perceived benefits of using <u>injection</u> (Multiple answers possible)</b>			
Can be discontinued if desired to have another child	52.5	43.3	45.3
Easy to use	36.7	35.6	35.9
Effective method	48.2	28.8	33.0
Long lasting	5.2	7.0	6.6
Less side effects	3.9	2.6	2.9
Other±	-	0.1	0.1
<b><i>Mentioned at least two of above</i></b>	<b>56.1</b>	<b>27.5</b>	<b>33.9</b>
<b><i>Mentioned at least one</i></b>	<b>85.2</b>	<b>86.8</b>	<b>86.4</b>
Do not know	14.8	13.2	13.6
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>
<b>Opinion regarding the disadvantages of using <u>injection</u> (Multiple Response)</b>			
It has many side effects	40.7	54.2	51.2
It requires several visits to doctor	28.5	19.7	21.6
Difficult to use	16.7	5.1	7.6
It causes Infertility	11.8	1.6	3.8
Not accepted by husband	1.0	1.2	1.1
Not granted	1.6	0.4	0.6
Difficult to get	1.3	0.6	0.8
Not accepted by other family members	1.3	0.4	0.6
Expensive	0.3	0.5	0.4
It use is prohibited for religious reasons	-	0.1	0.1
Other§	-	0.4	0.3
<b><i>Mentioned at least one</i></b>	<b>73.8</b>	<b>69.4</b>	<b>70.4</b>
Do not know	26.2	30.6	29.6
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>

± Other includes: good for those who are suitable for using; for spacing..

§ Other includes: needs to be alert to use; less secretion of milk; full of hurdle.

### 4.3.3 Use of injectable

As discussed in Section 4.2 above, there were 235 married women (55 in mountain and 180 in hills) who were using injectable contraceptives at the time of survey. These women were asked about the sources from where they last obtained the service.

**Table 4.25 Percent distribution of currently married women aged 15-49 years using injectable contraceptives at the time of survey by source of their supply and ecological regions**

Places from where injection was obtained last time	Mountain	Hills	Total
Health Post/ Sub-health post	87.3	70.6	74.5
Private Pharmacy	5.5	14.4	12.3
Hospital	1.8	8.9	7.2
Outreach clinic; mobile camp	3.6	2.8	3.0
Private Clinic/ Nursing Home	1.8	1.7	1.7
Other (NGO; volunteer)	-	1.7	1.3
<b>Total</b>	<b>55</b>	<b>180</b>	<b>235</b>

Three-quarters (87% in the mountains) obtained injectable contraceptives from community level government health facilities such as health post or sub-health post (compared to 39% of all current contraceptive users in Table 4.9) and 12% from a private pharmacy. The other sources mentioned by a small proportion of the respondents were hospitals, private clinics or nursing homes and outreach clinics (Table 4.25).

When asked which brand of injection they got last time, 84% (93% in mountains) of respondents said that they obtained *Depo-Provera*, usually available at the government service outlets. Fifteen percent (7% in mountains) of injection users used *Sangini* last time. 86% (93% in mountain and 83% in hills) reported that they obtained injectable free of cost. Among the few respondents reporting that they paid for the injectable, the price ranged from a minimum of Rs 30 to a maximum of Rs 60, with a median price of Rs 48 (Table 4.26).

**Table 4.26 Percent distribution of currently married women aged 15-49 years using injectable contraceptives at the time of survey by brand used last time including its cost and ecological regions**

Description	Mountain (n=55)	Hills (n=180)	Total (n=235)
<b>Brand of injection received last time</b>			
Depo-Provera	92.7	81.7	84.3
Sangini	7.3	16.7	14.5
Do not know	-	1.7	1.3
<b>Amount paid for the injection last time (in NRs)</b>			
30	-	1.1	0.9
35	-	0.6	0.4
40	1.8	0.6	0.9
45	1.8	5.6	4.7
50	1.8	7.8	6.4
60	1.8	-	0.4
<b>Median (SD)</b>	<b>48 (9)</b>	<b>48 (6)</b>	<b>48 (6)</b>
<b>Range</b>	<b>40-60</b>	<b>30-50</b>	<b>30-60</b>
Free of cost	92.7	83.3	85.5
Do not know	-	1.1	0.9

Current injectable users are as satisfied with method as users of other temporary methods – about 70% were very satisfied and 26% were somewhat satisfied. Only 6% said they were not satisfied with injectable, mainly due to side effects. The most frequently cited reasons for satisfaction were effectiveness, easy to use and absence of side effects (Table 4.27).

**Table 4.27 Percent distribution of currently married women aged 15-49 currently using injectable contraceptive by level of satisfaction, reasons for satisfaction or dissatisfaction**

Description	Percent
<b>Level of satisfaction</b>	
Very satisfied	68.5
Somewhat	25.5
Not at all	6.0
<b>Total</b>	<b>235</b>
<b>Reasons for satisfaction (Multiple Response)</b>	
Effective	81.0
Easy to use	59.7
No side effects	43.0
Inexpensive	8.1
Permanent, long lasting	2.7
<b>Total</b>	<b>221</b>
<b>Reasons for dissatisfaction (Multiple Response)</b>	
Ineffective	28.6
Side effects	85.7
Difficult to use	7.1
Expensive	-
Service center too far	28.6
<b>Total</b>	<b>14</b>

The most frequently cited (78%) reason for choosing injectable originally was effectiveness in preventing pregnancy, followed by ease of use (63%) and safe or few side effects (37%). 21% of users also said they chose it because their husband recommended this method. Respondents were also asked about the most important reason for choosing the injectable contraceptive instead of other methods. The answers were the same as above with 44% giving “effectiveness” as main reason and one-third citing ease of use (Table 4.28).

**Table 4.28 Percent distribution of currently married women aged 15-49 years using injectable contraceptive by reason for using this method**

Reasons for deciding to use injectable (Multiple Response)	Reasons (multiple response)	Most important reason
Very effective to prevent pregnancy	78.3	44.3
Safe/few side effects	37.4	10.2
Easy to use	63.4	32.3
Disliked other methods	8.1	0.9
Recommended by service provider	6.4	2.1
Recommended by friends/relatives	4.7	1.3
Recommended by husband	21.3	5.1
Do not know about other method	2.6	0.9
Permanent method; long lasting method; confirm for 3 month; no fear of becoming pregnant	3.0	2.6
<b>Other</b> ( <i>other methods not effective; easy to use and can get freely; no hurdle in using; lack of time</i> )	0.4	0.4
<b>Total</b>	<b>n=235</b>	<b>100</b>

When further asked whether their husbands were in favor or not of the idea of using injectable 94% of the respondents said that their husbands were in favor of using it while only 2% said that their husbands had opposed it (Table not shown).

### 4.3.4 Future use intention and willingness to pay

As discussed in Section 4.2 above, 41% (n=133 in mountain and 273 in hills) of the respondents said they intend to use injectable contraceptives in the future. These women were further asked about their willingness to pay for injectable contraceptives.

Almost all the respondents (98%) in both regions said that they would pay Rs 45 for one dose of injectable (Table 4.29). Further, 89% stated they would be willing to pay at least Rs 50 for one injection, with one-sixth said they'd be willing to pay Rs 60 or more. The average maximum price women said they were willing to pay as a maximum was Rs 52 in mountains and Rs 53 in hills. When further probed what they would do if the price of one injection was higher than the maximum price they were willing to pay, almost all (99%) the respondents in mountain and 93% in hills affirmed that they would continue to buy the product.

**Table 4.29 Percent distribution of currently married women aged 15-49 years who intend to use injectable contraceptives in the future by willingness to pay for injectable contraceptives and ecological regions**

Description	Mountain (n=133)	Hills (n=273)	Total (n=406)
<b>Willingness to buy a dose of injection at a price of Rs 45</b>			
Yes	99.2	96.7	97.5
No	0.8	2.6	2.0
Do not know	-	0.7	0.5
<b>Maximum price willing to pay for dose of Injection (NRs)</b>			
Less than 50	8.3	2.6	4.4
50-59	76.7	70.0	72.2
60+	14.3	17.6	16.5
<b>Mean (SD)</b>	52.3 (7.0)	52.9 (7.5)	52.7 (7.3)
<b>Median (SD)</b>	50 (7.0)	50 (7.5)	50 (7.3)
<b>Range</b>	45-90	30-100	30-100
Do not know	0.8	9.9	6.9
<b>Reactions of the respondents if the price of injection would be higher than the maximum price they were willing to pay</b>			
Continue to buy	98.5	93.4	95.1
Look for other cheaper brand	-	1.5	1.0
Not buy (any brand of) the product	0.8	0.7	0.7
Do not know	0.8	4.4	3.2

## 4.4 Condoms

### 4.4.1 Exposure to messages in the last 6 months

More MWRA ( $p < .01$ ) in the hills than in mountains reported hearing or seeing some message or information about condoms from any source in the last 6 months. Radio (59%, 43% in mountains) was the most frequent source of information, followed by friends or relatives (48%, 63% in mountains), and neighbors (22%, 30% in mountains), FCHVs (16%, 21% in mountains), health facility/health worker (13%, 7% in mountains) and Television (13%, 3% in mountains) (Table 4.30). As with injections, radio was the most mentioned source for hill respondents and friend or relatives was the main source for mountain respondents.

In summary, the analysis, in general, reveals that media was important source of information in the hills than in mountain while interpersonal communication was higher in mountains than in hills.

**Table 4.30 Percent distribution of currently married women aged 15-49 years having received any information on condoms in the last 6 months and ecological regions**

Description	Mountain	Hills	Total
<b>Exposure to any messages or information from any source about condom over the last 6 months</b>			
Yes	47.5	53.6	52.3
No	52.5	43.8	45.7
Do not know/ cannot remember	-	2.6	2.0
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>
<b>Source of information on condom in the last 6 months (Multiple Response)</b>			
Radio	42.8	63.0	59.0
Friends/Relatives	62.8	43.8	47.5
Neighbor	30.3	19.6	21.7
FCHV	21.4	14.7	16.0
Health facility; health worker	6.9	14.8	13.3
Television	3.4	14.8	12.6
In a shop	2.8	8.5	7.4
Poster/Hoarding Board	6.2	6.5	6.4
Newspaper/magazine/broacher	3.4	1.9	2.2
Husband	-	2.2	1.8
Other±	1.4	0.5	0.7
Do not know/ do not remember	-	0.2	0.1
<b>Total</b>	<b>145</b>	<b>587</b>	<b>732</b>

± Other includes: community meeting; office, women development training.

Table 4.31 further analyzed the differentials on recall of some messages or information about condoms during the six months prior to the survey according to selected background characteristics. As seen with messages about injectable, respondents with a secondary or higher level of education and higher SES status had greater exposure to the information or messages than those of other groups. Exposure to information or messages about condoms was also significantly higher among non-Hindu and Hill Janajati group of women than the women of other groups. Further, respondents with exposure to more media had greater exposure to information and message about condoms than their respective counterparts non-exposed to media and lower socio-economic status ones.

**Table 4.31 Percent distribution of currently married women aged 15-49 years having received any information on condoms in the last 6 months by their selected background characteristics**

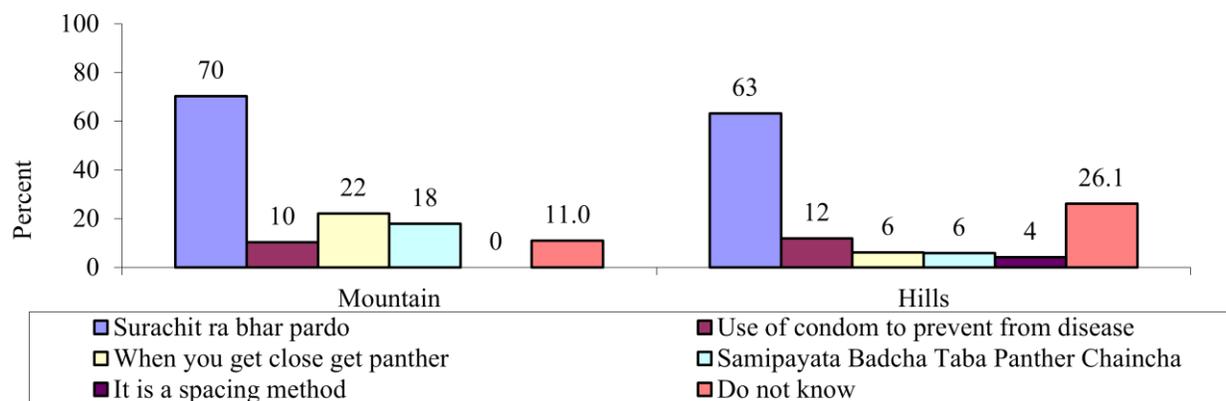
Background characteristics	Percent exposed to message		Number
	Yes	No	
<b>Region of residence</b>	ns		
Mountain	47.5	52.5	305
Hills	53.6	46.4	1095
<b>Age of women (in years)</b>	ns		
15-19	55.2	44.8	87
20-29	54.0	46.0	637
30-49	50.3	49.7	676
<b>Level of education</b>	*		
No schooling/illiterate	40.3	59.7	749
Some primary	60.0	40.0	250
Some secondary	68.4	31.6	234
SLC or above	71.9	28.1	167
<b>Religion</b>	*		
Hindu	46.7	53.3	1086
Non-Hindu	71.7	28.3	314
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	43.4	56.6	489
Hill Janajati	67.2	32.8	613
Hill Dalit	34.3	65.7	216
Newar	41.5	58.5	82
<b>Migration status</b>	*		
Non-migrant	51.1	48.9	1183
Migrant	58.5	41.5	217
<b>Exposure to media</b>	*		
None	24.1	75.9	494
Only one	60.6	39.4	523
Only two	70.0	30.0	240
All three	89.5	10.5	143
<b>SES Index</b>	*		
Lowest	27.6	72.4	315
Second	47.7	52.3	287
Middle	53.1	46.9	271
Fourth	67.7	32.3	263
Highest	70.5	29.5	264
<b>Total</b>	<b>52.3</b>	<b>47.7</b>	<b>1400</b>

\*Significant at <.05 level

ns= Not significant

Respondents (n=145 in mountain and 587 in hills) who reported having seen or heard any message on condoms were further asked to enumerate the types of messages they heard or saw in the previous 6 months. More than three-quarters of the respondents were able to recall at least one, with the most commonly mentioned message being *Surachhit ra bhar pardo* (safe and dependable), a slogan of CRS Panther Condom, in both regions. Messages regarding the importance of using condoms for the prevention of diseases were also reported by about one-tenth of exposed respondents from both regions (Figure 4.6). Over 17% of those in mountains mentioned each of the local and English versions of Panther slogan (English: when you get close, get Panther), compared to over 6% in hills. In the hills, 26% said they did not remember a specific message, compared to only 11% in mountain.

**Figure 4.6 Percentage of currently married women aged 15-49 years who have heard or seen any messages on condoms in the last 6 months by type of message seen or heard in the last 6 months and ecological regions**

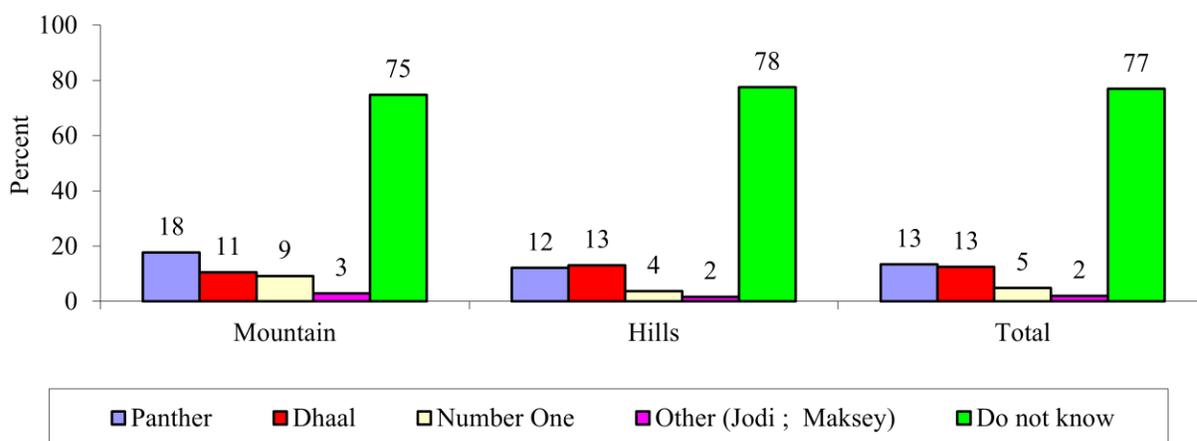


n=145 in mountain and 587 in hills

#### 4.4.2 Awareness of brands and sources of supply and opinion on method

Overall, nearly 1-in-4 respondents of all MWRA were able to mention the names of at least one brand of condom spontaneously; 77% could not. No marked difference on level of knowledge of different brands of condoms was observed across the region of residence of the respondents. The most commonly known condom brands were Panther and Dhaal in both the mountain and hills – about 13% mention each spontaneously. 9% of women in mountains mentioned Number 1, but only 4% in hills (Figure 4.7).

**Figure 4.7 Percentage of currently married women aged 15-49 years by condom brand they know and ecological regions**



n= 305 in mountain and 1095 in mountain

Over 4-in-5 respondents with a higher percentage in hills (89%) than in mountain (74%) mentioned at least one place to acquire condoms. The most frequently cited source of condom was pharmacy (58%, 50% in mountains), health post (43%), government hospital or clinic (25%), and FCHVs (23%). Approximately 1-in-6 respondents mentioned that condoms could be obtained from private hospital or clinic and sub-health post. Only 9% mentioned shops (Table 4.32).

**Table 4.32 Percent distribution of currently married women aged 15-49 years by knowledge about the sources of supply of condoms and ecological regions**

Knowledge about source of supply of condom (Multiple Response)	Mountain	Hills	Total
<u>Public sector</u>			
Health post	39.0	43.9	42.9
Government hospital/clinic	20.7	26.7	25.4
FCHV	25.9	22.2	23.0
Sub-health post	11.8	14.8	14.1
PHC center	4.6	4.1	4.2
PHC outreach	0.3	1.5	1.2
Mobile clinic	-	0.5	0.4
Other government	-	0.3	0.2
<u>Non-government (NGO) Sector</u>			
FPAN	2.0	2.1	2.1
Marie Stopes	-	0.1	0.1
<u>Private medical sector</u>			
Pharmacy	49.5	59.9	57.6
Private hospital/clinic	28.5	13.3	16.6
Sangini outlet	0.3	0.9	0.8
<u>Other source</u>			
Shop	0.3	10.8	8.5
Friend/relative	0.7	0.3	0.4
Do not know/no answer	26.2	10.8	14.1
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>

73% of respondents mentioned at least one benefit of condoms and 26% mentioned at least two. The percentage of respondents who mentioned two or more benefits of using condoms was significantly higher in mountain (33%) than in hills (24%) region ( $p < .001$ ).

**Table 4.33 Percent distribution of currently married women aged 15-49 years by knowledge about the benefits and disadvantages of using condoms and ecological regions**

Description	Mountain	Hills	Total
<b>Perceived benefits of using condoms (Multiple Response)</b>			
Prevents STIs/HIV infection	49.2	50.2	50.0
Effective method	20.7	20.2	20.3
Easy to use	19.7	16.6	17.3
Can be discontinued if desired to have another child	20.7	10.1	12.4
Less side effects	1.6	4.2	3.6
Other±	-	0.2	0.1
<b><i>Mentioned two or more of the above</i></b>	<b>33.4</b>	<b>23.8</b>	<b>25.9</b>
<b><i>Mentioned at least one of above</i></b>	<b>69.2</b>	<b>73.7</b>	<b>72.7</b>
Do not know	30.8	26.3	27.3
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>
<b>Perceived disadvantages of using condom (Multiple Response)</b>			
It has many side effects	19.3	11.5	13.2
Difficult to use	9.2	7.0	7.5
Fear of bursting or tearing; fear of becoming pregnant even if it is used	3.6	7.9	6.9
Not granted	3.9	1.5	2.0
Not accepted by husband	10.2	2.3	4.0
It causes Infertility	1.0	1.2	1.1
Difficult to get	2.3	0.5	0.9
It requires several visits to doctor	1.0	0.2	0.4
Expensive	1.0	0.1	0.3
Not accepted by other family members	-	0.1	0.1
Other§	-	0.7	0.6
Do not know	59.7	70.5	68.1
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>

± Other includes: good for those who are suitable for using; for spacing; can stock in uterus or can be expelled.

§ Other includes: needs to be alert to use; itching vagina; full of hurdle.

The main benefit cited (50%) was prevents STIs and/or HIV infection, followed distantly by effectiveness (20%), easy to use (17%) and can have child if stopped using (12%, 21% in mountains). Just over one-fourth did or could not mention any benefits (Table 4.33). 68% of all MWRA (60% in hills) did or could not mention any disadvantages of condoms. The main disadvantage cited (13%, 19% in mountains) was that condoms had side effects. The next two highest mentioned disadvantages were "difficult to use" (8%) and fear of bursting/tearing or becoming pregnant even using condoms (7%). In addition, 10% of women in mountains said condoms were not accepted by their husband, compared to 2% in the hills.

#### 4.4.3 Future use intention and willingness to pay<sup>3</sup>

Respondents (n=75) who said they intended to use condoms in the future were also asked about their willingness to pay for them (table 4.34). Overall, 92% of the respondents affirmed that they would be willing to pay Rs 5 for a pack of three condoms. 63% of these respondents said they would be willing to pay Rs 10 for a pack of three condoms and one-tenth of them were willing to pay Rs 12 or more. On average these respondents said they were willing to pay the maximum price of Rs 10 for a pack of 3 condoms. When asked what they would do if the price of a pack of three condoms was higher than the maximum price they were willing to pay, 88% affirmed that they would continue to buy the product.

**Table 4.34 Percent distribution of currently married women aged 15-49 years who intended to use condoms in future by willingness to pay for condoms**

Description	Percent (n=75)
<b>Willingness to buy a pack of three condoms at a price of RS 5</b>	
Yes	92.0
No	-
Do not know	8.0
<b>The maximum price you would be willing to pay for a pack of three condoms (in NRs)</b>	
Less than Rs 10	13.3
Rs 10	62.7
Rs 12+	9.3
<b>Median (SD)</b>	<b>10 (1.8)</b>
<b>Range</b>	<b>6-15</b>
Do not know	14.7
<b>Reactions of the respondents if the price of condom would be higher than the maximum price they were willing to pay</b>	
Continue to buy	88.0
Look for other cheaper brand	1.3
Do not know	10.7

## 4.5 IUDs

### 4.5.1 Exposure to messages in the last 6 months

All married respondents (n=1400) included in the study were asked if they had heard or seen any information or messages related to IUD in the past six months from any sources. 43% responded affirmatively, significantly higher among those in hills than in mountains (p<.001) (Table 4.35).

The most frequently cited sources of information about IUD were radio (58%, 42% in mountains) and friends or relatives (45%, 63% in mountains), similar to the results for injectable and condoms. Four other sources were mentioned by between 13% and 20% of respondents who had heard any information: Neighbor, FCHV, and Health facility and/or health worker and television. As with

<sup>3</sup> Note: given the low expected number of current condom users (there were 43), the study did not ask about usage patterns.

other methods, respondents in the mountains were twice as likely to mention FCHV as those in the hills. The percentage of respondents who obtained information about the IUD from television constituted only 3% in mountain, one-fifth of the 15% in hills who mentioned this channel (Table 4.35).

**Table 4.35 Percent distribution of currently married women aged 15-49 years who received information on IUD in the last 6 months by source and ecological regions**

Description	Mountain	Hills	Total
<b>Exposure to any messages or information from any source about IUD over the last 6 months</b>			
Yes	29.8	46.8	43.1
No	69.2	50.3	54.4
Do not know/ cannot remember	1.0	2.9	2.5
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>
<b>Sources of information about IUD in the last 6 months (Multiple Response)</b>			
Radio	41.8	60.5	57.7
Friends/Relatives	62.6	42.4	45.4
Neighbor	15.4	21.1	20.2
FCHV	33.0	14.6	17.4
Health facility; health worker	6.6	14.6	13.4
Television	3.3	14.8	13.1
Newspaper/magazine/broacher	3.3	1.6	1.8
Poster/Hoarding Board	1.1	0.8	0.8
In a shop	1.1	0.6	0.7
Husband	-	0.2	0.2
Other±	1.1	0.6	0.7
Do not know/ do not remember	1.1	0.6	0.7
<b>Total</b>	<b>91</b>	<b>512</b>	<b>603</b>

± Other includes: community meeting; office, women development training.

Table 4.36 shows differentials on exposure of respondents to any messages or information about IUD in the last six months by their selected background characteristics. As seen with messages about injectable and condoms, respondents with secondary or higher levels of education, higher SES levels and exposure to multiple media had greater exposure to the information or messages than their respective counterparts. Also similar to the other methods, exposure to information or messages about IUDs was significantly higher among non-Hindu and Hill Janajati group of women than the women of other groups.

**Table 4.36 Percent distribution of currently married women aged 15-49 years received information on IUD in the last 6 months by their selected background characteristics**

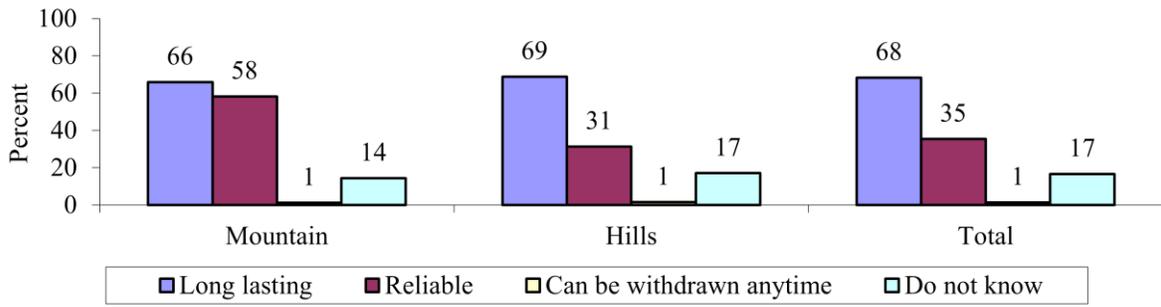
Background characteristics	Percent exposed to any message		Number
	Yes	No	
<b>Region of residence</b>	*		
Mountain	29.8	70.2	305
Hills	46.8	53.2	1095
<b>Age of women (in years)</b>	ns		
15-19	41.4	58.6	87
20-29	44.7	55.3	637
30-49	41.7	58.3	676
<b>Level of education</b>	*		
No schooling/illiterate	30.4	69.6	749
Some primary	51.2	48.8	250
Some secondary	59.4	40.6	234
SLC or above	64.7	35.3	167
<b>Religion</b>	*		
Hindu	37.8	62.2	1086
Non-Hindu	61.1	38.9	314
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	36.0	64.0	489
Hill Janajati	55.6	44.4	613
Hill Dalit	24.1	75.9	216
Newar	41.5	58.5	82
<b>Migration status</b>	ns		
Non-migrant	42.3	57.7	1183
Migrant	47.5	52.2	217
<b>Exposure to media</b>	*		
None	15.6	84.4	494
Only one	48.2	51.8	523
Only two	65.0	35.0	240
All three	82.5	17.5	143
<b>SES Index</b>	*		
Lowest	15.6	84.4	315
Second	35.9	64.1	287
Middle	43.5	56.5	271
Fourth	60.1	39.9	263
Highest	66.3	33.7	264
<b>Total</b>	<b>43.1</b>	<b>56.9</b>	<b>1400</b>

\*Significant at <.05 level

ns= Not significant

Respondents were also asked about type of messages they heard or saw about IUDs in the last 6 months. Slightly over four-fifths (86% in mountain and 83% in hills) of the respondents were able to recall at least one message, with about two-thirds mentioning “long lasting” and one-third (58% in the mountains) mentioning “reliable” (Figure 4.8).

**Figure 4.8 Percentage of currently married women aged 15-49 years who have heard or seen any messages on IUD in the last 6 months by type of messages seen or heard and ecological regions**

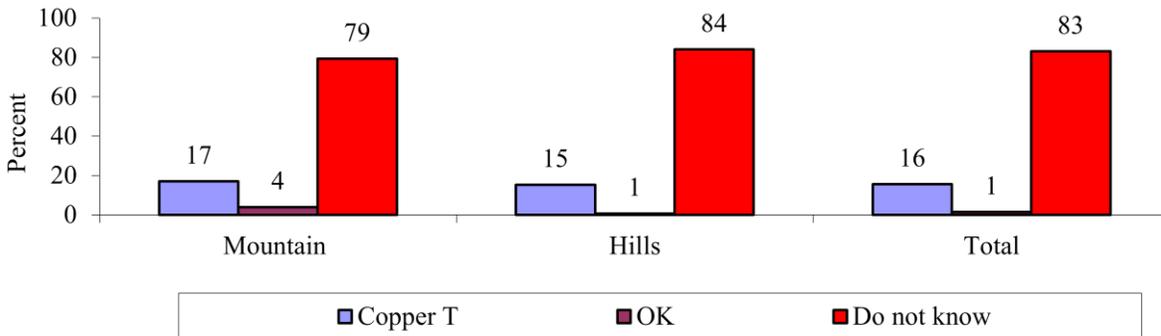


n=91 in mountain and 512 in hills

#### 4.5.2 Awareness of brands and sources of supply and opinion on method

The great majority (83%) of MWRA were NOT able to remember any brand name spontaneously. 16% were able to recall Copper T and 1% recalled OK (Figure 4.9).

**Figure 4.9 Percentage of currently married women aged 15-49 years by brands of IUD they know and ecological regions**



n= 305 in mountain and 1095 in hills

53% of the respondents in mountain and 74% in hills mentioned at least one place to acquire an IUD with the four most frequently cited sources as Government hospital (46%, 28% in mountains), health post (28%), pharmacy (24%) and private hospital or clinic (18%, 24% in mountains). Nearly half of the respondents in mountain and about a quarter in hills were unaware of any sources of supply (Table 4.37).

**Table 4.37 Percent distribution of currently married women aged 15-49 years by knowledge about the sources of supply of IUD and ecological regions, FP/RH/MCH survey, 2011**

Knowledge about sources from where one can get/buy IUD (Multiple responses possible)	Mountain	Hills	Total
<b>Public sector</b>			
Government hospital/clinic	27.5	51.1	45.9
Health post	28.2	27.9	27.9
Sub-health post	7.2	8.4	8.1
PHC center	4.6	3.6	3.8
PHC outreach	0.7	0.7	0.7
FCHV	0.7	0.4	0.4
Other government	1.0	-	0.2
Mobile clinic	-	0.1	0.1
<b>Non-government (NGO) Sector</b>			
FPAN	3.0	2.4	2.5
UMN	-	0.7	0.6
Marie Stopes	-	0.3	0.2
<b>Private medical sector</b>			
Pharmacy	20.3	24.9	23.9
Private hospital/clinic	23.9	15.7	17.5
Sangani outlet	0.3	0.3	0.3
Other private	-	0.1	0.1
<b>Other source</b>			
Friend/relative	0.3	0.2	0.2
Do not know/no answer	46.9	25.5	30.1
<b>Total</b>	<b>305</b>	<b>1095</b>	<b>1400</b>

Opinions were sought from all MWRA regarding the benefits and disadvantages of IUDs. About two-thirds of respondents (50% in mountains) mentioned at least one benefit of IUDs, with 38% (28% in mountains) citing "long lasting" as a benefit of IUDs, followed by "can be discontinued whenever desired to have a baby" (27%) and effective method (20%) (Table 4.38).

**Table 4.38 Percent distribution of currently married women aged 15-49 years by knowledge of benefits and disadvantages of using IUD and ecological regions**

Description	Mountain (n=305)	Hills (n=1095)	Total (n=1400)
<b>Perceived benefits of using IUD (Multiple Response)</b>			
Long lasting	27.9	40.6	37.9
Can be discontinued if desired to have another child	25.9	27.7	27.3
Effective method	18.0	20.9	20.3
Less side effects	3.3	3.0	3.1
Easy to use	2.6	1.4	1.6
Other±	-	0.2	0.1
<b>Mentioned at least 2 of above</b>	<b>22.6</b>	<b>21.1</b>	<b>21.4</b>
<b>Mentioned at least one</b>	<b>49.5</b>	<b>69.7</b>	<b>65.3</b>
Do not know	50.5	30.3	34.7
<b>Perceived disadvantages of using IUD (Multiple Response)</b>			
It has many side effects	16.4	19.5	18.8
It causes Infertility	11.8	14.1	13.6
Difficult to use	16.1	8.6	10.2
It requires several visits to doctor	9.2	7.4	7.8
Expensive	3.9	2.5	2.8
Disruption in the uterus	-	2.0	1.6
Difficult to get	2.6	0.6	1.1
Not accepted by husband	0.7	0.5	0.5
Not granted	1.0	-	0.2
Not accepted by other family members	0.3	0.2	0.2
Other§	-	0.1	0.1
<b>Mentioned at least one</b>	<b>40.7</b>	<b>42.8</b>	<b>42.4</b>
Do not know	59.3	57.2	57.6

± Other includes: good for those who are suitable for using; for spacing; can get stuck in uterus or can be expelled.

§ Other includes: need to be alert to use; itching vagina; less secretion of milk; full of hurdles.

The most frequently cited disadvantages were that IUDs have many side effects (19%), cause infertility (14%), are difficult to use (10%, 16% in mountains) and require several visits to doctor (8%). Over half of all respondents did not mention or did not know any disadvantages.

#### 4.5.3 Future use intention and willingness to pay<sup>4</sup>

98% of the 106 women who said they would use an IUD in the future said that they would pay Rs 100 for it. About half (53%) of these respondents said they were willing to pay Rs 100-120 followed by nearly one-quarter (23%) who said they would pay Rs 150 and about 15% of the women said that they would pay Rs 150-300. On average women said they would pay a maximum of Rs 138 for an IUD. More than 90% of the respondents also said that they would continue to buy if its price was higher than the maximum price they were willing to pay for it (Table 4.39).

**Table 4.39 Percent distribution of currently married women aged 15-49 years intending to use IUD in the future by willingness to pay for IUD**

Description	Total (n=106)
<b>Willingness to pay Rs 100 for IUD</b>	
Yes	98.1
No	0.9
Do not know	0.9
<b>The maximum price willing to pay for IUD (in NRs)</b>	
Rs 100-120	52.8
Rs 150	22.6
Rs 150-300	15.1
<b>Mean (SD)</b>	<b>138 (42)</b>
<b>Median (SD)</b>	<b>120 (42)</b>
<b>Range</b>	<b>100-300</b>
Do not know	9.4
<b>Reactions of the respondents if the price of IUD would be higher than the maximum price they were willing to pay</b>	
Continue to buy	90.6
Look for other cheaper brand	3.8
Not buy (any brand of) the product	0.9
Do not know	4.7

#### 4.6 Emergency contraception

This section presents findings on respondents' knowledge and use of emergency contraception including their exposure to it, future use intention and willingness to pay for the product.

##### 4.6.1 Knowledge and use of emergency contraception

Knowledge of emergency contraception among all MWRA was lower than other methods, with only 17% of the respondents saying they had heard about it. Those who reported having heard of emergency contraception were asked to describe it.

<sup>4</sup> Note: given the low expected number of current IUD users (there were 30), the study did not ask about usage patterns.

**Table 4.40 Percent distribution of currently married women aged 15-49 years by their knowledge of emergency contraception**

Description	Percent
<b>Ever heard about emergency contraception</b>	
Yes	16.9
No	83.1
<b>Total</b>	<b>1400</b>
<b>Reported description of emergency contraception (Multiple Response)</b>	
As an emergency measure after unprotected sexual intercourse, women can take special pills at any time within three days to prevent pregnancy	43.0
Pills that you take after you have sex	40.5
A pill that is taken by a women up to 120 hrs (five days) after unprotected sex to prevent pregnancy	22.8
Abortion; killing drug	7.2
To be taken within 72 hours	2.5
Avoiding unwanted pregnancy	1.7
Do not know	5.5
<b>Total</b>	<b>237</b>

The main responses were that *it was pills that one can take after sex (41%) and it is an emergency measure after unprotected sexual intercourse, women can take special pills at any time within three days to prevent pregnancy (43%)*. Likewise, 2.5% specifically stated *it was pills that can be taken within 72 hours following sex and it helped avoiding unwanted pregnancy* (Table 4.40). 23% stated that it can be taken up to five days after unprotected sex.

Only nine women (all in the hills) reported to have ever used emergency contraception in the past. Of the nine women who had used emergency contraception, five had used it two to eight years prior to the survey and one used it in less than one year before. Three of them did not know/remember when they used it (Table not shown).

#### **4.6.2 Exposure to messages in the last 6 months**

All married women were asked if they had heard or seen any messages or information about emergency contraception from any sources in the prior 6 months. Only 13% of the respondents said they had heard or seen something. Just over half (55%) of these respondents reported that they got information about this contraception from radio followed by 44% who said they got information from their friends or relatives, and about one-fourth of the respondents also mentioned television as their information source. 13% said they heard from a neighbor and another 12% from a FCHV (Table 4.41). The information or messages they had seen or heard about emergency contraception over the past six months were as follows (Table not shown) (n=179).

- *Afthyaro Parishthiti Ma Sajilo Upaya* (Simple solution for difficult situation) (86%)
- Medicine to be used in case of unwanted pregnancy (6%)
- Baby terminating medicine (2%)
- Others (6 %)

**Table 4.41 Percent distribution of currently married women aged 15-49 years who received information on emergency contraception in the last 6 months by source**

Description	Percent
<b>Exposure to any messages or information from any source about Emergency Contraception over the last 6 months</b>	
Yes	12.8
No	83.9
Do not know/ cannot remember	3.4
<b>Total</b>	<b>1400</b>
<b>Sources of information about Emergency Contraception in the last 6 months (Multiple Response)</b>	
Radio	54.7
Friends/Relatives	43.6
Television	27.4
Neighbor	12.8
FCHV	11.7
Health facility; health worker	7.3
Newspaper/magazine/broacher	3.9
Poster/Hoarding Board	1.1
In a shop	0.6
Other±	0.6
Do not know/ do not remember	1.1
<b>Total</b>	<b>179</b>

± Other includes: community meeting; office, women development training.

Table 4.42 further analyzed differentials on the exposure of respondents to any messages or information about emergency contraception over the last six months by their selected background characteristics. Respondents under 30 had greater exposure to emergency contraception than women 30 and over. Similarly, as with the other methods already discussed, women with higher levels of education, SES and media exposure had greater exposure to the messages or information than those with lower. For emergency contraception, there was no significant difference by religion, while Hill Dalit were the least likely to have reported hearing or seeing any messages.

**Table 4.42 Percent distribution of currently married women aged 15-49 years by received information on emergency contraception in the last 6 months by their selected background characteristics**

Background characteristics	Percent exposed to emergency contraceptive message		Number
	Yes	No	
<b>Region of residence</b>	*		
Mountain	5.6	94.4	305
Hills	14.8	85.2	1095
<b>Age of women (in years)</b>	*		
15-19	16.1	83.9	87
20-29	15.9	84.1	637
30-49	9.5	90.5	676
<b>Level of education</b>	*		
No schooling/illiterate	3.3	96.7	749
Some primary	12.8	87.2	250
Some secondary	25.2	74.8	234
SLC or above	37.7	62.3	167
<b>Religion</b>	ns		
Hindu	11.9	88.1	1086
Non-Hindu	15.9	84.1	314
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	14.1	85.9	489
Hill Janajati	14.8	85.2	613
Hill Dalit	4.2	95.8	216
Newar	12.2	87.8	82
<b>Migration status</b>	*		
Non-migrant	11.8	88.2	1183
Migrant	18.0	82.0	217
<b>Exposure to media</b>	*		
None	2.4	97.6	494
Only one	7.8	92.2	523
Only two	23.8	76.3	240
All three	48.3	51.7	143
<b>SES Index</b>	*		
Lowest	1.0	99.0	315
Second	3.8	96.2	287
Middle	8.9	91.1	271
Fourth	22.8	77.2	263
Highest	30.7	69.3	264
<b>Total</b>	<b>12.8</b>	<b>87.2</b>	<b>1400</b>

\*Significant at <.05 level

ns= Not significant

### 4.6.3 Awareness of brands and sources of supply and opinion on method

Only 5% of all MWRA in mountains and 7% of those aware in the in hills were able to report the brand name of at least one emergency contraception brand. *Econ*, *Femicon*, *I-Pill* and *Nilocon* white were the brand names mentioned by 1-3% of the respondents in both regions (Table not shown).

Among those (n=237) who reported having heard of emergency contraception nearly 9-in-10 respondents were able to mention at least one place to acquire it; the most commonly cited was pharmacy (71%), followed by government hospital or clinic (43%), private hospital or clinic (19%) and health post (15%), (Table 4.43).

**Table 4.43 Percent distribution of currently married women aged 15-49 years having heard of emergency contraception by knowledge of sources of supply**

Knowledge about sources from where one can get/buy Emergency Contraception (Multiple Response)	Percent
<u>Public sector</u>	
Government hospital/clinic	42.6
PHC center	3.0
Health post	15.2
Sub health post	1.7
PHC outreach	-
FCHV	1.3
Other government	-
<u>Non-government (NGO) Sector</u>	
FPAN	0.8
Marie Stopes	0.8
<u>Private medical sector</u>	
Private hospital/clinic	19.0
Pharmacy	70.9
<u>Other source</u>	
Friend/relative	0.4
Do not know/no answer	13.5
<b>Total</b>	<b>237</b>

Few respondents in both regions had knowledge about the benefits and disadvantages of emergency contraceptives, due to low overall awareness (13%) of the method. Approximately 20% of the respondents in hills and 8% in mountains mentioned some benefit, with “can be used after sex to prevent pregnancy” mentioned most often (Table 4.44). Less than 5% of the respondents mentioned any disadvantage of using emergency contraception, with none mentioned by more than 2%.

**Table 4.44 Percent distribution of currently married women aged 15-49 years by knowledge of benefits and disadvantages of using emergency contraception**

Description	Mountain (n=305)	Hills (n=1095)	Total (n=1400)
<b>Perceived benefits of using Emergency Contraception (Multiple Response)</b>			
Can be used after sex to prevent pregnancy as a result of undesired sex	7.2	15.4	13.6
Effective method	1.0	3.6	3.0
Easy to use	2.0	1.3	1.4
Can terminate unwanted pregnancy; unwanted pregnancy can be prevented	-	1.3	1.0
Less side effects	-	0.4	0.3
Do not know	92.1	79.6	82.4
<b>Perceived disadvantages of using Emergency Contraception (Multiple Response)</b>			
It causes Infertility	2.0	1.9	1.9
Expensive	0.7	1.0	0.9
It has many side effects	0.7	0.7	0.7
Difficult to get	1.6	0.2	0.5
It use is prohibited for religious reasons	0.3	0.4	0.4
Not accepted by other family members	0.3	0.2	0.2
Difficult to use	-	0.2	0.1
It requires several visits to doctor	0.3	0.1	0.1
Not accepted by husband	-	0.2	0.1
Do not know	95.7	95.8	95.8

#### 4.6.4 Future use intention and willingness to pay<sup>5</sup>

Respondents who reported having heard about emergency contraception were asked if they would buy emergency contraception if they felt that they were at risk of being pregnant and did not want to have a child at that time. 58 % of these respondents responded affirmatively. All the respondents unanimously responded that they would pay Rs 80 for it. All but 9% said they would pay a maximum of Rs 90 or more. On average, the maximum price was Rs 95. Nearly all said that they would continue to buy if the price of emergency contraception was higher than the maximum price they were willing to pay for it (Table 4.45).

**Table 4.45 Percent distribution of currently married women aged 15-49 years having heard of emergency contraceptives by willingness to pay for it**

Description	Total
<b>Willingness to buy emergency contraception when felt at risk of being pregnant and did not want another child</b>	
Yes	57.8
No	42.2
<b>Total**</b>	<b>237</b>
<b>Willingness to buy emergency contraception at a price of Rs 80</b>	
Yes	100.0
No	-
<b>Total</b>	<b>137</b>
<b>The maximum price willing to pay for emergency contraception (in NRs)</b>	
Rs 80-85	8.8
Rs 90	49.6
Rs 91-Rs 200	41.6
<b>Men (SD)</b>	<b>95 (15)</b>
<b>Median (SD)</b>	<b>90 (15)</b>
<b>Range</b>	<b>80-200</b>
<b>Total</b>	<b>137</b>
<b>Reaction of respondents if the price of emergency contraception would be higher than the maximum price they were willing to pay</b>	
Continue to buy	97.1
Look for other cheaper brand	0.7
Do not know	2.2
<b>Total</b>	<b>137</b>

#### 4.7 Attitudes towards contraception and methods

In order to examine their attitudes towards contraception a series of statements related to contraceptives were presented to both the unmarried and married respondents included in the survey. The statements were related to respondents' opinion/attitudes towards contraceptives. For this purpose, a number of positive as well as negative statements were read out one by one to the respondents, who were asked whether they would agree or disagree with each. A three-point scale was used to record their opinion (+1 for agree, 0 for neither agree or disagree or -1 for disagree) for calculating composite index. The closer a number is to 1 or -1, the stronger the overall level of agreement or disagreement was. The closer the score is to 0, the weaker it is. The results are presented in Table 4.46.

<sup>5</sup> Note: given the low expected number of current emergency contraception users (9 women), the study did not ask about usage patterns.

Five out of the 14 statements were related to contraceptives in general and the remaining nine statements were pertaining to four different contraceptive methods, namely injectable, emergency contraception, IUD and condoms. Of the five statements related to contraceptives in general, almost all respondents agreed with the statement "if you stop using a contraceptive method, you can get pregnant again" (0.942). Of all 14 statements, this is the only one with such a high score. Other statements that were generally agreed with include: "most people around here do not care who uses or does not use contraception" (0.431) and "family members have lots of influence on the use of contraception by women in this community" (0.409). Overall, respondents generally disagreed that "shopkeepers make women feel bad when buying contraceptives"(-0.299). Respondents were on average neutral about the statement "my family does not talk about contraception" (-0.081).

**Table 4.46 Mean ratings of unmarried and currently married women aged 15-49 years on degree of agreement on different aspects of contraception and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b><u>On contraception</u></b>									
If you stop using a contraceptive method, you can get pregnant again	0.894	0.928	0.921	0.956	0.945	0.945	0.943	0.941	0.942
Most people around here do not care who uses or does not use contraception	0.447	0.348	0.369	0.483	0.438	0.448	0.475	0.419	0.431
Family members have lots of influence on the use of contraception by women in this community	0.365	0.348	0.351	0.400	0.432	0.425	0.393	0.414	0.409
Shopkeepers make women feel bad when buying contraceptives	-0.212	-0.262	-0.251	-0.219	-0.339	-0.312	-0.218	-0.322	-0.299
My family does not talk about contraception	0.000	-0.148	-0.115	0.133	-0.131	-0.072	0.105	-0.134	-0.081
<b><u>On Injection</u></b>									
Injections are easier to use than other contraceptives	0.482	0.708	0.659	0.476	0.637	0.601	0.478	0.653	0.614
Injections can make you gain weight	0.435	0.554	0.528	0.219	0.385	0.348	0.265	0.421	0.387
I am afraid to take Injections in the pharmacy, since others might see me	-0.329	-0.515	-0.474	-0.340	-0.601	-0.543	-0.338	-0.582	-0.528
Children born to a woman who used Injections can have many things wrong with them	-0.188	-0.207	-0.203	-0.057	-0.135	-0.118	-0.085	-0.151	-0.136
<b><u>On condom</u></b>									
Only bad women buy condoms	-0.529	-0.492	-0.500	-0.495	-0.383	-0.408	-0.503	-0.406	-0.428
Condoms are only used for sex with someone other than your spouse	-0.424	-0.403	-0.408	-0.251	-0.270	-0.266	-0.288	-0.299	-0.297
<b><u>On emergency contraception</u></b>									
Most people think that using emergency contraception is bad	0.165	0.033	0.062	0.241	0.123	0.150	0.225	0.104	0.131
Emergency contraception is a good way to prevent pregnancy – you can just take one whenever you are afraid you might be pregnant	0.200	0.069	0.097	0.244	0.137	0.161	0.235	0.122	0.147
<b><u>On IUD</u></b>									
IUDs can get stuck inside you	0.000	0.000	0.000	-0.051	-0.034	-0.038	-0.040	-0.026	-0.029
<b>Total</b>	<b>85</b>	<b>305</b>	<b>390</b>	<b>315</b>	<b>1095</b>	<b>1410</b>	<b>400</b>	<b>1400</b>	<b>1800</b>

Note: +1 equals agree, -1 equals disagree

Of the four statements regarding injectable contraceptives, two were generally agreed, "injections are easier to use than other contraceptives"(0.614) and "injections can make you gain weight" (0.387). A relatively high negative index for "I am afraid to take Injections in the pharmacy, since others might see me" (-0.528) indicates that more people are NOT afraid of others seeing them than those that are afraid. The relatively weak index for "children born to a woman who used Injections

*can have many things wrong with them*" (-0.136) indicates that on average people don't know or that there are relatively equal percentages of those who agree and disagree.

The fact that more people disagreed than agreed with two statements related to condoms, "*Condoms are only used for sex with someone other than your spouse*" (-0.297) and "*only bad women buy condoms*" (-0.428) reveal generally positive attitudes towards condoms.

The relatively weak indices on two statements related to emergency contraception "*most people think that using emergency contraception is bad*" (0.131) and "*emergency contraception is a good way to prevent pregnancy – you can just take one whenever you are afraid you might be pregnant*" (0.147) again indicates that most people didn't know, which is likely, since only 17% of respondents had ever heard of the method. Unmarried women were twice more likely than married ones to agree with both statements which could indicate while they're more positive towards using emergency contraceptives, they also believe more strongly that people think it's not good to use this method.

The weakest index of all 14 statements belongs to "*IUDs can get stuck inside you*" (-0.029). This is not surprising, given that only 2% of the respondents have ever used an IUD, so few people would know someone who had used one and her experience.

## **4.8 Summary of Findings for Contraception**

### **4.8.1 Marriage and fertility and opinions on number and spacing of children**

The median age at marriage among married respondents was 17 years for the women of both mountain and hills with the standard deviation of 3.1 in mountain and 2.7 in hills (Table 4.1).

The mean number of children ever born (CEB) was 2.73 while that of children currently living was found to be 2.53 (3 in mountains) which is lower than the national average (3.04 CEB and 2.66 currently living) (DHS 2006).

12% of respondents with children or currently pregnant indicate that the current or last pregnancy was completely unwanted (12%) or not wanted at that time (9%), indicating an unmet need for family planning of 21%.

About three-fourths (76%) of the respondents (married and unmarried) considered, 2 children, as ideal with a mean of 2.3 children. The ideal number of children was higher among women in the mountains (2.5 children) than those of hills (2.2 children) and among married women than unmarried.

The average ideal birth interval was 4.1 years, higher in the hills than mountains and among unmarried than among married.

Injectable were most often mentioned as the best way to space births (41%, 54% in mountains).

### **4.8.2 Overall Knowledge and use of contraception**

#### **4.8.2.1 Knowledge of contraception**

94% of MWRA reported awareness of at least three modern methods. More than 9-in-10 married respondents were found to be aware (spontaneous plus aided) of female sterilization, male sterilization and injectable, 90% of oral pills and condoms and approximately three quarters of IUD and Implants. Region-wise data shows that women in the hills were more likely to be aware of all these seven contraceptive methods than the women of mountain areas. Awareness of each of the

other three methods asked – female condom, rhythm and withdrawal – was below 40%, but higher in the hills than in the mountains.

#### **4.8.2.2 Use of contraception – ever and current**

Approximately two-thirds (68%) of the respondents reported using a contraceptive method at some point, with 61% reported having used a modern method (Table 4.4). Injectable (35%) was reported as the most commonly ever used method in both the mountain and hill regions followed by oral pills (13%), withdrawal (12%), male sterilization (9%), condom (8%) and female sterilization (7%). The ever use of IUDs and Implants was only about 3%. There was not much variation between mountains and hills on ever use by method.

Overall, 45% of these married women said they were using a modern contraceptive at the time of survey which is slightly higher than that of the national average of 43%<sup>6</sup>. Injectable were the most commonly used contraceptives (17%), followed by male sterilization (9%) and female sterilization (7%). Approximately 5% of the women were currently using oral pills. The current use of other spacing methods such as condoms, IUDs and implants were each less than 4% in both the mountain and hills regions.

Further analysis shows that over one-fifth of the current injectable users and about one-third of current pill users had used other contraceptives before using the current method. The main method previously used by current injectable users was OCPs (9%). Injectable were previously used by 30% of current pill users, 26% of current female sterilization users and 21% of women currently having their husbands with male sterilization.

Among the 697 married women who are not currently using a contraceptive method, almost half have used some method in the past: 21% of current non-users have used injectable, 9% pills and withdrawal and 6% have used condoms.

Current use of modern contraceptives was highest among women aged 35-44 years and lowest among women of 15-19 years. Similarly, women with the highest SES quintile were significantly more likely to use contraceptives than the women of lower SES quintiles. Hills *Janajati* women were significantly less likely to use modern contraceptives than the women of other caste groups. However, no significant difference was observed in the current use of modern contraceptives across the region of residence, literacy status, religion, migration and media exposure of the respondents.

The major source of supply of contraceptive method for users when first obtaining their current method was government health sectors (78%) followed by the private sector (11%) and non-government sector (6%).

Approximately 60% of current users reported that they were told about the possible side-effects of the method when first selected and the same percentage reported that they were told about actions to be taken in case of experiencing side effects. This was somewhat higher for injectable users (66%).

#### **4.8.2.3 Satisfaction with and reasons for using current method**

Overall, 4-in-5 respondents said they were very satisfied with the current method used, followed by about 15% who were somewhat satisfied. Only about 4% of the respondents indicated dissatisfaction with their current method.

The main reasons stated for satisfaction (very and somewhat) of current users (all methods combined) were: effectiveness, lack of side effects and easy to take/use. These are key

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<sup>6</sup> Nepal Demographic and Health Survey 2011 (Preliminary Report).

requirements to satisfy clients. The main reason for not being satisfied is side effects. This might be reduced by increasing levels of explanation of possible side effects beforehand plus what to do if they occur.

The most frequently cited reasons for choosing a particular method were the same three: effectiveness in preventing births (the main answer when asked for the ONE most important reason), safe or few side effects and ease of use. About two-fifths of respondents (40% in the mountain region) reported their husband's recommendation as a reason for using a particular method.

When further asked if their husbands were in favor or not of the idea of using the current method, all the respondents in mountain and almost all (97%) in hills responded affirmatively.

#### **4.8.2.4 First use of contraceptive method among MWRA who ever used**

The median age for first using any contraceptive method was 24, with 81% starting under age 30; 37% started between 20 and 24 years, 23% between 25-29 years, and 21% between 14 and 19 years. The highest percentage (47%, 52% in the mountains) first used injectable, followed by oral pills (12%), withdrawal (11%) and condoms (9%). A considerable proportion (16%) of the respondents also reported using sterilization as their first method.

On average, a woman had 2 children at the time they first used contraception: 31% of women had one child, followed by 22% who had two children, 15% three children, and 15% no children. The mean age of their youngest child at the time of first use was 7 months (0.6 years); 60% said their youngest child was below one year of age, followed by 23% whose youngest child was one year old, and 9% whose child was two years old.

#### **4.8.2.5 Future use of contraceptive methods**

Over one-third of the women (not using a permanent method) said they wanted to have (more) children in the future. As expected, younger and those with lower parity women were significantly more likely to desire (more) children in the future. More than half (57%) of the respondents (65% in the mountains) wanted to become pregnant after more than two years from the survey date.

84% of MWRA (excluding those who used sterilization) said they intend to use a modern method in the future with injectable being the most mentioned method (41%, 61% in the mountains). Other methods mentioned for future/continued use were sterilization (14% female and 10% male), oral pills (13%, 19% in mountains), IUD (11%) and implants (10%). This is similar to current method usage and most current users (e.g., three-fourths of injectable users and 68% of OCP users) said they plan to continue with their current method.

#### **4.8.2.6 Reasons for non-use of contraceptive methods – future, present, ever**

Infrequent sex or husband away from home (34%) followed by menopausal or hysterectomy (31%, 54% in mountains) and health concerns/side effects/interference with the body (28%) were the most frequently cited reasons for not intending to use contraceptives in the future. Desire for (more) children (19%) was also mentioned by a sizeable proportion of respondents of both regions. About 14% mentioned that they or their husband were opposed to modern methods.

*Husband away from home* (46%) and *infrequent sex* (21%) were the main reasons given for not currently using contraceptives and the 2<sup>nd</sup> and 3<sup>rd</sup> highest responses for never using condoms, where desire for more children was the most frequently given reason (39%). About 18% said that they

never used contraception because they or their husband are opposed. About 14% mentioned health concerns/side effects/interference with body as reasons for both never and currently not using.

### 4.8.3. Injectable contraceptives

#### 4.8.3.1 Exposure to messages in the last 6 months

Nearly 3-in-5 respondents reported to have heard and/or seen some message or information about injectable in the preceding 6 months. 56% (74% in mountains) of those who heard or saw any message reported that they obtained information about injectable from their friends and 55% (39% from the radio. 28% stated they heard from neighbors, 18 % (27% in mountains) reported obtaining information about injectable from FCHVs, 14% from the health facility and/or health worker (only 6% in mountains) and 11% (only 3% in mountains) mentioned television as their information source about injectable.

Almost all (96%) of the respondents who said they heard and/or seen something reported at least one message they had heard or seen in the last six months; the two most commonly cited messages (no others were cited by more than 1%) were: *Ek patak lagae pachi tin mahina dhukka (one dose guarantees for three months)* (78% in mountains and 66% in hills) and *Sangini tin mahine sui (Sangini: the injection for three months)* (64% in mountains and 55% in hills).

#### 4.8.3.2 Awareness of brands and sources of supply and opinion on method

Approximately 85% of the respondents in the hills and 80% in mountain were able to recall at least one brand of injectable contraceptives, with 62% each recalling Sangini and Depo-Provera.

The vast majority of respondents (94%, 89% in mountains) mentioned at least one place to acquire injectable contraceptives, with the two most frequently cited sources being health post (59%) and pharmacy (55%, only 42% in the mountains). About two-fifths of the respondents mentioned a government hospital or clinic.

**Table 4.47 Summary of findings related to injectable**

Measure	Injectable
Product awareness among CMWRA	n=1400 96%
Ever used	n=1400 35%
Brand awareness, spontaneous	n=1400 Sangini- 62% Depo - 62% None- 15%
Brand used last	n=235 Depo -84% Sangini-15%
Price paid last time got injection % got product for free last time Don't remember price Mean price paid	n=235 86% 1% Rs 46
Maximum willing to pay, among those who say they'll use in future	n=406 86% would pay Rs 45
Mean maximum price willing to pay, among those who say they'll use in future	n=406 Rs 53; 89% would pay Rs 50 or more

More than 85% of the respondents in both regions mentioned at least one benefit of injectable contraceptives. *Can be discontinued if desired to have another child* (45%) followed by *easy to use* (36%) and *effective method* (33%, 48% in mountains) were the most frequently cited benefits of injectable. Respondents in the mountains were more likely to mention benefits of injectable: over 56% of the respondents in mountain as opposed to only 28% in hills mentioned two or more benefits of injection ( $p < .001$ ).

70% of respondents mentioned at least one disadvantage of injectable contraceptives, with 50% (41% in mountains) mentioning “many side effects”, followed distantly by “requires several visits to a doctor” (22%, 29% in mountains), “difficult to use” (8%, 17% in mountains) and “causes infertility” (4%, 12% in the mountains).

#### **4.8.3.3 Current usage of injectable**

Three-fourths of injectable users (87% in the mountains) obtained it last time at community level government health facilities such as health post or sub-health post and 12% from a private pharmacy.

Almost all current users (84%, 93% in mountains) mentioned that they used *Depo Provera*, last time and 15% (7% in mountains) used *Sangini*. This is despite of equal brand awareness mentioned above. Almost all (86%, 93% in mountains) reported that they obtained the last injectable for free. Among the few respondents reporting that they paid for the injectable, the price ranged from a minimum of Rs 30 to a maximum of Rs 60, with a mean price of Rs 46

Current injectable users are as satisfied with their method as users of other temporary methods, about 70% are very satisfied and 25% are somewhat satisfied. Only 6% said they were not satisfied with injectable, mainly due to side effects. The most frequently cited reasons for satisfaction were effectiveness, easy to use and absence of side effects.

The most frequently cited reason for choosing injectable originally was effectiveness in preventing births (78%), followed by ease of use (63%) and safe or few side effects (37%). 21% of users also said they chose it because their husband recommended this method. Almost all (94%) said their husbands were in favor of using this method.

#### **4.8.3.4 Future use intention and willingness to pay**

41% ( $n=133$  in mountain and 273 in hills) of the respondents said they intend to use injectable contraceptives in the future. 98% of those who indicated they would (continue to) use injectable in the future said that they would pay Rs 45 for one injection, with the average maximum price of Rs 53 and 89% saying they'd pay at least Rs 50.

### **4.8.4 Condoms**

#### **4.8.4.1 Exposure to messages in the last 6 months**

Just over half (52%) of the respondents reported hearing and/or seeing some message or information about condoms in the prior 6 months, with radio (59%), friends or relatives (48%) and neighbors (22%) being the most frequently cited sources. Radio and TV were cited more often in hills and friends and/or relatives and FCHVs in mountains. More than three-quarters of those in the hills and 89% of those in mountains who said they heard and/or saw something were able to recall at least one message; about two-thirds mentioned *Surachhit ra bhar pardo* (*safe and reliable*), followed by

15% (lower in hills) mentioning both the local and English versions Panther slogans (*when you get close, get Panther*).

#### **4.8.4.2 Awareness of brands and sources of supply and opinion on method**

Over 3/4<sup>th</sup> of married women could not remember any condom brand names spontaneously, with Panther and Dhaal mentioned in both the mountain and hills – about 13% mention in each region spontaneously. 9% of women in mountains mentioned Number 1, but only 4% in hills.

Over 4-in-5 respondents with a higher percentage in hills (89%) than in mountains (74%) mentioned at least one place to acquire condoms, with pharmacy (58%, 50% in mountains) cited most frequently, followed by health post (43%), government hospital or clinic (25%), and FCHVs (23%). Only 9% mentioned shops.

73% of respondents mentioned at least one benefit of condoms and 26% mentioned at least two. The condom benefit mentioned by the most (50%) of respondents was that they prevent STIs and HIV infections. This was followed by effectiveness (20%), easy to use (17%) and “can discontinue if want a child” (12%). Just over one-fourth did or could not mention any benefits.

About two-thirds of respondents did or could not mention any disadvantages of condoms. The main disadvantages mentioned were “has side effects” (13%), “difficult to use” (8%) and “fear of bursting or tearing” (7%). 10% of women in mountains said condoms were not accepted by their husband, compared to 2% in the hills.

#### **4.8.4.3 Future use intention and willingness to pay**

Note: given the low expected number of current condom users (there were 43), the study did not ask about usage patterns.

Overall, 92% of the 75 respondents who said they would use condoms in the future agreed that they would be willing to pay Rs 5 for a pack of three condoms, with an average maximum price of Rs 10 for a pack of 3.

### **4.8.5 IUDs**

#### **4.8.5.1 Exposure to messages in the last 6 months**

43% of all the MWRA married women (significantly lower in the mountains – 30%) said they had heard and/or seen something about IUDs in the past six months, with the most frequently cited sources being the radio (higher in hills) and friends and/or relatives (higher in mountains).

Almost all of these (84%) recalled at least one message, with 68% (58% in the mountains) mentioning “long lasting” and 35% (58% in the mountains) mentioning “reliable”.

#### **4.8.5.2 Awareness of brands and sources of supply and opinion on method**

The great majority (83%) of MWRA were NOT able to remember any brand names for IUDs spontaneously, with 16% mentioning Copper T and one percent mentioning OK.

53% of the respondents in mountain and 75% in hills mentioned at least one place to acquire an IUD with the four most frequently cited sources being: government hospital (46%, 28% in mountains), health post (28%), pharmacy (24%) and private hospital or clinic (18%, 24% in mountains). Nearly half of the respondents in mountain and about a quarter in hills were unaware of any sources of supply.

About two-thirds of respondents (50% in mountains) mentioned at least one benefit of IUDs, with the highest mention (38%) being "long lasting", followed by "it can be discontinued whenever desired to have a baby" (27%), and effectiveness (20%).

The most frequently cited disadvantages were that IUDs "have many side effects" (19%), cause infertility (14%), are difficult to use (10%, 16% in mountains) and require several visits to doctors (8%). Over half of all respondents did not mention or did not know any disadvantages.

#### **4.8.5.3 Future use intention and willingness to pay**

Note: given the low expected number of current IUD users (there were 30), the study did not ask about usage patterns.

Among the 106 women who said they intended to use an IUD in the future, all but 2% said they would pay Rs 100, with the average maximum price of Rs 138.

#### **4.8.6 Emergency contraception**

##### **4.8.6.1 Knowledge and use of emergency contraception**

Knowledge of emergency contraception among the married women was lower than all other methods (including female condom), with only 17% of the respondents saying they had heard about it. Only nine women (all in the hills) reported to have ever used emergency contraception in the past.

Those who reported having heard of emergency contraception were asked to describe it. The main responses were that it was pill that one can take after unsafe sex (41%) and it is an emergency measure after unprotected sexual intercourse, women can take special pills at any time within three days to prevent pregnancy (43%). Likewise, 2.5% specifically stated it was pills that can be taken within 72 hours following sex and it helped avoiding unwanted pregnancy and 23% stated that it can be taken up to five days after sex.

##### **4.8.6.2 Exposure to messages in the last 6 months**

Only 13% of the respondents said they had heard or seen something about emergency contraception in the previous 6 months, with just over half (55%) of these respondents reporting that they got this information from the radio, followed by 44% who said they got information from their friends or relatives, and about one-fourth of the respondents also mentioned television as their information source. The key message recalled was *Afthyaro Parishthiti Ma Sajilo Upaya (easy means in difficult situation)*.

##### **4.8.6.3 Awareness of brands and sources of supply and opinion on method**

Only 6% of the MWRA were able to report the brand name of at least one emergency contraceptive, with *Econ*, *Femicon*, *I-Pill* and *Nilocon White* mentioned by 1-3% of the respondents in both regions.

Among those (n=237) who reported having heard of emergency contraception nearly 9-in-10 respondents were able to mention at least one place to acquire it; the most commonly cited was pharmacy (71%), followed by government hospital or clinic (43%), private hospital or clinic (19%) and health post (15%).

While few respondents gave any benefits and disadvantages of emergency contraceptives, due to low overall awareness (13%) of the method, the benefit mentioned most often was "can be used

after sex to prevent pregnancy” (14%). Likewise, few respondents mentioned any disadvantage of emergency contraception, with no specific response mentioned by more than 2%.

#### **4.8.6.4 Future use intention and willingness to pay**

Note: given the low expected number of current emergency contraceptive users (there were 9), the study did not ask about usage patterns.

Approximately 58 % of respondents aware of emergency contraception said “yes” when asked if they would use it if necessary. All of these respondents responded that they would pay Rs 80 for it, and on average the maximum price they were willing to pay was Rs 95.

#### **4.8.7 Attitudes towards contraception**

Results from responses to a set of 14 attitude statements read to all respondents (married and unmarried) indicate that:

- Most agree that contraceptive methods are reversible
- There is not much stigma related to using contraception:
  - moderate agreement that “people do not care who uses or doesn’t use contraception” and that “shopkeepers do not make women feel bad when buying contraceptives”
  - high disagreement with the statement “I am afraid of taking injections in the pharmacy since others might see me.”
- There were some relatively positive attitudes towards condoms and injectable:
  - There was general disagreement with the two statements about condoms: "condoms are only used for sex with someone other than your spouse" and "only bad women buy condoms"
  - Related to injectable, there was a high degree of agreement that injections are easier to use than other contraceptives and weak disagreement that "children born to a woman who used injections can have many things wrong with them". There was moderate agreement with the statement “injections can make you gain weight”, but that was not mentioned spontaneously by respondents when asked earlier asked for benefits or disadvantages of injections.
- The relatively neutral indices on two statements related to emergency contraception and one on IUDs indicate that people don’t know much about these methods.
  - Unmarried women were twice more likely than married ones to agree both that "emergency contraception is a good way to prevent pregnancy – you can just take one whenever you are afraid you might be pregnant" and "most people think that using emergency contraception is bad", indicating while they’re more positive towards using emergency contraceptives, they also believe more strongly that people think it’s not good to use this method.

### **4.9 Conclusions - Contraception**

There is a major opportunity to increase usage of modern methods, as only 45% of married women in these areas currently use a method; 16% use injectable.

- 23% more have used some method in the past and 32% have never used any method.

- Unmet need (those whose most recent pregnancy was not wanted at all or at that time) was calculated to be 21%.
- 84% of those not using sterilization said they would use a modern method in the future, with 41% of those saying they would use injections.

Awareness of a number of contraceptive methods is very high; 94% of currently married women in the study could identify at least 3 modern method of contraception, with five methods having 88% awareness or higher, followed by Implant and IUDs at 77-78%. Awareness for all methods was somewhat lower in the mountains than the hills.

The majority of respondents said their ideal number of children was 2 with a mean interval period of 4 years.

Those who have never used contraception mostly indicate they want to have (more) children. They probably do not perceive that many methods are for spacing and are temporary.

Many who have used contraception in the past but are not using currently say it's because their husbands are away or they're not having sex frequently.

Effectiveness is the key benefit for the category of contraception, followed by safe/no side effects. These are what most current users say satisfies them about their method and likely why they plan to continue using that method. Current injectable users are also strongly motivated by ease of use.

Low reported levels of provider explanation about possible side effects and what to do about them may lead to method discontinuation, when women face issues.

Brand awareness is low for most contraceptives – except injectable.

Word of mouth - especially from friends/relatives and FCHVs - is the main source of messages/information for most contraceptives - excluding condoms where radio is the main source.

- Radio and television are mentioned more in the hills than in the mountains, where interpersonal sources are most frequently mentioned.

Key perceived benefits vary by product, which creates ability to meet different needs by different people. Among all MWRA, key perceived benefits were (see table below):

- Injections - temporary, easy to use and effective.
- Condoms - prevent STI/HIV
- IUDs - long-lasting, but not affecting fertility long-term
- Emergency contraception is for unplanned situations

**Table 4.48 Percentage distributions of currently married women aged 15-49 years by their perceived benefit of contraceptives**

Benefits among total respondents (n=1400)	Injections	Condoms	IUDs	Emergency Contraception
NONE/DK	14	27	35	82
Can be discontinued	45	12	27	-
Easy to Use	36	17	2	1
Effective	33	20	20	3
Prevent STI/HIV	-	50	-	-
Long lasting	7	-	38	-
Can be used after having sex	-	-	-	13
Less side effects	3	4	3	.3

Persistent negative perceptions (especially related to side-effects, but also lack of approval and rumors) of contraceptives remain in general and specific methods. Some specific disadvantages by method among MWRA include (see table below):

- Injections: side effects, requires several visits to doctor
- Condoms: side effects, difficult to use, can burst
- IUDs: cause infertility and side effects
- Emergency contraception: low awareness of product category

**Table 4.49 Percentage distributions of currently married women aged 15-49 years by their perceived disadvantages of contraceptives**

Disadvantages among total respondents (n=1400)	Injections	Condoms	IUDs	Emergency Contraception
NONE/DK	30	68	58	<b>96</b>
Side effects	<b>51</b>	<b>13</b>	<b>19</b>	1
Requires several visits to doctor	<b>22</b>	.3	8	-
Difficult to use	8	8	10	-
Fear of bursting/getting pregnant	-	<b>7</b>	-	-
Causes infertility	4	1	<b>14</b>	2
Not accepted by husband	1	4	1	-
Expensive	.4	.3	3	1

There is a potentially large opportunity to grow the volume of emergency contraception, including among unmarried women. The main barrier is that awareness and ever use of the product are both VERY low. The challenge how to increase awareness, positive attitudes and trial among those in need of this product

#### **4.10 Recommendations - Contraception**

##### **4.10.1 Objectives**

1. Increase percentage of women who are using an effective, modern method
2. Increase percentage of women who acquire their method by buying from CRS-supported outlets or those selling CRS products
3. Develop range of interpersonal sources of information, supported by radio and cell-phone reminders

##### **4.10.2 Pricing**

- It appears that the prices proposed by interviewers for each product were acceptable to those saying they intend to use that contraceptive in the future. However, CRS should be careful to assure that their current brand users will continue to purchase if prices are increased. Since most of the respondents do not currently pay anything for their contraceptive, it's hard to know how many of them would really pay the current product price.

##### **4.10.3 How to promote/increase sales - outlets and activities**

- As there are few private sector outlets in remote areas, public sector distribution for all products in these areas is essential, with CRS working progressively to increase access and market share.

- In the shorter-term, CRS should focus on increasing market share in hills and urban sectors, where services are more available, it's easier to reach people by mass media (hoarding boards and possibly radio) and disposable income is higher.
- Develop additional outlets/channels for distribution of socially-marketed products. This will require a major investment and sustained effort to be successful. Some potential approaches to reach people in areas with low mass media coverage and private sector outlets:
  - Regular village visits by Sangini providers
  - Hold regular women's durbars/melas in central market towns – if once every 3 months, providers could give injections regularly. Also provide information, counseling, and service delivery of other products.
  - Use cell phone messages to:
    - Advertise these events
    - Remind injectable users about date of next injection
    - Send teasers: Why is Sangini the best injectable?
  - Work with local women's groups and/or hairdressers who can pass on information and invitation cards for counseling at Sangini pharmacies.
  - Mobilize satisfied users of different methods to promote their method.
  - Create songs and slogans for different methods/brands that could be played independently of ads.
  - Develop a telephone hotline for information and counseling – especially useful for side-effects and emergency contraception.
  - Develop call-in quizzes or contests to raise awareness and increase participation about different products in exchange for winning something small or getting name mentioned on-air.
  - Narrow-target for emergency contraception
    - Set up outlets near universities or where young women congregate.
    - Telephone approaches would work especially well with this audience.
    - Develop peer counselors for emergency contraception.

#### **4.10.4 What to promote/positioning**

- Promote CRS or Sangini as an active “umbrella brand” of quality products that meet every couple's needs at different times and/or promote different brands separately - with an overarching, integrated supportive positioning.
- Increase perception that purchased brands and providers are a better value than free ones, perhaps because of the better service provided: “Sangini providers not only know about all the methods, but they care for you!”
- Improve Sangini provider quality and attitude to support perception of better service. Specifically train providers to actively discuss possible side effects of chosen method and what to do about them, especially with new clients. “Some side effects are normal, but they usually go away in a few days. If they don't, come back and see me.”

- All methods should be promoted as effective and safe.
  - Each method should also be promoted with different end benefits to differentiate them. Content should differ for different products.
    - Promote injectable/IUDs/pills for those having regular sex who want to wait 1-2 years
    - Want to have (more children)? → promote: temporary, safe, reversible methods, focus on spacing/WAITING until ready again
      - Injectable are the most desirable among these respondents (easy to use as well as best known/most used/best regarded/most likely to use in future).
      - Reach women during pregnancy, at delivery, etc. – to get them to think about delaying or avoiding another pregnancy while they’re dealing with pregnancy or newborn.
    - Temporary methods are completely reversible – show results/testimonials, focused on young women with one child under a year. For example: we wanted to wait until our first child was 3 before getting pregnant with our second child. So we used injections. Then when X was 3, we stopped, and Y was born a year later.
    - For those worried about health concerns who don’t want a method that interferes with their body → safe ways to avoid/delay pregnancy; if they’re worried about hormones, promote condoms which are not hormonal.
  - For those having infrequent sex and/or the husband lives away → promote: “once is enough.....to get pregnant” and methods to be used only when having sex (especially condoms.) “You only need to use one whenever you have sex.”
  - For those looking to wait longer than 2 years → effectiveness, well-being and aspirations for children of longer-term methods (IUDs/Implants): “We want to be able to provide our current children all the opportunity we can. We are thinking long-term.”
  - Those who have had unprotected sex and are worried about getting pregnant, especially unmarried women → emergency contraception.
- Make sure to include men in some aspects of promotion, as their agreement is important for different method use and resistance to family planning still exists among some. In materials/media, make sure to include men in images.
  - For those who are or have spouses who are opposed (14% who say they won’t use a modern method in the future for this reason), promote condoms and natural methods as safe and effective.

## Chapter 5 Maternal and Child Health and Products

Of the 1400 married women 51% (n=816; 157 from the mountains and 659 from the hills) had at least one child under five years of age living in their household, with a total of 970 children under five years of age (203 children from the mountains and 767 from the hills). 53% of these children were boys and 47% were girls. By age, 41% of the children were between 1-2 years old followed by 38% were 3-4 years of age, and 21% were under one year of age (Table 5.1).

**Table 5.1 Percent distribution of children under five years of age by their age at survey, sex and ecological regions**

Description	Mountain (n=203)	Hills (n=767)	Total (n=970)
<b>Sex of children</b>			
Boy	53.7	52.4	52.7
Girl	46.3	47.6	47.3
<b>Age of children (completed age)</b>			
<2 months	3.0	2.6	2.7
2-5 months	9.9	7.4	7.9
6-11 months	10.3	10.4	10.4
1-2 years	45.8	39.5	40.8
3-4 years	31.0	40.0	38.1

One of the objectives of the study was to get insight into the behaviors of married women of reproductive age (MWRA) with at least one child under 5 years of age regarding maternal and child health (MCH) and products, including KAP, places of obtaining and willing to pay for the products. These products included clean delivery kits (CDK), baby zinc and ORS.

### 5.1 Clean delivery kits

#### 5.1.1 Awareness of product and exposure to messages in the last 6 months

Those respondents (n=816) who had children below five years were asked if they had heard of clean delivery kits, a kit the Government promotes to be distributed through the private sector to ensure safe delivery at homes. Nearly half (48%, 36% in mountains – significantly lower) of the respondents reported to have heard about it. The proportion of women who heard about the kits was significantly higher among those with SLC or above education, belonging to Hill Brahmin / Chhetri caste, exposed to multiple media and belonging to higher SES than their respective counterparts. However, no significant differences on level of awareness were observed by age cohorts and religion (Table 5.2).

**Table 5.2 Percent distribution of currently married women aged 15-49 years having at least one child below 5 years of age at the time of survey by their knowledge on clean delivery kits, selected background characteristics and ecological regions**

Background characteristics	Percent heard of clean delivery kit		Number
	Yes	No	
<b>Region of residence*</b>			
Mountain	36.3	63.7	157
Hills	50.4	49.6	659
<b>Age of women (in years)</b>			
15-19	35.7	64.3	42
20-29	50.6	49.4	512
30-49	43.9	56.1	262
<b>Level of education*</b>			
No schooling/illiterate	30.1	69.9	408
Some primary	48.7	51.3	154
Some secondary	71.7	28.3	145
SLC or above	79.8	20.2	109
<b>Religion</b>			
Hindu	47.7	52.3	631
Non-Hindu	47.6	52.4	185
<b>Caste/ethnicity*</b>			
Hill Brahmin/Chhetri	52.6	47.4	268
Hill Janajati	49.7	50.3	354
Hill Dalit	36.3	63.7	146
Newar	39.6	60.4	48
<b>Migration status*</b>			
Non-migrant	45.0	55.0	694
Migrant	63.1	36.9	122
<b>Exposure to media*</b>			
None	23.1	76.9	295
Only one	49.8	50.2	297
Only two	71.5	28.5	130
All three	85.1	14.9	94
<b>SES Index*</b>			
Lowest	24.2	75.8	211
Second	36.9	63.1	176
Middle	51.0	49.0	151
Fourth	66.9	33.1	145
Highest	74.4	25.6	133
<b>Total</b>	<b>47.7</b>	<b>52.3</b>	<b>816</b>

\*Significant at 0.05 level

Among those (n=389) who had ever heard about the kits about three-fifths (59%, 47% in mountains which was significantly lower ( $p<.05$ ) than in the hills) said they had heard or seen some message/information about the clean delivery kit from some source in the last six months (Table 5.2). The most mentioned source of information on safe delivery kit was the FCHVs (60%) followed by radio (53%) and friend or relatives (36%). A smaller, but significant proportion of the women reported receiving the message from health facilities (15%) and television (14%). FCHV and friends/relatives as source of information were more popular in mountain while radio and TV were relatively more popular source in the Hills.

**Table 5.3 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey who could recall messages about SDK by its type, source and ecological regions**

Description	Mountain	Hills	Total
<b>Recall hearing/seeing any messages or information from any source about clean delivery kit over the last 6 months</b>			
Yes	47.4	61.4	59.4
No	52.6	36.7	39.1
Do not know	-	1.8	1.5
<b>Total</b>	<b>57</b>	<b>332</b>	<b>389</b>
<b>Source of information about clean delivery kits in the last 6 months (Multiple Response)**</b>			
FCHV	74.1	58.3	60.2
Radio	48.1	53.9	53.2
Friends/relatives	48.1	33.8	35.5
Health facility or health worker	7.4	16.2	15.2
Television	3.7	15.7	14.3
Neighbor	7.4	10.8	10.4
Newspaper/magazine	3.7	2.0	2.2
Poster/hoarding board	0.0	2.5	2.2
In a shop	0.0	1.0	0.9
Street dramas	0.0	0.5	0.4
Other (training; group meeting; school; husband)	0.0	1.0	0.9
<b>Total</b>	<b>27</b>	<b>204</b>	<b>231</b>

Differentials on the exposure of respondents to messages or information on clean delivery kits over the last 6 months preceding the survey according to their selected background characteristics are presented in Table 5.3. Younger and higher educational level of women were more significantly likely to have exposure to messages or information on clean delivery kits. Exposure to the messages or information on clean delivery kits was also much higher among Hill Janajati and non-Hindu women. Likewise, women of higher SES quintiles had greater exposure to information on clean delivery kits than those of lower SES ones.

The observed differentials on message recall across different variables can be substantiated only with larger number of cases, and at the moment the observed differentials cannot be confirmed due to small number of cases.

**Table 5.4 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and having heard of messages about clean delivery kit and selected background characteristics**

Background characteristics	Percent exposed to message on clean delivery kit		Number
	Yes	No	
<b>Region of residence</b>	*		
Mountain	47.4	52.6	57
Hills	61.4	38.6	332
<b>Age of women (in years)</b>	*		
15-19	86.7	13.3	15
20-29	61.0	39.0	259
30-49	52.2	47.8	115
<b>Level of education</b>	*		
No schooling/illiterate	43.1	56.9	123
Some primary	62.7	37.3	75
Some secondary	69.2	30.8	104
SLC or above	67.8	32.2	87
<b>Religion</b>	*		
Hindu	55.1	44.9	301
Non-Hindu	73.9	26.1	88
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	59.6	40.4	141
Hill Janajati	68.2	31.8	176
Hill Dalit	37.7	62.3	53
Newar	36.8	63.2	19
<b>Migration status</b>	ns		
Non-migrant	58.3	41.7	312
Migrant	63.6	36.4	77
<b>Exposure to media</b>	*		
None	33.8	66.2	68
Only one	50.7	49.3	148
Only two	71.0	29.0	93
All three	83.8	16.3	80
<b>SES Index</b>	*		
Lowest	43.1	56.9	51
Second	52.3	47.7	65
Middle	46.8	53.2	77
Fourth	70.1	29.9	97
Highest	71.7	28.3	99
<b>Total</b>	<b>59.4</b>	<b>40.6</b>	<b>389</b>

\*Significant at <.05 level

ns= Not significant

3-in-4 of exposed respondents correctly mentioned the items in the kits and about three-fifths said that CDK was to be used during delivery at homes. The main messages recalled by the respondents are summarized below (Table not shown).

- It contains blade, plastic sheet, thread, coin and soap (75%)
- It is for use during home delivery (62%)
- It should be bought before home delivery (13%)
- Prevents from infection including tetanus (12%)

### 5.1.2 Awareness of brand

Of the 389 women who had ever heard of CDK, almost three-fourths (71% spontaneously and 74% after probing) were able to mention the brand name of CDK – *Sutkeri Samagri*, the CRS brand, was the only brand they were able to recall. However, over a quarter of the respondents could not recall any brand name of CDK (Table 5.5).

**Table 5.5 Percent distribution of currently married women aged 15-49 having least one child below 5 years of age at the time of survey and heard of clean delivery kit by awareness of different brands**

Recall of brand names of clean delivery kits	Spontaneous	After probing
Sutkeri Samagri	71.0	73.5
Do not know/ no response	29.0	26.7
<b>Total</b>	<b>389</b>	<b>389</b>

When asked from where one could acquire the CDK the most frequently mentioned sources were health posts (54%) and pharmacy (52%), followed by governmental hospital (31%) and FCHVs (27%) and private hospital (23%). The non-government (NGO) sector as a source of obtaining CDK was mentioned by only a negligible proportion (2%) of the respondents (Table 5.6).

Note that among the total sample of 816 married women with at least one child under five, 48% mentioned at least one place to get CDKs, 33% mentioned at least 2 places, and 15% mentioned at least 3 places; 52% did not mention any places. (Table not shown)

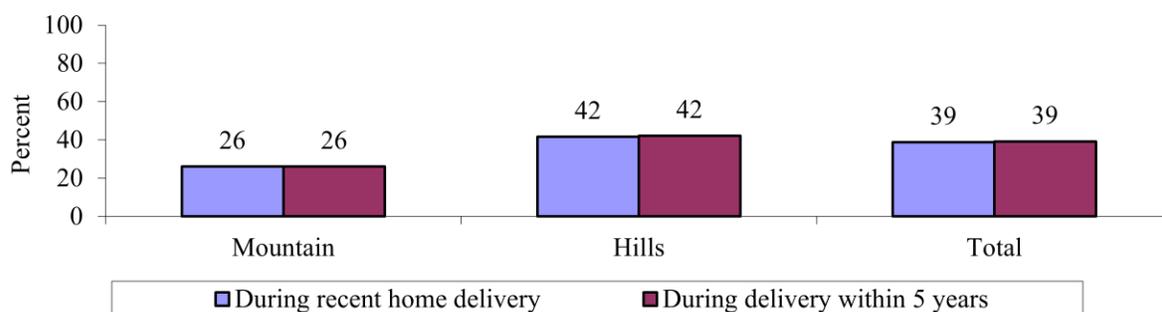
**Table 5.6 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and heard of clean delivery kit by knowledge about the source of their supply**

Knowledge about places to get/buy clean delivery kit (Multiple Response)	Mountain	Hills	Total
<u>Public sector</u>			
Health post	61.4	52.4	53.7
Government hospital/clinic	31.6	31.0	31.1
FCHV	28.1	26.5	26.7
Sub-health post	10.5	16.0	15.2
PHC center	5.3	4.2	4.4
PHC outreach	-	1.2	1.0
<u>Non-government (NGO) Sector</u>			
FPAN	-	2.4	2.1
UMN	-	0.3	0.3
<u>Private medical sector</u>			
Pharmacy	50.9	52.1	51.9
Private hospital/clinic	33.3	21.7	23.4
Sangini outlet	-	0.3	0.3
<u>Other source</u>			
Shop	-	1.8	1.5
Do not know/no answer	1.8	3.0	2.8
<b>Total</b>	<b>57</b>	<b>332</b>	<b>389</b>

### 5.1.3 Use of product

Among 389 women who reported having heard about clean delivery kits, 64% (n=250) had given birth to a child at home in the last five years. These women were asked if they had used the clean delivery kit during the birth of their last child or the next to youngest one. Overall, 39% of these respondents reported ever using clean delivery kits during delivery and during the birth of their youngest or the second youngest child – the proportion of those using clean delivery kit was significantly higher in hills (42%) than in mountain (26%) region (p<.05) (Figure 5.1).

**Figure 5.1 Percentage of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of clean delivery kit(CDK) and had delivered at home by use status of CDK within 5 years before the survey date and ecological regions**



n= 46 in mountain and 204 in hills

Table 5.7 further analyzes the differentials on the use of clean delivery kits by the women during the delivery of a child at home on the basis of their select background characteristics. Use of clean delivery kits was significantly higher among women of younger age cohorts, exposed to all three media and higher SES index than their respective counterparts. By caste or ethnicity, use of clean delivery kits was highest among Hill Brahmin/Chhetri and lowest among Hill Janajati and much higher among Hindus than non-Hindus

**Table 5.7 Percent distributions of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey, has heard of clean delivery kit (CDK) and have ever used it during delivery at home within 5 years before the survey date by selected background characteristics**

Background characteristics	Percent of CDK use in birth at home within 5 years		Number
	Yes	No	
<b>Age of women (in years)</b>	*		
15-19	60.0	40.0	10
20-29	43.1	56.9	153
30-49	29.9	70.1	87
<b>Level of education</b>	ns		
No schooling/illiterate	29.6	70.4	98
Some primary	41.7	58.3	48
Some secondary	43.1	56.9	58
SLC or above	52.2	47.8	46
<b>Religion</b>	*		
Hindu	50.0	50.0	184
Non-Hindu	9.1	90.9	66
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	54.5	45.5	77
Hill Janajati	31.0	69.0	129
Hill Dalit	35.1	64.9	37
Newar	42.9	57.1	7
<b>Migration status</b>	ns		
Non-migrant	37.0	63.0	208
Migrant	50.0	50.0	42
<b>Exposure to media</b>	*		
None	32.6	67.4	46
Only one	35.9	64.1	103
Only two	32.1	67.9	56
All three	62.2	37.8	45
<b>SES Index</b>	*		
Lowest	39.5	60.5	38
Second	25.0	75.0	52
Middle	47.2	52.8	53
Fourth	32.8	67.2	61
Highest	54.3	45.7	46
<b>Total</b>	<b>39.2</b>	<b>60.8</b>	<b>250</b>

\*Significant at <.05 level

ns= Not significant

Respondents who reported having ever having used clean a delivery kit were asked where they had obtained it. The most frequently mentioned sources were FCHVs (34%) and health posts (24%) in public sector and pharmacy (12%) and private hospital or clinic (11%) in private sector. Non-government sector was mentioned by only a negligible proportion of the respondents (1%) (Table 5.8).

**Table 5.8 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of clean delivery kit(CDK) and have used it during delivery at home within 5 years before the survey date by source of supply of clean delivery kit last used**

Sources from where the most recent CDK was obtained	Percent
<u>Public sector</u>	
FCHV	33.7
Health post	23.5
Sub-health post	4.1
Government hospital/clinic	3.1
PHC center	3.1
<u>Non-government (NGO) Sector</u>	
Other NGO	1.0
<u>Private medical sector</u>	
Pharmacy	12.2
Private hospital/clinic	11.2
<u>Other source</u>	
Shop	5.1
Friend/relative	1.0
Other (mother's group; health worker)	2.0
<b>Total</b>	<b>98</b>

Approximately 4-in-5 respondents recalled using the brand "*Sutkeri Samagri*" during the last time they used a CDK, while the other 20% of respondents could not recall the brand name. 60% of CDK users could not remember what they paid the last time. Among the others, 13% said they paid Rs 50 for CDK and 10% paid less than Rs 50, and 12% said that they got the CDK free (Table 5.9).

**Table 5.9 Percent distribution of currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of clean delivery kit (CDK) and have used it during delivery at home within 5 years before the survey date by brand and amount paid for its most recent use**

Description	Percent (n=98)
<b>Brand of Clean Delivery Kit used</b>	
Sutkeri Samagri	79.6
Do not know	20.4
<b>Amount paid for the CDK kit used last time (in NRs)</b>	
Less than Rs 50	10.2
Rs 50	13.2
More than Rs 50	4.1
<b>Range</b>	<b>25-100</b>
Got free	12.2
Do not know/remember	60.2
Mean (SD)	48.5 (13.2)
Median (SD)	50.0 (13.2)

Respondents who delivered at home and were aware of CDK but who never used one (n=152) were asked the reasons for not doing so. Three-fifths of the respondents reported that they did not use the kit since it was not easily available nearby. A substantial proportion (21%) of the respondents said

they had not known about it and about one-tenth of them thought that it was not necessary (Table 5.10).

**Table 5.10 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of clean delivery kit (CDK) but never used it during delivery at home before 5 years from the date of survey by reasons for not using it**

Reason for never using clean delivery kit	Percent
Not easily available/ not available nearby	60.5
Do not know about CDK	21.1
Did not think it was necessary	11.8
Nobody was there to bring	3.9
Other±	2.0
Reason not known	0.7
<b>Total</b>	<b>152</b>

± Other includes: due to use of traditional materials; it was fine even without the use of CDK.

#### 5.1.4 Future use intention and willingness to pay

Respondents (n=389) who had heard of clean delivery kits were asked if they would use the kit if they decided to give birth to another baby at home or outside the health facility in the future. In response, 2-in-3 respondents expressed their intention to use the kits in the future. Those (n=264) who intended to use clean delivery kit in the future were further asked if they would buy such a kit at a price of Rs 50. Nearly all (98%) the respondents responded affirmatively. They were also asked about the maximum price they would be willing to pay for a clean delivery kit. 70% were willing to pay Rs 56 or more (48% said between Rs 56-60 followed by 13% who said they'd pay more than Rs 60) (Table 5.11). On average, women were willing to pay a maximum of Rs 60 for a clean delivery kit.

**Table 5.11 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of clean delivery kit (CDK) by intention to use it in future in deliveries at home or outside health facility including price they would be willing to pay for it**

Description	Percent
<b>Intention to use CDK in the future</b>	
Yes	67.9
No	18.5
Do not know	13.6
<b>Total</b>	<b>389</b>
<b>Willingness to buy CDK at a price of Rs 50</b>	
Yes	98.1
No	1.5
Do not know	0.4
<b>Total</b>	<b>264</b>
<b>Maximum price willing to pay for a CDK (in Rs)</b>	
Rs 50-55	29.5
Rs 56-60	48.1
Rs 61+	12.5
<b>Mean (SD)</b>	<b>60.6 (8.6)</b>
<b>Median (SD)</b>	<b>60.0 (SD 8.6)</b>
<b>Range</b>	<b>50-100</b>
Do not know	9.8
<b>Total</b>	<b>264</b>

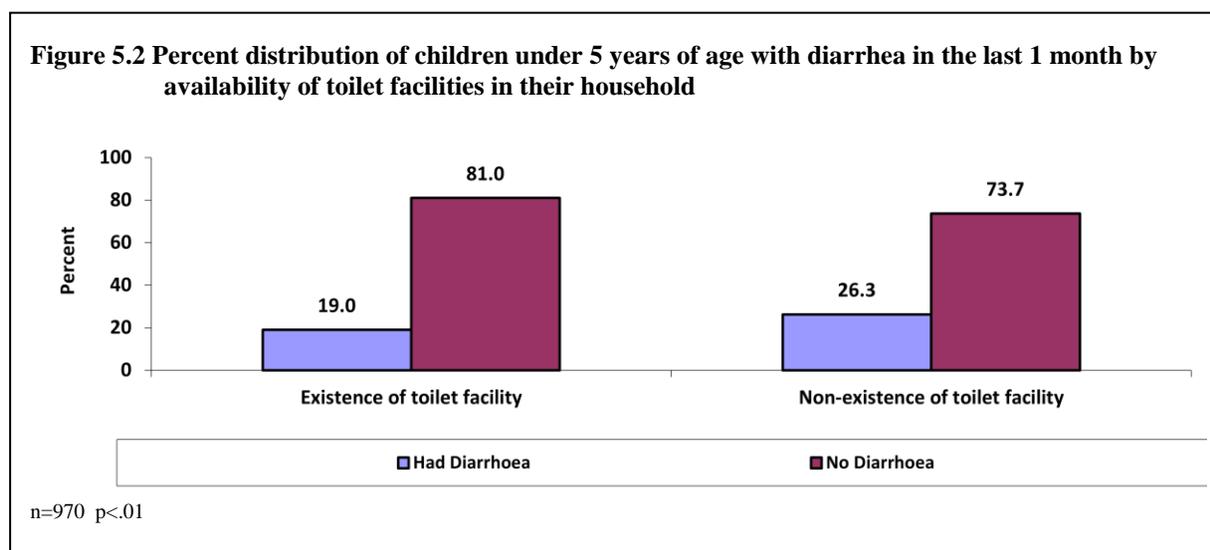
## 5.2 Age, sex and recent diarrheal incidence among children under five years of age

In order to examine the diarrheal prevalence, all the women were asked if their children below five years of age had diarrhea in the last two weeks and last month preceding the interview. 15% of the children below five years of age had diarrhea in the last two weeks and 22% in the last month. No marked difference between mountains and hills was observed in children's diarrheal prevalence (Table 5.12).

**Table 5.12 Percent distribution of children under five years of age by incidence of diarrhea in last two weeks, last one month and ecological regions**

Description	Mountain (n=203)	Hills (n=767)	Total (n=970)
<b>Incidence of diarrhea in the last 2 weeks</b>			
Yes	14.8	15.4	15.3
No	85.2	84.6	84.7
<b>Diarrheal incidence in the last one month (including last 2 weeks)</b>			
Yes	22.7	21.5	22.0
No	77.3	78.2	78.0

Data presented in Figure 5.2 shows the strong association ( $p < .01$ ) between the existence of toilet facilities in the households and incidence of diarrhea among children under five years during the month prior to the survey. 19% of the children having toilet facilities in their households compared to over 26% of those not having such facilities had diarrhea in the last one month preceding the survey.



The relationship between incidence of diarrhea in last two weeks before survey among the last born children and those who defecate in bush versus in toilet was also examined. The analysis shows that 60 percent of the 816 women with one child under five years reported to defecate in the bush and did not had a toilet in their house. The cross-tabulation analysis shows that children who belong to women whose household member were reported to defecate in the open were 1.6 times more likely to get diarrhea than children of women whose household member were reported to defecate in toilet. The difference was statistically significant (19.7% versus 12 %; ( $p < .01$ )). [Table not shown]

## 5.3 Baby zinc

The Government of Nepal introduced baby zinc to be given in addition with ORS to reduce the frequency, quantity and duration of diarrhea of a child. This study included information on the awareness, use and opinion on the baby zinc among married women who had children below five years of age at the time of survey. The findings are presented in this section.

### 5.3.1 Awareness of product and exposure to messages in the last 6 months

38% of the 816 women (26% in mountains, significant at  $p < .05$ ) who had under-five children reported they have heard about zinc (Table 5.13). Likewise, women aged 20-29 years and those belonging to Hill Brahmin/Chhetri and Janajati castes had greater awareness of baby zinc than the women of other castes. A strong association between awareness of baby zinc and number of media they were exposed to was also observed. Moreover, a significantly ( $p < .05$ ) higher proportion of women belonging to higher SES quintile reported to have heard about it than those in the lower SES quintiles (Table 5.13).

**Table 5.13 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey by awareness of baby zinc and selected background characteristics**

Background characteristics	Percent heard of baby zinc		Number
	Yes	No	
<b>Region of residence</b>	*		
Mountain	25.5	74.5	157
Hills	41.0	59.0	659
<b>Age of women (in years)</b>	*		
15-19	26.2	73.8	42
20-29	43.6	56.4	512
30-49	29.0	71.0	262
<b>Level of education</b>	*		
No schooling/illiterate	20.8	79.2	408
Some primary	40.3	59.7	154
Some secondary	57.9	42.1	145
SLC or above	72.5	27.5	109
<b>Religion</b>	ns		
Hindu	37.1	62.9	631
Non-Hindu	41.1	58.9	185
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	44.4	55.6	268
Hill Janajati	39.8	60.2	354
Hill Dalit	24.7	75.3	146
Newar	29.2	70.8	48
<b>Migration status</b>	*		
Non-migrant	34.3	65.7	694
Migrant	59.0	41.0	122
<b>Exposure to media</b>	*		
None	17.6	82.4	295
Only one	35.7	64.3	297
Only two	58.5	41.5	130
All three	80.9	19.1	94
<b>SES Index</b>	*		
Lowest	19.4	80.6	211
Second	26.7	73.3	176
Middle	33.8	66.2	151
Fourth	55.9	44.1	145
Highest	67.7	32.3	133
<b>Total</b>	<b>38.0</b>	<b>62.0</b>	<b>816</b>

\*Significant at  $< .05$  level

ns= Not significant

Among the respondents (n=310) who said they had heard of baby zinc, just over two-thirds (69%) said that they had heard or seen messages in last six months. The most frequently mentioned sources

were FCHVs (64%) and radio (61%). The other noted sources include friends or relatives (30%), health facilities/worker (21%), television (17%), and neighbor (12%).

**Table 5.14 Percent distributions of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of baby zinc in the last 6 months and source of information**

Description	Percent
<b>Recall hearing or seeing to any messages or information from any source about baby zinc over the last 6 months</b>	
Yes	69.4
No	28.4
Do not know	2.3
<b>Total</b>	<b>310</b>
<b>Source of information about baby zinc in the last 6 months (Multiple Response)</b>	
FCHV	63.7
Radio	60.5
Friends/relatives	30.2
Health facility or health worker	20.5
Television	17.2
Neighbor	12.1
Newspaper/magazine	3.3
Poster/Hoarding board	2.8
In a shop	1.9
Other±	0.5
Do not know/ no response	0.5
<b>Total</b>	<b>215</b>

± Other includes: training; group meeting; school; husband.

Table 5.15 further analyzes the differentials on exposure of respondents to messages or information on baby zinc tables over the last six months according to their select background characteristics. Exposure to the messages or information on zinc was significantly higher among Hill Janajati and lower among Newari women. Respondents belonging to the higher SES index had a greater exposure to information or messages on zinc than those of lower SES ones. Similarly, significantly a higher proportion non-Hindu woman and those with exposure to two or more media had heard or seen message or information on baby zinc in the last 6 months than their respective counterparts.

**Table 5.15 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of baby zinc in the last 6 months and selected background characteristics**

Background characteristics	Percent exposed to baby zinc message		Number
	Yes	No	
<b>Region of residence</b>	ns		
Mountain	72.5	27.5	40
Hills	68.9	31.1	270
<b>Age of women (in years)</b>	ns		
15-19	72.7	27.3	11
20-29	70.4	29.6	223
30-49	65.8	34.2	76
<b>Level of education</b>	ns		
No schooling/illiterate	61.2	38.8	85
Some primary	72.6	27.4	62
Some secondary	73.8	26.2	84
SLC or above	70.9	29.1	79
<b>Religion</b>	*		
Hindu	64.5	35.5	234
Non-Hindu	84.2	15.8	76
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	65.5	34.5	119
Hill Janajati	80.1	19.9	141
Hill Dalit	50.0	50.0	36
Newar	42.9	57.1	14
<b>Migration status</b>	ns		
Non-migrant	68.9	31.1	238
Migrant	70.8	29.2	72
<b>Exposure to media</b>	*		
None	46.2	53.8	52
Only one	62.3	37.7	106
Only two	76.3	23.7	76
All three	88.2	11.8	76
<b>SES Index</b>	*		
Lowest	41.5	58.5	41
Second	66.0	34.0	47
Middle	68.6	31.4	51
Fourth	76.5	23.5	81
Highest	77.8	22.2	90
<b>Total</b>	<b>69.4</b>	<b>30.6</b>	<b>310</b>

\*Significant at <.05 level

ns= Not significant

Mountain and hills disaggregated data are not shown because of small sample size in mountain.

91% of those who reported to have heard some information about baby zinc in the prior 6 months, provided a specific message that they heard, with the two most frequently mentioned being “baby zinc keeps the diarrhea away” (58%) and “baby zinc should be given for 10 days/completely” (57%). Other information recalled included “baby zinc was the right rehydration treatment of diarrhea” (32% - note that the campaign did NOT say that zinc was for dehydration), *baby zinc would help in building immunity* (27%), *zinc reduces the duration of diarrhea* (21%), *Baby Zinc should be used along with ORS/ Baby Zinc with ORS cures faster* (13%) (Table 5.16). Other messages were focused on prevention of diarrhea, including washing hands with soap, and other treatment options, such as feeding liquid to sick baby, ORS and suger-salt-solution.SSS.

**Table 5.16 Percent distributions of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of baby zinc in the last 6 months by type of information seen/heard.**

Type of information seen//heard about baby zinc in the last 6 months (Multiple Response)	Percent
Baby Zinc Zhada Pakhala Bagcha tadha (baby zinc keeps the diarrhea away)	57.7
Baby Zinc tablets should be given for 10 days/ complete dose should be administered	57.2
Baby Zinc is the right rehydration treatment of diarrhea	32.1
Baby Zinc helps in building immunity/ the risk of new episode in the future reduces	27.4
Baby Zinc reduces the duration of the diarrheal episode	20.9
Hand washing with soap	11.2
Baby Zinc should be used along with ORS/ Baby Zinc with ORS cures faster	13.0
Jhada Pakhala ko upachar Baby Zinc chakki ko prayog (use of baby zinc tablet for the treatment of diarrhea)	4.7
Give plenty of liquid to child with diarrhea	4.2
Give boiled water and sugar-salt solution	3.3
Should not give stale food	1.9
Give ORS	1.9
Treating drinking water	0.9
Do not know/no response	9.3
<b>Total</b>	<b>215</b>

### 5.3.2 Brand awareness and sources of supply

A vast majority (81%) of the respondents could not recall any brand name of the baby zinc, even after prompting. The most frequently recalled brand name, before (8%) and after (12%) probing, was Z-DIS 10. Less than 5% of the respondents mentioned, even after probing, Z-DIS 20, ZINCOVA-20, ZINC-DT 10, ZINC-DT 20 and ZN-DT (Table 5.17). Only 17 out of 310 respondents were able to mention two or more brands of baby zinc (Table not shown).

**Table 5.17 Percent distributions of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of baby zinc by brand**

Q319b: Recall of brand names for baby zinc (Multiple Response)	Spontaneous	After probing
Z-DIS 10	7.7	11.6
Z-DIS 20	4.2	4.2
Zinc-DT 10	2.6	2.9
Zinc-DT 20	0.6	1.3
ZINCOVA-20	3.2	3.2
ZN-DT	1.0	1.0
ZN-DT 10	0.6	0.6
Do not know	84.8	81.3
<b>Total</b>	<b>310</b>	<b>310</b>

When asked, from where they could get baby zinc, somewhat more than half mentioned pharmacies (59%) and health posts (55%), followed by FCHVs (41%) and government hospitals (30%). Additionally, 17% mentioned sub-health posts and 15% mentioned private hospitals as places to acquire baby zinc (Table 5.18)<sup>7</sup>.

Note that among the total sample of 816 married women with at least one child under five, 37% mentioned at least one place to get zinc, 30% mentioned at least 2 places, and 15% mentioned at least 3 places; 63% did not mention any places (Table not shown).

<sup>7</sup> With a sample size of 40 in mountains, MOST of these differences are not going to be significant.

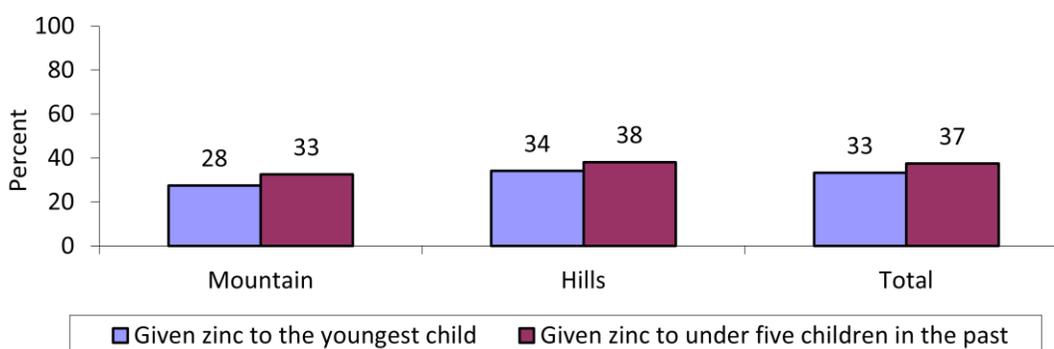
**Table 5.18 Percent distributions of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of baby zinc by information about the source of its supply and ecological regions**

Knowledge about places to get/buy <u>baby zinc</u> (Multiple Response)	Mountain	Hills	Total
<u>Public sector</u>			
Health post	60.0	54.1	54.8
FCHV	32.5	41.9	40.6
Government hospital/clinic	37.5	28.5	29.7
Sub-health post	12.5	17.8	17.1
PHC center	7.5	5.6	5.8
PHC outreach	2.5	0.4	0.6
Other government	2.5	-	0.3
<u>Private medical sector</u>			
Pharmacy	55.0	60.0	59.4
Private hospital/clinic	22.5	13.7	14.8
Sangini outlet	-	0.7	0.6
<u>Other source</u>			
Shop	-	1.1	1.0
Do not know/no answer	2.5	2.6	2.6
<b>Total</b>	<b>40</b>	<b>270</b>	<b>310</b>

### 5.3.3 Use of product

Information on use of the baby zinc was sought from those 310 respondents who had reported to have heard about the baby zinc. Overall, 1-in-3 of these respondents (28% in mountains) reported that they gave zinc to their youngest child during the last diarrheal episode. Similarly, 37% of these respondents (33% in mountains) reported they gave zinc to a child sometime in the past (Figure 5.3). Among those who have given baby zinc to the last child during last episode of diarrhea (n=103), 88 % reported to also have given ORS (data not shown).

**Figure 5.3 Percentage of currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of baby zinc who had given zinc to their youngest child during last diarrheal episode or any children below five years of age in the past by ecological regions**



n= 40 in mountain and 270 in hills

Table 5.19 further analyzes the differentials of the respondents' background characteristics for those who have given zinc tablets at any time to their children under 5. The proportion of women who gave zinc tablets to their child was higher among Hindu than non-Hindu, and lowest among and the Hill Janajati caste, compared to the others. Interestingly women with no exposure to mass media were significantly more likely to give zinc tablets to their children than those exposed. However, no significant association was observed between giving children zinc and the age cohorts, level of education, migration status and SES status of the women.

**Table 5.19 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of baby zinc by its use and selected background characteristics**

Background characteristics	Percent ever gave zinc		Number
	Yes	No	
<b>Age of women (in years)</b>	ns		
15-19	18.2	81.8	11
20-29	39.9	60.1	223
30-49	32.9	67.1	76
<b>Level of education</b>	ns		
No schooling/illiterate	41.2	58.8	85
Some primary	38.7	61.3	62
Some secondary	32.1	67.9	84
SLC or above	38.0	62.0	79
<b>Religion</b>	*		
Hindu	42.3	57.7	234
Non-Hindu	22.4	77.6	76
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	45.4	54.6	119
Hill Janajati	28.4	71.6	141
Hill Dalit	41.7	58.3	36
Newar	50.0	50.0	14
<b>Migration status</b>	ns		
Non-migrant	37.8	62.2	238
Migrant	36.1	63.9	72
<b>Exposure to media</b>	*		
None	57.7	42.3	52
Only one	25.5	74.5	106
Only two	40.8	59.2	76
All three	36.8	63.2	76
<b>SES Index</b>	ns		
Lowest	39.0	61.0	41
Second	46.8	53.2	47
Middle	35.3	64.7	51
Fourth	34.6	65.4	81
Highest	35.6	64.4	90
<b>Total</b>	<b>37.4</b>	<b>62.6</b>	<b>310</b>

\*Significant at <.05 level

ns= Not significant

60% of those who had ever given zinc to their child during diarrhea (n=116) did so last in the prior 6 months and most of the rest between 6 months to one year prior, with an overall mean of 6 months and a median of 4 months. The major sources of supply of zinc used last time were at grassroots level health facilities (health post, sub-health post or PHC- 51%), followed by FCHV (24%) and pharmacy (16%). 67% of these respondents were unaware of the brand of zinc that they used last time; the most frequently reported brand used was Z-DIS 10 (17%) followed by

ZINCOVA 20 (6%). Over 3-in-four respondents (78%) reported that they had received the zinc free and a notable proportion (16%) of the respondents said they did not know how much was paid last time. Only 7% (n=8) of the respondents reported paying for zinc, with the average amount paid of Rs 26 (Table 5.20).

**Table 5.20 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of baby zinc and used including source of supply, brand of zinc and cost**

Description	Percent (n=116)
<b>Last time zinc was given</b>	
Less than 6 months	59.5
6-11 months	12.9
1 year	23.3
2 years	2.6
Do not know	1.7
<b>Mean</b>	<b>5.8</b>
<b>Median</b>	<b>4.0</b>
<b>SD</b>	<b>5.3</b>
<b>Range</b>	<b>0-24</b>
<b>Places of obtaining zinc given in last time</b>	
Health Post/ Sub-health post/PHC	50.9
FCHV	24.1
Private Pharmacy	16.4
Hospital	7.8
Private clinic/ nursing home	0.9
<b>The brand of zinc given last time</b>	
Z-DIS 10	17.2
Z-DIS 20	4.3
Zinc-DT 10	1.7
Zinc-DT 20	0.9
ZINCOVA-20	6.0
ZN-DT	0.9
ZN-DT 10	1.7
Do not know	67.2
<b>Amount paid for the 10 –day dose of zinc the last time it was obtained (in NRs)</b>	
20	1.7
25	1.7
30	3.4
<b>Mean (SD)</b>	<b>26.3 (4.4)</b>
<b>Range</b>	<b>20-30</b>
97= Free of cost	77.6
98= Do not know	15.5

Among those (n=193) who had heard about zinc but never given it to their child below five years, the main reasons for non-use of zinc were that the baby had no diarrhea (37%) or it was not needed (30%). The other most frequently cited reasons were: unaware of the need for giving zinc together with ORS (14%), unavailability of the zinc (10%) and ORS or other medicine given (6%). A small proportion of the respondents thought that baby zinc was not effective for the control of diarrhea (Table 5.21). Among those who said “no need” 93 percent did not have diarrhea in last two week.

**Table 5.21 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of baby zinc and never used by reasons for not using**

Reasons for never use of zinc (Multiple Response)	Percent
No diarrhea	36.8
No need	29.5
Did not know it should be given with ORS/ thinking that ORS alone was fine	13.5
Did not have Baby Zinc	10.4
ORS helped to stop diarrhea; other medicine was given	6.2
Do not think Baby Zinc is effective	3.1
Other±	3.6
<b>Total</b>	<b>193</b>

± Other includes: health worker did not prescribe; did not like to take or give tablets; used traditional remedies; baby was too small.

### 5.3.4 Future use intention and willingness to pay

Almost all respondents (97%) who had heard about zinc (n=302) stated that they would use zinc if any of their children had diarrhea in the future. Similarly, almost all these respondents (99%) confirmed that they would pay the suggested price of Rs. 25 for a 10 dose pack of zinc. 84% said that their maximum price was Rs 30 or above, with 62% stating Rs 30 only. The average amount they were willing to pay for a pack of 10-tablet zinc was Rs 33 with the standard deviation of 4. And almost all (92%) said that even the price of zinc was higher than their maximum price they would still buying the zinc (Table 5.22).

**Table 5.22 Percent distributions of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of baby zinc by intention to use it during diarrhea of their child in the future including price they will be willing to pay for it**

Description	Total
<b>Intention to use zinc if any child has diarrhea in the future</b>	
Yes	97.4
No	0.3
Do not know	2.3
<b>Total</b>	<b>310</b>
<b>Willingness to buy 10 dose of ZINC at a price of Rs 25</b>	
Yes	98.7
No	0.7
Do not know	0.7
<b>Total</b>	<b>302</b>
<b>The maximum price willing to pay for a pack of 10-tablet zinc (in NRs)</b>	
Rs 25-29	4.6
Rs 30	61.6
Rs 31 or more	22.5
<b>Mean (SD)</b>	<b>32.7 (4.0)</b>
<b>Range</b>	<b>25-50</b>
Do not know	11.3
<b>Total</b>	<b>302</b>
<b>Expected actions if the price of 10 tablets of zinc is higher than the maximum price willing to pay</b>	
Continue to buy	91.7
Look for other cheaper brand	2.0
Not buy (any brand of) the product	0.7
Do not know	5.6
<b>Total</b>	<b>302</b>

## 5.4 Oral rehydration solution (ORS)

The Government of Nepal introduced ORS for the treatment of dehydration due to diarrhea several decades ago. It was distributed through public and NGO sectors often free of cost, with some distribution through private pharmacies. Among various ORS brands available, CRS offers the Nava Jeevan brand. This study requested information from the respondents on the awareness, use and opinion on the ORS. The findings are presented in this section.

### 5.4.1 Awareness of product and exposure to messages in the last 6 months

Among the 816 MWRA with children below five years of age, almost all (93%) of them had heard of ORS (Table 5.23). The proportion of the respondents who had heard of ORS found to be significantly ( $p < .05$ ) more in hills (94%) than in mountain (89%) region.

**Table 5.23 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey by knowledge of ORS and selected background characteristics**

Background characteristics	Percent heard of ORS		Number
	Yes	No	
<b>Region of residence</b>	*		
Mountain	88.5	11.5	157
Hills	94.2	5.8	659
<b>Age of women (in years)</b>	Ns		
15-19	85.7	14.3	42
20-29	93.9	6.1	512
30-49	92.7	7.3	262
<b>Level of education</b>	*		
No schooling/illiterate	88.5	11.5	408
Some primary	95.5	4.5	154
Some secondary	99.3	0.7	145
SLC or above	99.1	0.9	109
<b>Religion</b>	Ns		
Hindu	93.5	6.5	631
Non-Hindu	91.9	8.1	185
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	94.4	5.6	268
Hill Janajati	93.8	6.2	354
Hill Dalit	87.0	13.0	146
Newar	100.0	-	48
<b>Migration status</b>	ns		
Non-migrant	92.8	7.2	694
Migrant	95.1	4.9	122
<b>Exposure to media</b>	*		
None	85.1	14.9	295
Only one	96.3	3.7	297
Only two	99.2	0.8	130
All three	100.0	-	94
<b>SES Index</b>	*		
Lowest	86.7	13.3	211
Second	90.9	9.1	176
Middle	93.4	6.6	151
Fourth	99.3	0.7	145
Highest	99.2	0.8	133
<b>Total</b>	<b>93.1</b>	<b>6.9</b>	<b>816</b>

\*Significant at  $< .05$  level

ns= Not significant

Women with some secondary or above level of education were significantly ( $p < .05$ ) more likely to be aware of ORS than those with some primary or no schooling/illiterate. Similarly, the level of awareness of ORS was also significantly higher ( $p < .05$ ) among the Newari caste and those exposed to all the three media than their respective non-Newari and non-exposed counterparts. Further, socio-economic status of the respondents was also strongly positively associated with the level of awareness of ORS.

Among those ( $n=760$ ) who had ever heard of ORS, 61% had either heard or seen some message about ORS from some source in the last 6 months preceding the survey. Among those who had ever heard of ORS, 54% (40% in mountains and 57% in hill) reported to have received from radio. Similarly, 10% from the mountain and 19% from the hills reported to have received from health facility or health worker. Other differentials were not statistically significant (Table 5.24).

**Table 5.24 Percent distributions of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of ORS in the last 6 months by source of information**

Description	Mountain	Hills	Total
<b>Exposure to any messages or information from any source about ORS over the last 6 months</b>			
Yes	58.3	62.0	61.3
No	41.7	34.6	35.9
Do not know	-	3.4	2.8
<b>Total</b>	<b>139</b>	<b>621</b>	<b>760</b>
<b>Sources of information about ORS in the last 6 months (Multiple Response)</b>			
FCHV	67.9	66.5	66.7
Radio *	39.5	56.9	53.9
Friends/relatives	39.5	33.8	34.8
Health facility or health worker*	9.9	19.0	17.4
Neighbor	16.0	13.5	13.9
Television	2.5	14.3	12.2
Poster/Hoarding board	-	3.6	3.0
Newspaper/magazine	1.2	1.8	1.7
Other $\pm$	-	0.5	0.4
Do not know/ no response	1.2	-	0.2
<b>Total</b>	<b>81</b>	<b>385</b>	<b>466</b>

$\pm$  Other includes: Training, Group meeting, Schools, husbands. \* indicates significant at 5% level

Table 5.25 shows differentials on exposure of respondents to information or messages on ORS over the last six months by selected background characteristics. Respondents having secondary or above level of education and those in higher SES quintiles had greater exposure to the information or message on ORS than those who had no schooling or less than secondary level of education as well as lower SES quintiles. Non-Hindus were more likely to have heard a message than Hindus. Respondents belonging to Hill Dalit were significantly less likely to have exposure to the messages than those of other castes. A higher proportion of respondents who were migrants and those had exposure to any media had higher exposure to some message on ORS during last 6 months than those who were not migrants or had no media exposure.

**Table 5.25 Percent distributions of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of ORS in the last 6 months by selected background characteristics**

Background characteristics	Percent exposed to any message		Number
	Yes	No	
<b>Region of residence</b>	ns		
Mountain	58.3	41.7	139
Hills	62.0	38.0	621
<b>Age of women (in years)</b>	ns		
15-19	63.9	36.1	36
20-29	62.2	37.8	481
30-49	59.3	40.7	243
<b>Level of education</b>	*		
No schooling/illiterate	49.0	51.0	361
Some primary	68.0	32.0	147
Some secondary	75.7	24.3	144
SLC or above	74.1	25.9	108
<b>Religion</b>	*		
Hindu	55.9	44.1	590
Non-Hindu	80.0	20.0	170
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	53.8	46.2	253
Hill Janajati	75.9	24.1	332
Hill Dalit	40.9	59.1	127
Newar	54.2	45.8	48
<b>Migration status</b>	*		
Non-migrant	59.3	40.7	644
Migrant	72.4	27.6	116
<b>Exposure to media</b>	*		
None	38.2	61.8	251
Only one	65.4	34.6	286
Only two	77.5	22.5	129
All three	88.3	11.7	94
<b>SES Index</b>	*		
Lowest	42.6	57.4	183
Second	56.3	43.8	160
Middle	61.7	38.3	141
Fourth	78.5	21.5	144
Highest	74.2	25.8	132
<b>Total</b>	<b>61.3</b>	<b>38.7</b>	<b>760</b>

\*Significant at <.05 level

ns= Not significant

The message/information heard by most respondents exposed to messages/information in the last 6 months was *the use of ORS for the treatment of diarrhea* (72%) followed by *mixing a packet of ORS with one liter of clean water* (66%), *giving ORS frequently to treat diarrhea* (49%), and *ORS is available in nearby medical and other shops* (10%), (Table 5.26).

**Table 5.26 Percent distributions of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of messages related to ORS in last 6 months by type of messages**

Type of information seen/heard about ORS in the last 6 months (Multiple Response)	Mountain	Hills	Total
Use ORS for the treatment of diarrhea	76.5	70.6	71.7
Mix a packet of ORS with 1 liter of clean water	65.4	66.5	66.3
Give ORS frequently	48.1	48.8	48.7
It is available in nearby medical and other shops	16.0	9.1	10.3
To give ORS within 24 hours of diarrhea	-	0.8	0.6
Other (one may get diarrhea during rainy season)	-	0.3	0.2
Do not know/ no response	1.2	1.3	1.3
<b>Total</b>	<b>81</b>	<b>385</b>	<b>466</b>

## 5.4.2 Brand awareness, opinions and sources of supply

Data presented in Table 5.27 shows that 98% of respondents aware of ORS from both regions spontaneously mentioned at least one brand name of ORS, with about 95% of the respondents from both regions aware of ORS spontaneously recalling the brand *Jeevan Jal* and 30% *Nava Jeevan*. After prompting the recall increased to 98% and 38% respectively. *Nava Jal* and *Jeevan Bal* had spontaneous recall of 5% each and total recall of 6-7% with 98% recalling *Jeevan Jal* followed 38% (28% in mountains) recalling *Nava Jeevan*.

**Table 5.27 Percent distributions of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of ORS by brand and ecological regions**

Recalled brand name for ORS (Multiple Response)	Mountain		Hills		Total	
	Spontaneous	After probing	Spontaneous	After probing	Spontaneous	After probing
Jeevan Jal	94.2	99.3	95.3	97.7	95.1	98.0
Nava Jeevan	28.1	36.7	30.8	38.0	30.3	37.8
Nava Jal	5.0	6.5	4.5	7.1	4.6	7.0
Jeevan Bal	5.0	7.2	4.3	6.3	4.5	6.4
Sakti Jal	-	-	0.6	1.1	0.5	0.9
Relyte	0.7	0.7	-	-	0.1	0.1
Revive	-	-	0.2	0.2	0.1	0.1
Electrobion	-	-	-	0.2	-	0.1
Do not know	2.2	-	2.1	0.2	2.1	0.1
<b>Total</b>	<b>139</b>	<b>139</b>	<b>621</b>	<b>621</b>	<b>760</b>	<b>760</b>

Among the 304 respondents mentioning two or more ORS brand names of ORS, 69% (90% in mountains) considered *Jeevan Jal* the best followed by about 23% (7% in mountains), (Table 5.28).

**Table 5.28 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard and of at least two brands of ORS by opinion regarding the best brand of ORS**

Description	Mountain (n=58)	Hills (n=246)	Total (n=304)
<b>Opinion on the best brand of ORS</b>			
Jeevan Jal	89.7	63.8	68.8
Nava Jeevan	6.9	26.4	22.7
Jeevan Bal	1.7	0.8	1.0
Nava Jal	-	0.8	0.7
Relyte	1.7	-	0.3
Revive	-	0.4	0.3
Do not know	-	7.7	6.3
<b>Reasons for believing the brand as the best brand of ORS (Multiple Response)</b>			
The most effective treatment of diarrhea	60.3	51.2	53.0
FCHV recommended	58.6	35.0	39.5
Easily available	19.0	34.6	31.6
Recommended by health provider	25.9	26.4	26.3
This is the only brand available	20.7	17.5	18.1
Cheap and affordable	6.9	4.5	4.9
Recommended by relative/friends	8.6	4.1	4.9
Having test as orange; because of good taste	-	3.3	2.6
Mother's group recommended	3.4	0.4	1.0
Due to old and reputed drug	-	0.8	0.7
Other±	-	1.2	1.0
Do not know	-	6.9	5.6

± Other includes: advised by family member; used previously also.

When asked to give the reasons for considering the selected brand as the best, slightly more than half (53%, 60% in mountains) of the respondents said that the brand of ORS was the most effective in treating diarrhea and followed by 40% (59% in mountains) of the respondents said that the brand was recommended by the FCHVs. The other reasons mentioned by a sizeable percentage of the respondents were related to availability (32%, 19% in mountains) or only brand available (18%) and recommended by health provider (18%) or relative/friend (5%) or mothers' groups (1%).

Further analysis indicates the most prominent reason for believing the top two brands of ORS as the best brand was effectiveness in treating diarrhea (56% Jeevan Jal and 58% for Nava Jeevan). The other most frequently cited reasons were: recommendation by the FCHVs (43% for Jeevan Jal and 39% for Nava Jeevan) and health workers (28% for both the Jeevan Jal Nava Jeevan). Notably more respondents cited Jeevan Jal as the best brand due to its easy availability and only brand available. 12% of Nava Jeevan preferrers mentioned its orange/good taste, the main comparative advantage over Jeevan Jal (no Jeevan Jal preferrers mentioned this reason) (Table 5.29).

**Table 5.29 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of ORS and identified the two best brands by reasons**

Reasons for believing the brand as the best brand of ORS (Multiple Response)	Jeevan Jal	Nava Jeevan
The most effective treatment	55.5	58.0
FCHV recommended	43.1	39.1
Recommended by health provider	27.8	27.5
Easily available	37.3	21.7
This is the only brand available	23.0	7.2
Recommended by relative/friends	5.3	4.3
Cheap and affordable	6.7	1.4
Mother's group recommended	0.5	2.9
Having orange taste ore good taste	-	11.6
Due to old and reputed drug	1.0	-
Other±	1.4	-
Do not know	20.9	1.4
<b>Total</b>	<b>209</b>	<b>69</b>

± Other includes: advised by family member; used previously also.

Over 99% of respondents in both the mountain and hills mentioned at least one place to acquire ORS, with pharmacy (58%, 47% in mountains), health post (57%, 71% in mountains) and FCHVs (53%) the most frequently cited sources (Table 5.30). Other locations mentioned included government hospitals (27%), sub-health posts (27%), and private hospital/clinic (17%). Only 3% mentioned shops as a potential source.

Note that among the total sample of 816 married women with at least one child under five, 93% mentioned at least one place to get ORS, 76% mentioned at least 2 places, and 40% mentioned at least 3 places; 7% did not mention any places.

**Table 5.30 Percent distributions of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of ORS by its source of supply and ecological regions**

Knowledge about sources of getting or buying ORS (Multiple Response)	Mountain	Hills	Total
<u>Public sector</u>			
Health post	70.5	54.4	57.4
FCHV	51.1	53.1	52.8
Government hospital/clinic	25.2	27.4	27.0
Sub-health post	10.1	22.2	20.0
PHC center	10.8	6.1	7.0
PHC outreach	1.4	1.1	1.2
Other government	0.7	0.3	0.4
Mobile clinic	0.7	-	0.1
<u>Private medical sector</u>			
Pharmacy	46.8	60.2	57.8
Private hospital/clinic	19.4	16.1	16.7
Sangini outlet	-	0.5	0.4
<u>Other source</u>			
Shop	-	3.9	3.2
Friend/relative	0.7	0.5	0.5
Do not know/no answer	0.7	0.2	0.3
<b>Total</b>	<b>139</b>	<b>621</b>	<b>760</b>

### 5.4.3 Use of product

Of the 760 respondents who had heard of ORS, about two-fifths of them in both mountain and hills had given ORS to their youngest child the last time when he/she had diarrhea. Similarly, 54% of the respondents in mountain and 47% in hills reported had given ORS to any child below five years of age at some time in the past (Figure 5.4). Among those who have heard of zinc and have given ORS (n=139), 65.5% reported to have given zinc also to a child with diarrhea in the last episode.

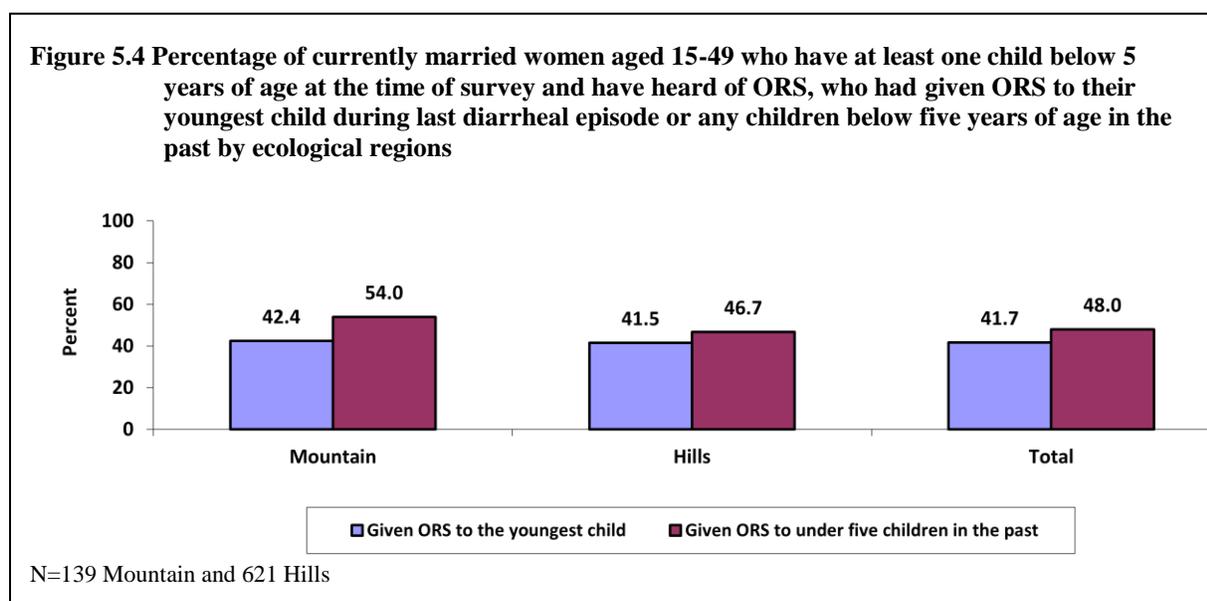


Table 5.31 further analyzes the differentials on the use of ORS to the children according to the selected background characteristics of the responding women. Interestingly, women with no schooling or illiterate and those non-exposed to any media were significantly more likely to give ORS to their child during diarrhea than their respective counterparts. Similarly, a higher proportion of Hindu and Newari women reported giving ORS to their child than non-Hindu women or women of other caste/ethnicity. However, no significant difference was observed on use of ORS across the age cohorts, migration status and SES index of the women.

**Table 5.31 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of ORS and used for children below five years of age by selected background characteristics**

Background characteristics	Percent		Number
	Yes	No	
<b>Age of women (in years)</b>	ns		
15-19	30.6	69.4	36
20-29	48.2	51.8	481
30-49	50.2	49.8	243
<b>Level of education</b>	*		
No schooling/illiterate	54.6	45.4	361
Some primary	38.8	61.2	147
Some secondary	43.1	56.9	144
SLC or above	45.4	54.6	108
<b>Religion</b>	*		
Hindu	52.0	48.0	590
Non-Hindu	34.1	65.9	170
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	54.2	45.8	253
Hill Janajati	36.4	63.6	332
Hill dalit	57.5	42.5	127
Newar	70.8	29.2	48
<b>Migration status</b>	ns		
Non-migrant	47.7	52.3	644
Migrant	50.0	50.0	116
<b>Exposure to media</b>	*		
None	61.4	38.6	251
Only one	38.5	61.5	286
Only two	48.1	51.9	129
All three	41.5	58.5	94
<b>SES Index</b>	ns		
Lowest	55.7	44.3	183
Second	48.1	51.9	160
Middle	44.7	55.3	141
Fourth	43.1	56.9	144
Highest	46.2	53.8	132
<b>Total</b>	<b>48.0</b>	<b>52.0</b>	<b>760</b>

\*Significant at <.05 level

ns= Not significant

56% of the respondents who ever gave ORS reported they had given ORS to their child during diarrhea within 6 months prior to the survey and another 33% had given ORS from 6 months to one year prior to the survey. The mean number of months ago that they last gave ORS was 7 with a median of 4 months.

61% of respondents (75% in mountains) obtained the ORS that they used last time from the local level government health facilities such as health post, sub-health post or PHCC, followed by private pharmacies (17%) and FCHVs (15%).

Most (82%) of the respondents gave *Jeevan Jal* to their child the last time they used ORS, with 12% saying they gave *Nava Jeevan*. 78% (87% in mountains) reported that the ORS they used last time was received free of cost. Those who paid and remembered a price paid an average of Rs. 9 for a packet of ORS (Table 5.32).

**Table 5.32 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at survey and have heard of ORS and used for children below five years of age by age of child , source of supply and ecological regions**

Description	Mountain (n=75)	Hills (n=290)	Total (n=365)
<b>Time when ORS was given for last time</b>			
Less than 6 months	57.3	56.2	56.4
6-11 months	12.0	13.1	12.9
1 year	18.7	20.3	20.0
2 years	6.7	5.2	5.5
3 years	1.3	1.4	1.4
4 years	2.7	-	0.5
Do not know	1.3	3.8	3.3
<b>Mean</b>	<b>7.5</b>	<b>6.5</b>	<b>6.7</b>
<b>Median</b>	<b>3.0</b>	<b>4.0</b>	<b>4.0</b>
<b>SD</b>	<b>10.0</b>	<b>7.0</b>	<b>7.7</b>
<b>Range</b>	<b>0-48</b>	<b>0-36</b>	<b>0-48</b>
<b>Source of obtaining ORS given last time</b>			
Health Post/ Sub-health post/PHCC	74.7	57.6	61.1
Private Pharmacy	9.3	19.0	17.0
FCHV	12.0	15.9	15.1
Hospital	2.7	5.9	5.2
Private Clinic/ Nursing Home	1.3	1.4	1.4
Other (relative)	-	0.3	0.3
<b>Brand of ORS given last time</b>			
Jeevan Jal	89.3	81.0	82.7
Nava Jeevan	5.3	13.1	11.5
Jeevan Bal	4.0	3.1	3.3
Relyte	1.3	-	0.3
Revive	-	0.3	0.3
Nava Jal	-	0.7	0.5
Do not know	-	1.7	1.4
<b>Amount paid for one packet of ORS the last time it was obtained (in NRs)</b>			
5	1.3	1.0	1.1
7	-	1.0	0.8
8	2.7	6.6	5.8
10+	6.6	8.2	7.9
<b>Mean (SD)</b>	<b>9.5 (2.8)</b>	<b>9.0 (1.9)</b>	<b>9.1 (2.1)</b>
<b>Range</b>	<b>5-15</b>	<b>5-15</b>	<b>5-15</b>
Free of cost	86.7	76.2	78.4
Do not know	2.7	6.9	6.0

45% of the 393 respondents who had never used ORS mentioned that they did not use because their babies either did not had diarrhea were too small to give ORS (this category was combined in the questionnaire and cannot be separated) or they did not have diarrhea. Nearly one-fifth did not give ORS because they had adopted traditional remedies or they did not think that it was necessary to give ORS to the children suffering from diarrhea. A small proportion of the respondents was not aware of ORS or said that the ORS was not available nearby. Non-use of ORS due to unavailability nearby was more prevalent in mountain (23%) than in hills (3%) regions. Among “No need” only 2 of the 74 had diarrhea in last two weeks (Table 5.33).

**Table 5.33 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of ORS but t by reasons for not using**

Reasons for never using ORS (Multiple Response)	Mountain	Hills	Total
No diarrhea/Baby too small	40.6	45.3	44.5
No need to give	15.6	19.5	18.8
Adopted traditional remedies	28.1	16.7	18.6
Given other medicine	3.1	14.3	12.5
Not available nearby	23.4	3.0	6.4
Unaware of ORS treatment	4.7	2.1	2.5
Other±	3.1	4.0	3.8
<b>Total</b>	<b>64</b>	<b>329</b>	<b>393</b>

± Other includes: due to administration of zinc; given other medicines; consulted traditional healer, baby was too small.

#### 5.4.4 Future use intention and willingness to pay

Among those (n=760) respondents who had heard about ORS, all of them in mountains and nearly all (96%) in hills affirmed that they would use ORS if their children would have diarrhea in the future (Table 5.34). When asked whether they would buy a one-day sachet of ORS at a price of Rs 8, all the respondents in mountain and 98% in the hills said that they would. When further probed about the maximum price they would be willing to pay for one day sachet of ORS, the mean maximum price given was Rs 11, with 64% of respondents said that they would pay Rs 10 for it and 36% saying they'd pay Rs 11-15. Almost all (92%) of the respondents (98% in mountains) said that they would continue to buy ORS even if its price was higher than the maximum price they were willing to pay.

**Table 5.34 Percent distribution of currently married women aged 15-49 having at least one child below 5 years of age at the time of survey and have heard of ORS by intention to use in the future including price they will be willing to pay for it and ecological regions**

Description	Mountain	Hills	Total
<b>Intention to use ORS if the child has diarrhea in the future</b>			
Yes	100.0	95.7	96.4
No	-	0.6	0.5
Do not know	-	3.7	3.0
<b>Total</b>	<b>139</b>	<b>621</b>	<b>760</b>
<b>Willingness to buy a one-day sachet of ORS at a price of Rs 8</b>			
Yes	100.0	98.0	98.4
No	-	1.0	0.8
Do not know	-	1.0	0.8
<b>Total</b>	<b>139</b>	<b>594</b>	<b>733</b>
<b>The maximum price that respondents willing to pay for one day sachet of ORS (in NRs)</b>			
Rs 8-9	1.4	1.9	1.8
Rs 10	73.4	63.0	64.9
Rs 11+	25.2	26.6	26.3
<b>Mean (SD)</b>	<b>10.9 (1.8)</b>	<b>11.0 (1.8)</b>	<b>11.0 (1.8)</b>
<b>Range</b>	<b>8-15</b>	<b>9-15</b>	<b>8-15</b>
Do not know	-	8.6	7.0
<b>Total</b>	<b>139</b>	<b>594</b>	<b>733</b>
<b>Reactions of the respondents if the price of one day sachet of ORS would be higher than the maximum price they are willing to pay</b>			
Continue to buy	97.8	90.6	92.0
Look for other cheaper brand	-	2.9	2.3
Not buy (any brand of) the product	2.2	1.0	1.2
Do not know	-	5.6	4.5
<b>Total</b>	<b>139</b>	<b>594</b>	<b>733</b>

#### 5.5 Attitudes towards zinc and ORS

This study tried to get insight into the attitudes of the married women with children under 5 towards diarrhea, zinc and ORS. For this purpose respondents were presented with 16 statements, both negative and positive, and asked whether they agree or disagree. The responses to those statements were given a numerical value (+1 (for agree), 0 (for neither agree or disagree or don't know) or -1 (for disagree)) to calculate a composite index. The survey results are presented in Table 5.35.

The women had very strong beliefs related to four of the six statements regarding diarrhea, most agreeing with three - diarrhea can be caused by drinking unsafe water, children can die from diarrhea, and hand washing with soap can reduce chances of diarrhea - and disagreeing with If my child gets diarrhea it is best just to do nothing and it will pass in time. These responses demonstrate

positive attitudes related to cause of and ways to prevent diarrhea, as well as its seriousness and need for treatment. On average, beliefs were much weaker for the other two statements; with more agreeing that I rely on my health provider/pharmacist to give the correct treatment for my child's diarrhea and more disagreeing that most diarrhea can be managed at home without any drugs. The results of these two seem contradictory.

There was a high overall agreement with the beliefs that *ORS is an effective rehydration treatment* and *I know how to prepare ORS*. There was also relatively high overall disagreement with the statement that *ORS does not stop diarrhea*, indicating that respondents may not distinguish much between dehydration and diarrhea itself. There was weak overall agreement with the statement that “*shops nearby here always have ORS for sale*”, indicating either an actual or perceived availability issue.

**Table 5.35 Mean ratings of the degree of agreement among currently married women aged 15-49 having at least one child below 5 years of age at the time of survey on aspects of diarrhea, ORS and zinc by ecological regions**

Description	Mountain (n=157)	Hills (n=659)	Total (n=816)
<b>Regarding diarrhea</b>			
Diarrhea can be caused by drinking unsafe water	0.962	0.961	0.961
Children can die from diarrhea	0.917	0.939	0.935
Hand washing with soap can reduce chances of diarrhea	0.981	0.968	0.971
I rely on my health provider/pharmacist to give the correct treatment for my child's diarrhea	0.478	0.226	0.275
Most diarrhea can be managed at home without any drugs	-0.236	-0.313	-0.298
If my child gets diarrhea it is best just to do nothing and it will pass in time	-0.796	-0.765	-0.771
<b>Regarding zinc</b>			
There is a place nearby where I can get Baby Zinc when my child needs it	0.076	0.231	0.201
Baby Zinc is the most appropriate treatment for diarrhea	0.223	0.285	0.273
Baby Zinc should be given along with ORS/ORT to be most effective.	0.223	0.270	0.261
I am willing to pay the current price for Baby Zinc	0.217	0.351	0.325
If you give ORS, you do not need to give Baby Zinc	-0.140	-0.134	-0.135
My child won't take Baby Zinc because it tastes bad ±	-0.475	-0.189	-0.226
<b>Regarding ORS</b>			
ORS is an effective rehydration treatment	0.847	0.845	0.846
I know how to prepare ORS	0.733	0.836	0.816
Shops nearby here always have ORS for sale	-0.096	0.214	0.154
ORS does not stop diarrhea	-0.624	-0.674	-0.664

± Denominator those who were aware of zinc (n=40 in mountain, 270 in hills and 310 total)

+1 equals agree, -1 equals disagree

Reaction to all six zinc statements was less strong, indicating less knowledge/experience with the product. On average there was moderate agreement with the following statements: *I am willing to pay the current price for Baby Zinc*, *Baby Zinc is the most appropriate treatment for diarrhea*; *there is a place nearby where I can get Baby Zinc when my child needs it* and *Baby Zinc should be given along with ORS/ORT to be most effective*. On average, there was moderate disagreement with two negative statements, namely *If you give ORS, you do not need to give Baby Zinc* (which is consistent with the reaction to the previous statement) and *my child won't take Baby Zinc because it tastes bad*, which indicates there is not a large concern about the taste.

## 5.6 Summary of findings: Maternal and Child Health and Products

Of the 1400 married women in the study, 51% (n=816) had at least one child under five years of age living in their household. There were a total of 970 children; 53% were boys and the rest (47%) were girls. 21% were under 1 year old, 41% were between 1 and 2 years of age and 38% were 3-4 years old.

## **5.6.1 Clean delivery kits**

### **5.6.1.1 Awareness of product and exposure to messages in the last 6 months**

Nearly half (48%, 36% in mountains) of the married respondents with a child under 5 were aware of CDKs.

Among those aware, about three-fifths (59%, 47% in mountains) said they had heard and/or seen some message and/or information about the clean delivery kit in the last six months from some source, with the most mentioned source being FCHVs (60%) followed by radio (53%) and friend or relatives (36%).

The main messages recalled were the items in the kits (75%) and that a CDK was to be used during home delivery (62%).

### **5.6.1.2 Awareness of brand, source of supply**

Of the 389 women who had ever heard of CDK, almost three-fourths (71% spontaneously and 74% after probing) mentioned *Sutkeri Samagri*, the only brand they were able to recall; 27% did not recall any name.

The two most frequently mentioned places where you can get a CDK were health posts (54%) and pharmacy (52%), followed by governmental hospital (31%), FCHVs (27%) and private hospital (23%).

Note that among the total sample of 816 married women with at least one child under five, 48% mentioned at least one place to get CDKs, 33% mentioned at least 2 places, and 15% mentioned at least 3 places; 52% did not mention any places.

### **5.6.1.3 Product usage**

Among the respondents aware of clean delivery kits, 64% (n=250) had given birth to at least one child at home in the last five years. Among these women, 39% (26% in mountains) reported using a clean delivery kit for at least one birth.

When asked where they obtained the CDK used last, the most frequently mentioned sources were FCHVs (34%) and health posts (24%), followed by pharmacy (12%) and private hospital or clinic (11%).

Approximately 4-in-5 of those who used a CDK mentioned using *Sutkeri Samagri* brand during their most recent delivery and the remaining 20% could not recall the brand name.

60% of CDK users could not remember what they paid the last time. Among the others, 13% said they paid Rs 50 for CDK, 10% paid less than Rs 50, and 12% said that they got the CDK free.

Three-fifths of those who had given birth at home but never used a CDK said that they never used one because it was not easily available or not available nearby. An additional 21% said they had not known about it and about one-tenth said “it was not necessary.”

### **5.6.1.4 Future use intention and willingness to pay**

Two-thirds of those aware of clean delivery kits said yes when asked if they'd use them in the future and nearly all (98%) of those said they would be willing to pay the price requested of Rs 50. On average, the maximum price these women said they were willing to pay for a CDK was Rs 61, with 70% saying they were willing to pay Rs 56 or more.

## **5.6.2 Age, sex and recent diarrheal incidence among under-five children**

Overall, 15% of the children below five years of age had diarrhea in the last two weeks and 22% had diarrhea in the last month. There were no significant differences between the mountain and hill areas.

## **5.6.3 Baby zinc**

### **5.6.3.1 Awareness of product and exposure to messages in the last 6 months**

38% (26% in mountains) of the women who had under-five children were aware of baby zinc.

69% of those aware said that they had heard and/or seen messages in the prior six months, with the two most mentioned sources being FCHVs (64%) and radio (61%). Other notable sources included friends and/or relatives (30%), health facilities/worker (21%), television (17%) and neighbors (12%).

91% those who reported to have heard and/or seen some information about baby zinc in the prior 6 months recalled a message, with the two most frequently mentioned being “baby zinc keeps the diarrhea away” (58%) and “baby zinc should be given for 10 days/completely” (57%). Other information recalled included “baby zinc was the right rehydration treatment of diarrhea” (32% - the campaign did NOT say that zinc was for dehydration), *baby zinc would help in building immunity* (27%), *zinc reduces the duration of diarrhea* (21%), *Baby Zinc should be used along with ORS/ Baby Zinc with ORS cures fast* (13%).

### **5.6.3.2 Brand awareness and sources of supply**

85% of the respondents could not recall any brand name of baby zinc. The most frequently recalled brand name, before (8%) and after (12%) prompting, was Z-DIS 10. Less than 5% of the respondents mentioned, even after prompting, Z-DIS 20, ZINCOVA-20, ZINC-DT 10, ZINC-DT 20 and ZN-DT.

The two most frequently mentioned places where one can get baby zinc were pharmacies (59%) and health posts (55%), followed by FCHVs (41%) and governmental hospitals (30%).

Note that among the total sample of 816 married women with at least one child under five, 37% mentioned at least one place to get zinc, 30% mentioned at least 2 places, and 15% mentioned at least 3 places; 63% did not mention any places.

### **5.6.3.3 Product usage**

1-in-3 of those aware of baby zinc (28% in mountains) reported that they gave zinc to their youngest child during the last diarrheal episode and a total of 37% of these respondents (33% in mountains) reported giving zinc to a child under five years at some time in the past.

60% of those who had ever given zinc to their child during diarrhea did so last in the prior 6 months and most of the rest between 6 months to one year prior, with an overall mean of 6 months and a median of 4 months.

The major sources of supply of zinc used last time were grassroots level health facilities (health post, sub-health post or PHC- 51%), followed by FCHV (24%) and pharmacy (16%). 67% of these respondents were unaware of the brand of zinc that they used last time; the most frequently reported brand used was Z-DIS 10 (17%) followed by ZINCOVA 20 (6%).

Over 3-in-4 zinc users (78%) reported that they had received the zinc free and a notable proportion (16%) of the respondents said they did not know how much was paid last time. Only 7% (n=8) of the respondents reported paying for zinc, with the average amount paid of Rs 26.

Among non-zinc users who were aware of zinc, the main reasons given for non-use were that the baby had no diarrhea (37%) or that zinc was not needed (30%). The other most frequently cited reasons were: unaware of the need for giving zinc together with ORS (14%), unavailability of the zinc (10%) and ORS or other medicine given (6%).

#### 5.6.3.4 Future use intention and willingness to pay

Almost all (97%) of the respondents aware of zinc said they would use zinc if any of their children had diarrhea in the future, with 99% of these saying they would pay the requested Rs. 25 for a 10-tablet pack of zinc. The average maximum amount they said they would pay for a pack of 10-tablet zinc was Rs 33, with 62% stating Rs 30.

### 5.6.4 Oral rehydration solution (ORS)

#### 5.6.4.1 Awareness of product and exposure to messages in the last 6 months

Almost all (93%, 89% in mountains) women with children under 5 years had heard of ORS. Among those aware, 61% said they had heard and/or seen some message from some source in the prior 6 months, with 67% mentioning FCHVs as the source, followed by 54% (40% in mountains) saying radio and 35% indicating friends or relatives.

The three messages mentioned most were: “use ORS for the treatment of diarrhea” (72%), “mix a packet of ORS with one liter of clean water” (66%) and “give ORS frequently to treat diarrhea” (49%). 10% mentioned recalling “ORS is available in nearby medical and other shops”.

#### 5.6.4.2 Brand awareness, opinions and sources of supply

Over 95% of the respondents aware of ORS spontaneously recalled the brand name *Jeevan Jal* and 30% recalled *Nava Jeevan*. After prompting the recall increased to 98% and 38% respectively. *Nava Jal* and *Jeevan Bal* had spontaneous recall of 5% each and total recall of 6-7%.

69% (90% in mountains) of those who recalled at least two brand names said that *Jeevan Jal* was the best brand, followed by about 23% (7% in mountains) for *Nava Jeevan*. The main reason given for preference was effectiveness (53%), followed by 40% (59% in mountains) who said that the brand was recommended by the FCHVs. The main differences in reasons given for the two brands were that more respondents said *Jeevan Jal* was easily available and the only brand available, whereas the good/orange taste was mentioned by 12% of those preferring *Nava Jeevan* and none of those preferring *Jeevan Jal*.

Over 99% of respondents aware of ORS in both the mountains and hills mentioned at least one place to acquire ORS, with pharmacy (58%, 47% in mountains), health post (57%, 71% in mountains) and FCHVs (53%) the most frequently cited.

Note that among the total sample of 816 married women with at least one child under five, 93% mentioned at least one place to get ORS, 76% mentioned at least 2 places, and 40% mentioned at least 3 places; 7% did not mention any places.

### 5.6.4.3 Product usage

42% of those aware of ORS in both mountains and hills said they had given ORS to their youngest or next child under 5 the last time when he/she had diarrhea. Almost half (48%, 54% in mountains) reported having given ORS to some child below five years of age at some time in the past. The mean number of months ago that ORS users last gave ORS was 7 and the median was four.

61% of ORS users (75% in mountains) obtained the ORS used last from local level government health facilities such as health post, sub-health post or PHCC, followed by private pharmacies (17%) and FCHVs (15%).

Most (82%) of the respondents gave *Jeevan Jal* to their child the last time they used ORS, and 12% gave *Nava Jeevan*. Nearly 4-in-5 respondents reported that the ORS they used last time was received free of cost, with the average cost among those who bought ORS the last time at Rs. 9 for a packet.

Of the respondents who had never used ORS, nearly half (44%) mentioned that they did not use ORS because their babies were too small to give ORS or that they did not have diarrhea. Nearly one-fifth did not give ORS because they used traditional remedies or they did not think that it was necessary. A small proportion (6%, 23% in mountains) said that ORS was not available nearby.

### 5.6.4.4 Future use intention and willingness to pay

96% of respondents aware of ORS said yes when asked if they would buy a one-day sachet of ORS at a price of Rs 8. The mean maximum price given was Rs 11.

### 5.6.5 Attitudes towards diarrhea, zinc and ORS

Results from responses to a set of 16 attitude statements indicate that:

- Respondents have strong positive attitudes towards causes of and ways to prevent diarrhea (unsafe water, dirty hands), as well as the seriousness of and the need to treat diarrhea.
- There were strong positive attitudes about the effectiveness and ability to prepare ORS, but also a strong belief that ORS stops diarrhea.
- There was weak overall agreement with the statement that “*shops nearby here always have ORS for sale*”, indicating either an actual or perceived availability issue.
- The relatively weak agreement/disagreement on the zinc statements indicates that people don’t know much about Baby Zinc.

## 5.7 Conclusions

### 5.7.1 Maternal and child health products

- The survey results reveal that less than 50% of the target group (MWRA with at least one child under age 5) is aware of clean delivery kits and baby zinc.
- ORS awareness is quite high at 93%.
- Among those who are aware, only about 40% have ever used each of the products. A significant reason given by those not using CDK, ORS or Zinc was that it was not necessary. We need to understand what this means – why do respondents not consider these products necessary?

- For CDK and zinc, other reasons for non-use include lack of availability and lack of knowledge about it.
- For ORS and Zinc, other reasons for non-use include “child didn’t have diarrhea”
- For ORS there was also a sizeable amount of people who said the baby is too small. We need to understand what this means.
- While 40% of MWRA with at least one child under 5 was able to mention at least three places to acquire ORS, only 15% could mention at least three places to acquire zinc or a CDK. Similarly, while almost all respondents (93%) could mention at least one place to acquire ORS, less than half could mention one place to acquire a CDK (48%) or zinc (37%).

**Table 5.36 Ability to mention source of supply for MCH products among currently married women aged 15-49 having at least one child below 5 years of age at the time of survey**

Description	CDK (%)	Zinc (%)	ORS (%)
Mentioned at least one place	48	37	93
Mentioned at least two places	33	30	76
Mentioned at least three places	15	15	40
Mentioned NO place	52	63	7

N=816 currently married women aged 15-49 years with at least one child under five years of age

- Brand awareness of *Sutkeri Samagri* is high among those aware of CDKs, but only half of MWRA with a child under 5 were aware of CDKs as a product.
- Brand awareness (unaided) for *Nava Jeevan* is low and one third that of *Jeevan Jal* (30% compared to 95%).
  - *Nava Jeevan*’s comparative advantage is its orange/good taste. *Jeevan Jal*’s comparative advantages are wide availability and no cost.
  - Both brands are considered to be effective, the category’s key benefit.

**Table 5.37 Summary of brand and price of MCH products**

Measure	CDK	Baby Zinc	ORS
Product awareness among target	n=816 (currently married women aged 15-49 years with at least one child under five years of age) 48%	n=816 (currently married women aged 15-49 years with at least one child under five years of age) 38%	n=816 (currently married women aged 15-49 years with at least one child under five years of age) 93%
Ever used	n=250 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of clean delivery kit and have given birth to a child at home) 39%	n=310 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of baby zinc) 37%	n=760 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of ORS) 42%
Brand awareness, spontaneous	n=389 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and heard of clean delivery kit) <i>Sutkeri Samagri</i> =71% None: 29%	n=210 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of baby zinc) Z dis 10 8% None: 85%	n=760 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of ORS) <i>Jeevan Jal</i> – 95% <i>Nava Jeevan</i> 30%
Brand used last	n=98 (Percent distribution of currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of clean delivery kit and have used clean delivery kits (CDK) during home delivery in birth at home within 5 years from the survey) SS =80% Don't know 20%	n=116 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of baby zinc and have given zinc to a child below five years of age) Z dis 10 -17% Z dis 20- 4% Don't know:67%	n=365 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of ORS and have given ORS to any children below five years of age in the past) <i>JJ</i> -83% <i>NJ</i> -12%
% got product for free last time	n=98 (Percent distribution of currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of clean delivery kit and have used clean delivery kits (CDK) during home delivery in birth at home within 5 years from the survey) 12%	n=116 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of baby zinc and have given zinc to a child below five years of age) 78%	n=365 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of ORS and have given ORS to any children below five years of age in the past) 78%
Don't remember price	60%	16%	6%
Mean price paid	About (Rs 50)	Rs 26	Rs 9
Willing to pay X, among those who say they'll use in future	n=264 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of clean delivery kit who intent to use clean delivery kits if decided to give birth at home or outside health facility in the future) 98% would pay Rs 50	n=302 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of baby zinc who intent to use zinc during diarrhea) 99% would pay Rs 25	n=733 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of ORS who intent to use ORS during diarrhea) 98% would pay Rs 8
Mean price willing to pay, among those who say they'll use in future	n=264 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of clean delivery kit who intent to use clean delivery kits if decided to give birth at home or outside health facility in the future) Rs 61	n=302 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of baby zinc who intent to use zinc during diarrhea) Rs 33	n=733 (currently married women aged 15-49 who have at least one child below 5 years of age at the time of survey and have heard of ORS who intent to use ORS during diarrhea) Rs 11

Note: SS= Sutkeri Samagri; JJ=Jeevan Jal; NJ= Nava Jeevan

- Few people are paying for Baby Zinc and ORS - more than three-fourths of Baby Zinc and ORS users got their product last time for free.
- For CDK, only 12% said they got it for free.
- CRS product prices appear reasonable, but since most people are getting the products for free, it's hard to know how many would really pay the current CRS or a higher price.

**Table 5.38 Summary of reasons for non-use, source of information and source of supply, across products**

Measure	CDK	Baby Zinc	ORS
<b>Reasons never used this product</b>	n=152	n=193	n=393
Not available nearby/easily available	61%	10%	6%
Didn't know about	21%	-	3%
Not necessary	12%	30%	19%
No diarrhea/Baby was too small	-	37%	45%
Not aware need to give with ORS	-	14%	-
Used something else	-	6%	19+%
<b>Source of Information heard in last 6 months</b>	N=231	N=215	N=466
FCHV	60%	64%	67%
Radio	53%	61%	54%
Friend/relative	36%	30%	35%
Health facility/worker	15%	21%	17%
TV	14%	17%	12%
Neighbor	10%	12%	14%
School/book	-	-	-
<b>Source of supply last time acquired</b>	N=98	N=116	N=365
FCHV	34%	24%	15%
Health posts/sub health posts/PHC	30%	51%	61%
Pharmacy	12%	16%	17%
Private hosp/clinic	11%	-	1%
Shop	5%	-	0%
NGO	1%	-	-

- Overall, respondents understand what causes diarrhea, that it's serious and that they need to do something about it.
- Respondents have positive attitudes about ORS effectiveness but weaker attitudes exist towards baby zinc, probably due to lower awareness/experience with the product.

## 5.8 Recommendations

### 5.8.1 How to promote/increase sales - outlets and activities

- Products need to be more available in more places, especially CDKs. As there are few private sector outlets in remote areas, public sector distribution for all products in these areas is essential, with CRS working progressively to increase access and market share.
  - In the shorter-term, CRS should focus on increasing market share in hills and urban sectors, where services are more available, it's easier to reach people by mass media (hoarding boards and possibly radio), and disposable income is higher.
  - Increase availability at pharmacies, which are not currently a major source of supply for the three MCH products, but are for water disinfectant (probably due to low availability at public sector health facilities).

- Increase other sources of supply, such as shops (currently very low awareness or source of supply), beauty salons, women's/mothers' groups for MCH products.
- Work with these sources to promote the products and develop interactive, highly visible public activities which include demonstrating what they are, how they work and how to create a buzz.
  - Much of the information on these products has been provided by word of mouth from friends/family, neighbors. Visible community outreach and activities can increase awareness and trial.
  - Provide training and motivation for private sector health personnel and facilities to promote these products.
    - If possible, encourage the public sector to provide more information and promote the overall categories of MCH products and water disinfectant, even if they are not "selling" products for money.
  - Develop interesting and motivating Point of Purchase materials for pharmacies and shops and job aids for staff there as well as at health facilities and at the community level.
  - Use radio to support the public activities, and radio, cell phones and hoarding boards to promote brand names and remind people where they can buy the products.

### **5.8.2 What to promote/positioning**

- Recommended message/promotion strategies to address barriers to increased sales:
  - CDK: promote all the new places people can get it, target men and/or mothers-in-law to get CDK as a first gift for their new baby's health
  - ORS
    - Promote *Nava Jeevan's* comparative advantages of good taste/kids like.
    - For *Nava Jeevan* and ORS in general, to counter the belief that young children cannot take it, promote the fact ORS was specially designed for young children.
    - Emphasize that ORS, especially taken together with zinc, works better than buying medicine or traditional remedies.
  - Baby Zinc
    - Create a perceived need for baby zinc (it's currently perceived by many as not necessary); perhaps an approach like "try it next time your child has diarrhea and see how fast it clears up".
    - Product/brand question: Should CRS overwrap and promote a branded Baby Zinc with a user-friendly name rather than the name of the medicine?

## Chapter 6 Disinfection of Drinking Water

One of the objectives of the study was to explore the respondents' willingness to pay for MCH products. The previous chapter has dealt with the willingness to pay for diarrhea management related products namely baby zinc and ORS. One of the factors related to occurrence of diarrhea is lack of safe drinking water. There are various types of water purification products available in the market, including one that CRS markets, Piyush. This study captures information from the all respondents, married and unmarried, related to drinking water and treatments known of and used. The findings are presented in this chapter.

### 6.1 Awareness of product and exposure to messages in the last 6 months

Respondents' level of awareness about the water disinfectant products (i.e., medicine used to purify drinking water) was assessed in the survey. Overall, 3-in-5 respondents with a higher percentage of unmarried than married (78% vs. 56%) reported having heard about water disinfectant products (Figure 6.1). By region of residence, women from the hills (63%) were more were significantly more likely to have heard about these products ( $P < .001$ ) than those in the mountains (52%).

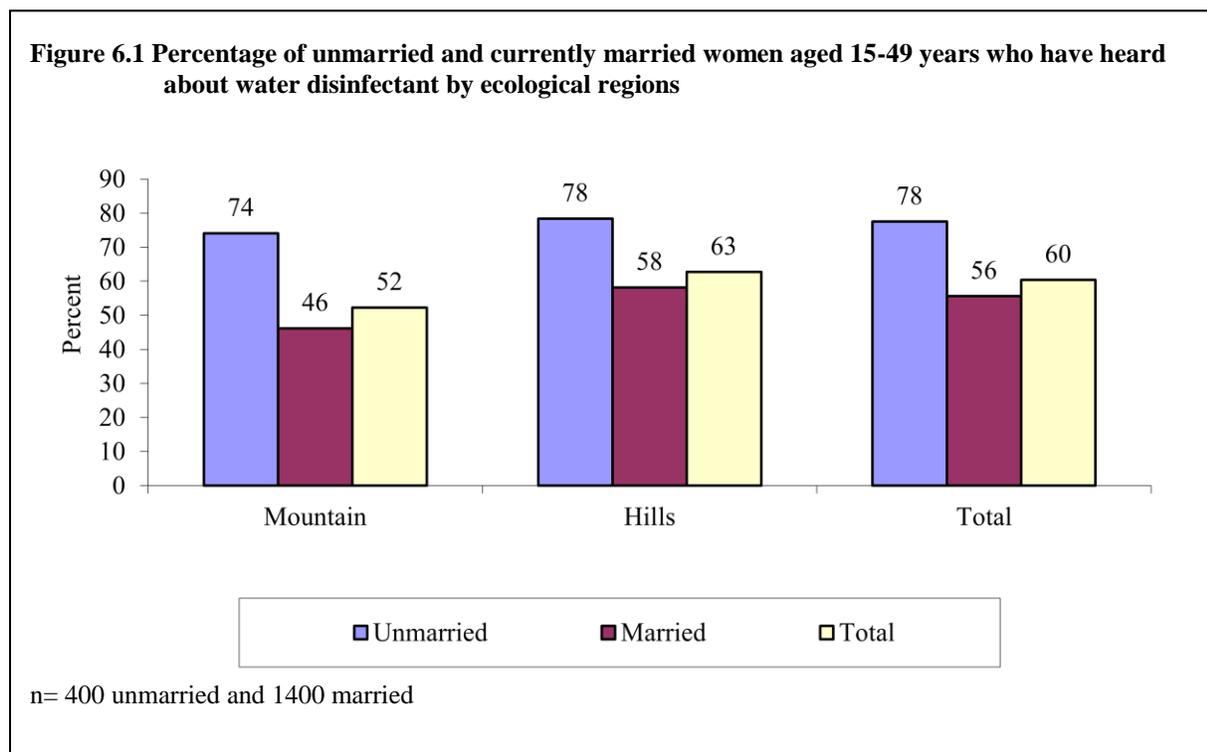


Table 6.1 further analyzes the differentials on the awareness on water disinfectant among respondents according to their selected background characteristics. Younger, non-Hindu and those having some secondary or above level of education had greater awareness about water disinfectant products/methods. Hill Dalit had the lowest awareness among the castes. Similarly, respondents belonging to higher SES quintiles and with exposure to any media were significantly more likely to be aware about water disinfectant than their respective counterparts.

**Table 6.1 Percent distribution of unmarried and currently married women aged 15-49 years who have heard about water disinfectant by selected background characteristics**

Background characteristics	Percent		Number
	Yes	No	
<b>Age of women (in years)</b>	*		
15-19	75.4	24.6	414
20-29	58.3	41.7	705
30-49	53.6	46.4	681
<b>Level of education</b>	*		
No schooling/illiterate	43.3	56.7	779
Some primary	55.4	44.6	312
Some secondary	78.6	21.4	429
SLC or above	86.1	13.9	280
<b>Religion</b>	*		
Hindu	56.7	43.3	1393
Non-Hindu	73.2	26.8	407
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	59.9	40.1	629
Hill Janajati	68.3	31.7	792
Hill Dalit	40.8	59.2	272
Newar	55.1	44.9	107
<b>Migration status</b>	Ns		
Non-migrant	59.6	40.4	1570
Migrant	66.1	33.9	230
<b>Exposure to media</b>	*		
None	32.1	67.9	561
Only one	65.1	34.9	648
Only two	81.1	18.9	349
All three	83.9	16.1	242
<b>SES Index</b>	*		
Lowest	41.4	58.6	360
Second	51.4	48.6	360
Middle	60.3	39.7	360
Fourth	73.4	26.6	361
Highest	75.8	24.2	359
<b>Total</b>	<b>60.4</b>	<b>39.6</b>	<b>1800</b>

\*Significant at <.05 level

ns= Not significant

Respondents (n=1088) who reported having heard about the water disinfectant were further asked whether they had heard or seen any message about it from any sources in the last 6 months prior to the survey. Overall, 57% of the respondents claimed to have heard or seen some message over the last 6 months period (Table 6.2). Among those (n=620) who had heard or seen the messages in the last 6 months, the main sources cited were radio (65%), friends or relatives (43%), television (21%), and neighbors (20%). Comparatively, a higher percentage of respondents from the hills (22%) than those from the mountain (13%) region reported receiving information from television, while a higher proportion of respondents from mountains than hills obtained information from informal sources such as friends and relatives (51% vs. 42%). In addition, 27% of the unmarried (1% of married) mentioned book or school as a source of information.

**Table 6.2 Percent distribution of unmarried and currently married women aged 15-49 years who have heard or seen any message on water disinfectant in the last 6 months by source of information and ecological region**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Exposure to any messages or information from any source about Water Disinfectant over the last 6 months</b>									
Yes	54.0	53.2	53.4	64.0	55.4	57.8	61.9	55.0	57.0
No	44.0	45.4	45.1	33.6	41.0	38.9	35.8	41.8	40.1
Do not know	1.6	1.4	1.5	2.4	3.6	3.3	2.3	3.2	2.9
<b>Total</b>	<b>63</b>	<b>141</b>	<b>204</b>	<b>247</b>	<b>637</b>	<b>884</b>	<b>310</b>	<b>778</b>	<b>1088</b>
<b>Sources of information on Water Disinfectant in the last 6 months (Multiple Response)</b>									
Radio	70.6	60.0	63.3	67.1	65.2	65.8	67.7	64.3	65.3
Friends/relatives	38.2	57.3	51.4	39.2	42.5	41.5	39.1	45.1	43.2
Television	20.6	9.3	12.8	23.4	21.5	22.1	22.9	19.4	20.5
Neighbor	11.8	25.3	21.1	14.6	21.8	19.6	14.1	22.4	19.8
School; book	14.7	4.0	7.3	29.7	0.8	9.8	27.1	1.4	9.4
Newspaper/magazine/broacher	5.9	6.7	6.4	9.5	2.5	4.7	8.9	3.3	5.0
Poster/ hoarding board	2.9	4.0	3.7	3.8	4.5	4.3	3.6	4.4	4.2
FCHV	5.9	5.3	5.5	-	3.4	2.3	1.0	3.7	2.9
n a shop/medical shop	2.9	6.7	5.5	-	0.8	0.6	0.5	1.9	1.5
Street dramas	2.9	-	0.9	1.3	0.6	0.8	1.6	0.5	0.8
Other±	-	-	-	2.5	4.0	3.5	2.1	3.3	2.9
<b>Total</b>	<b>34</b>	<b>75</b>	<b>109</b>	<b>158</b>	<b>353</b>	<b>511</b>	<b>192</b>	<b>428</b>	<b>620</b>

± Other includes: health worker; health facility; community meeting; local groups.

The most frequently mentioned information on water disinfectant that the women recalled was drink water only after boiling (39%), followed by *mero pariwarko swasthyako rachhya 3 thopa le*<sup>8</sup> (26%) and medicines will destroy the germs; drink medicated water (22%).

**Table 6.3 Percent distribution of unmarried and currently married women aged 15-49 years who have heard or seen any messages on water disinfectant in the last 6 months by type of messages on water disinfectant and ecological regions**

Type of information seen/heard about	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Water Disinfectant in the last 6 months (Multiple Response)</b>									
Drink water only after boiling	41.2	52.0	48.6	25.9	41.1	36.4	28.6	43.0	38.5
Mero paribar ko Swastha ko rachhya dui thopa le (protection of the health of my family by two drops)	32.4	33.3	33.0	28.5	23.2	24.9	29.2	25.0	26.3
Medicines will destroy the germs; drink medicated water	5.9	9.3	8.3	31.0	21.8	24.7	26.6	19.6	21.8
Drink water only after filtration	20.6	10.7	13.8	15.8	15.3	15.5	16.7	14.5	15.2
Use Piyush always to purify your water	20.6	10.7	13.8	14.6	15.0	14.9	15.6	14.3	14.7
Piyush chlorine jhoal (a liquid disinfectant)	26.5	22.7	23.9	12.7	9.1	10.2	15.1	11.4	12.6
Total who mentioned Piyush	41.2	30.7	33.9	23.4	21.8	22.3	26.6	23.4	24.4
Keep drinking water clean	-	-	-	6.3	4.5	5.1	5.2	3.7	4.2
No diarrhea if drink clean or safe water	-	-	-	1.3	1.1	1.2	1.0	0.9	1.0
Other±	-	-	-	3.2	2.3	2.5	2.6	1.9	2.1
Don not know	-	-	-	-	0.3	0.2	-	0.2	0.2
<b>Total</b>	<b>34</b>	<b>75</b>	<b>109</b>	<b>158</b>	<b>353</b>	<b>511</b>	<b>192</b>	<b>428</b>	<b>620</b>

± Other includes: use Water Guard; do not mess the surroundings of water sources; SODIS method of purifying water; use potassium.

<sup>8</sup> This slogan belong to Piyush

The first two were mentioned by a higher proportion of respondents in the mountain areas than in hills. The other information recalled by a sizeable proportion (13%-15%) of the respondents from both regions were drink water only after filtration; use Piyush always to purify water and Piyush is a liquid chlorine (24% in mountains). Further analysis reveals that of the 24.35 % of 620 respondents were able to recall the message either of the 2 statements, “use Piyush always to purify the water” “Piyush chlorine jhoal “ (Table 6.3).

## 6.2 Brand awareness, opinions and sources of supply

Respondents (n=1088) who reported having heard of water disinfectant were asked whether they had heard and could recall any brand name of disinfectant. Overall, 2-in-5 respondents with slightly a higher percentage in mountain (45%) than in hills (40%) spontaneously recalled at least one brand of water disinfectant. After prompting, this figure increased to nearly 50% in both regions. The most frequently mentioned brand name was *Water Guard* (41%) followed by Piyush (26%). Respondents in mountain were more likely to recall the Piyush name brand than those of hills while no marked difference was observed in case of *Water Guard* (Table 6.4). By marital status, unmarried women were more likely to recall both brands of water disinfectant compared to their married counterparts.

**Table 6.4 Percent distribution of unmarried and currently married women aged 15-49 years who have heard of water disinfectant by knowledge about brands and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Spontaneously recalled brand names for Water Disinfectant (Multiple Response)</b>									
Water guard	42.9	28.4	32.8	38.9	27.5	30.7	39.7	27.6	31.1
Piyus	44.4	26.2	31.9	29.6	23.4	25.1	32.6	23.6	26.4
Potassium permanganate	-	-	-	2.0	0.5	0.9	1.6	0.4	0.7
Nirmal tablet	-	-	-	0.4	0.3	0.3	0.3	0.3	0.3
Other (boiling; chlorine)	-	1.4	1.0	0.8	-	0.2	0.6	0.3	0.4
Do not know	41.3	61.7	55.4	51.4	63.9	60.4	49.4	63.5	59.5
<b>Total</b>	<b>63</b>	<b>141</b>	<b>204</b>	<b>247</b>	<b>637</b>	<b>884</b>	<b>310</b>	<b>778</b>	<b>1088</b>
<b>Recalled brand names for Water Disinfectant (both spontaneous and after probing) (Multiple answers possible)</b>									
Water guard	44.4	33.3	36.8	49.0	38.9	41.7	48.1	37.9	40.8
Piyus	44.4	30.5	34.8	35.2	26.8	29.2	37.1	27.5	30.2
Potassium permanganate	-	-	-	2.0	0.6	1.0	1.6	0.5	0.8
Nirmal tablet	-	-	-	0.4	0.3	0.3	0.3	0.3	0.3
Other (chlorine; SODIS)	-	1.4	1.0	0.8	0.2	0.3	0.6	0.4	0.5
<b>Mentioned at least two brand names</b>									
Spontaneously	58.7	38.3	44.6	48.6	36.1	39.6	50.6	36.5	40.5
Probed	58.7	45.4	49.5	57.1	45.2	48.5	57.4	45.2	48.7
<b>Mentioned at least two brand names</b>	<b>30.2</b>	<b>19.9</b>	<b>23.0</b>	<b>29.6</b>	<b>21.5</b>	<b>23.8</b>	<b>29.7</b>	<b>21.2</b>	<b>23.6</b>
Do not know	41.3	54.6	50.5	42.9	54.8	51.5	42.6	54.8	51.3
<b>Total</b>	<b>63</b>	<b>141</b>	<b>204</b>	<b>247</b>	<b>637</b>	<b>884</b>	<b>310</b>	<b>778</b>	<b>1088</b>
<b>Opinion regarding the best brand for Water Disinfectant (among who have heard of at least two brands of water disinfectant)</b>									
Piyus	36.8	60.7	51.1	34.2	35.8	35.2	34.8	40.0	38.1
Water guard	63.2	39.3	48.9	30.1	32.1	31.4	37.0	33.3	34.6
Other (SODIS)	-	-	-	-	0.7	0.5	-	0.6	0.4
Do not know	-	-	-	35.6	31.4	32.9	28.3	26.1	26.8
<b>Total</b>	<b>19</b>	<b>28</b>	<b>47</b>	<b>73</b>	<b>137</b>	<b>210</b>	<b>92</b>	<b>165</b>	<b>257</b>

Overall, 24% of the respondents recalled at least two brands of water disinfectant. Respondents (n=257) who reported having heard of at least two brands of water disinfectant were asked which one they thought was best for water disinfectant. Approximately, 38% of the respondents (51% in

mountains) considered Piyush the best disinfectant, followed by 35% (49% in mountains) who mentioned *Water Guard* as the best one. 27% (33% in hills) said they did not know (Table 6.4).

Respondents who selected one brand as best were asked to give their reasons. Easy to use was the main reason for considering both brands best (94% Piyush and 76% *Water Guard*), followed by absence of smell (30% Piyush and 37% *Water Guard*) and more effective (21% Piyush and 16% *Water Guard*). Cost was not mentioned by many respondents, but about 3% of those preferring Piyush mentioned it, compared to none for *Water Guard* (Table 6.5).

**Table 6.5 Percent distribution of unmarried and currently married women aged 15-49 years who have heard of two popular brands of water disinfectant (Piyush and Water Guard) by reasons for believing a particular brand of water disinfectant better than the other**

For what reason do you believe that brand is the best for <u>Water Disinfectant</u> ?	Piyush	Water Guard
Easy to use	93.9	76.4
No smell	29.6	37.1
More effective	21.4	15.7
Cheap	3.1	-
Other (referred by friend; attractive name; can easily destroy germs; extensive advertisement in TV)	1.0	2.2
Do not know	2.0	12.4
<b>Total</b>	<b>98</b>	<b>89</b>

Two-thirds of the respondents were able to mention at least one place to acquire water disinfectant; this was higher among unmarried respondents than their married counterparts in both regions. 57% of respondents (52% in the mountains) reported that water disinfectant could be obtained from pharmacy. About one-tenth of the respondents also mentioned each of the following as sources: private hospitals, health posts and general shops (Table 6.6).

**Table 6.6 Percent distribution of unmarried and currently married women aged 15-49 years who have heard of water disinfectant by knowledge about its source of supply and ecological regions**

Knowledge about places to get/buy Water Disinfectant (Multiple Response)	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<u>Public sector</u>									
Health post	15.9	14.2	14.7	13.8	9.3	10.5	14.2	10.2	11.3
Government hospital/clinic	6.3	9.2	8.3	10.9	8.8	9.4	10.0	8.9	9.2
FCHV	4.8	5.7	5.4	2.0	2.5	2.4	2.6	3.1	2.9
Subhealth post	3.2	5.0	4.4	2.4	1.9	2.0	2.6	2.4	2.5
PHC outreach	-	0.7	0.5	-	0.5	0.3	-	0.5	0.4
Other government	-	1.4	1.0	0.4	0.2	0.2	0.3	0.4	0.4
PHC center	-	-	-	0.4	0.3	0.3	0.3	0.3	0.3
<u>Non-government (NGO) Sector</u>									
Nepal Red Cross	1.6	5.0	3.9	-	-	-	0.3	0.9	0.7
FPAN	-	-	-	0.8	-	0.2	0.6	-	0.2
<u>Private medical sector</u>									
Pharmacy	63.5	46.8	52.0	62.3	56.5	58.1	62.6	54.8	57.0
Private hospital/clinic	39.7	19.1	25.5	15.0	6.8	9.0	20.0	9.0	12.1
Sangini outlet	-	0.7	0.5	0.8	0.9	0.9	0.6	0.9	0.8
Other private	1.6	-	0.5	0.4	0.2	0.2	0.6	0.1	0.3
<u>Other source</u>									
Shop	-	1.4	1.0	17.0	11.6	13.1	13.5	9.8	10.8
Friend/relative	3.2	2.8	2.9	-	0.3	0.2	0.6	0.8	0.7
Do not know/no answer	27.0	37.6	34.3	28.7	34.9	33.1	28.4	35.3	33.4
<b>Total</b>	<b>63</b>	<b>141</b>	<b>204</b>	<b>247</b>	<b>637</b>	<b>884</b>	<b>310</b>	<b>778</b>	<b>1088</b>

### 6.3 Water treatment practices and product use

65% of the 1088 respondents who reported having heard of water disinfectant reported that they treat water for drinking (Table 6.7) and 35% reported doing nothing to treat the drinking water. The treatment method used by the highest proportion of people was boiling (47%, 54% in the mountains) followed distantly by filtration (14%, 7% in mountains) and straining with cloth (12%). Less than 5% of the respondents said they used water disinfectant agents like chlorine, potassium and other agents.

When asked directly, only 7% of respondents said that they had used water disinfectant in the last year and only 9% (13% in mountains ( $p < .01$ )) had ever used a water disinfectant product.

**Table 6.7 Percent distribution of unmarried and currently married women aged 15-49 years who have heard of water disinfectant by ways of treating water for drinking, type of disinfectant used**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Ways of treating drinking water (Multiple Response)</b>									
Boiling	46.0	56.7	53.4	39.7	48.0	45.7	41.0	49.6	47.2
Filter	14.3	4.3	7.4	16.2	15.5	15.7	15.8	13.5	14.2
Straining with cloth	3.2	14.2	10.8	13.8	11.3	12.0	11.6	11.8	11.8
Settling	7.9	2.8	4.4	8.1	6.1	6.7	8.1	5.5	6.3
SODIS	3.2	2.1	2.5	2.4	1.1	1.5	2.6	1.3	1.7
Use water disinfectant	3.2	6.4	5.4	2.8	5.0	4.4	2.9	5.3	4.6
Chlorination	0.0	1.4	1.0	0.0	0.6	0.5	0.0	0.8	0.6
Using potassium; using <i>Fitkiri</i>	-	-	-	0.4	0.6	0.6	0.3	0.5	0.5
Do nothing	33.3	31.2	31.9	38.1	34.5	35.5	37.1	33.9	34.8
<b>Total</b>	<b>63</b>	<b>141</b>	<b>204</b>	<b>247</b>	<b>637</b>	<b>884</b>	<b>310</b>	<b>778</b>	<b>1088</b>
<b>Whether used water disinfectant in last one year</b>									
Yes	7.9	9.2	8.8	4.9	6.6	6.1	5.5	7.1	6.6
No	92.1	90.8	91.2	95.1	92.9	93.6	94.5	92.5	93.1
Do not remember	-	-	-	-	0.5	0.3	0.0	0.4	0.3
<b>Total</b>	<b>63</b>	<b>141</b>	<b>204</b>	<b>247</b>	<b>637</b>	<b>884</b>	<b>310</b>	<b>778</b>	<b>1088</b>
<b>Whether used water disinfectant product any time in the past</b>									
Yes	15.9	12.1	13.2	5.7	8.0	7.4	7.7	8.7	8.5
No	84.1	87.9	86.8	93.9	91.4	92.1	91.9	90.7	91.1
Do not remember	-	-	-	0.4	0.6	0.6	0.3	0.5	0.5
<b>Total</b>	<b>63</b>	<b>141</b>	<b>204</b>	<b>247</b>	<b>637</b>	<b>884</b>	<b>310</b>	<b>778</b>	<b>1088</b>

Table 6.8 depicts data on differentials by selected background characteristics on the ever use of water disinfectant by both the unmarried and married women included in the study. No significant difference was observed on ever use of water disinfectant across the age cohorts and migration status of the respondents. Hindu, Hill Dalit and those with SLC or above education were significantly more likely to have ever used of water disinfectant than their respective counterparts. Similarly, ever use of water disinfectant was also significantly higher among the respondents with the highest SES index and those exposed to either none or all three media than their respective counterparts.

**Table 6.8 Percent distribution of unmarried and currently married women aged 15-49 years who have heard of water disinfectant and have ever used water disinfectant by selected background characteristics and ecological regions**

Background characteristics	Percent		Number
	Yes	No	
<b>Region: Region of residence</b>	*		
Mountain	13.2	86.8	204
Hills	7.4	92.6	884
<b>Age of women (in years)</b>	Ns		
15-19	8.3	91.7	312
20-29	9.7	90.3	411
30-49	7.1	92.9	365
<b>Level of education</b>	*		
No schooling/illiterate	5.6	94.4	337
Some primary	7.5	92.5	173
Some secondary	7.4	92.6	337
SLC or above	14.5	85.5	241
<b>Religion</b>	*		
Hindu	11.0	89.0	790
Non-Hindu	1.7	98.3	298
<b>Caste/ethnicity</b>	*		
Hill Brahmin/Chhetri	12.7	87.3	377
Hill Janajati	3.3	96.7	541
Hill Dalit	18.9	81.1	111
Newar	8.5	91.5	59
<b>Migration status</b>	Ns		
Non-migrant	7.9	92.1	936
Migrant	11.8	88.2	152
<b>Exposure to media</b>	*		
None	12.8	87.2	180
Only one	5.7	94.3	422
Only two	6.0	94.0	283
All three	13.8	86.2	203
<b>SES Index</b>	*		
Lowest	6.7	93.3	149
Second	7.0	93.0	185
Middle	6.0	94.0	217
Fourth	6.8	93.2	265
Highest	14.0	86.0	272
<b>Total</b>	<b>8.5</b>	<b>91.5</b>	<b>1088</b>

\*Significant at <.05 level

ns= Not significant

Almost two-thirds (72%) of respondents (n= 92) who reported ever using disinfectant used it more recently than one year, with 19% saying one year. (Table 6.9). Over half (54%, 70% in the mountains ( $p<.05$ ), and 67% of unmarried) of the respondents used *Water Guard* last time, followed by 42% using Piyush. 98% of respondents said that the disinfectant they used was in liquid form. More than one-third (36%) of the respondents said that they obtained the disinfectant free of cost and an additional 37% did not remember/know the price that was paid. Among the remaining third, the average price paid was Rs 32. Approximately 13% of the respondents said that they paid Rs 30-35 for one bottle or package of disinfectant product followed by 9% who paid less than Rs 30 and 5% paid more than Rs. 35.

**Table 6.9 Percent distribution of unmarried and currently married women aged 15-49 years who have heard of water disinfectant and have ever used water disinfectant by type of disinfectant product used and cost for a bottle or package of the product and ecological regions**

Description	Mountain	Hills	Both		
	Total	Total	Unmarried	Married	Total
<b>Use of water disinfectant last time</b>					
Less than one year	59.3	76.9	66.7	73.5	71.7
1 year	25.9	15.4	16.7	19.1	18.5
2 year	11.1	3.1	8.3	4.4	5.4
3 year	3.7	3.1	8.3	1.5	3.3
6 year	-	1.5	-	1.5	1.1
<b>Mean</b>	<b>8.3</b>	<b>7.4</b>	<b>9.0</b>	<b>7.2</b>	<b>7.7</b>
<b>Median</b>	<b>5.0</b>	<b>3.0</b>	<b>5.0</b>	<b>3.0</b>	<b>4.0</b>
<b>SD</b>	<b>9.4</b>	<b>11.0</b>	<b>10.7</b>	<b>10.5</b>	<b>10.5</b>
<b>Range</b>	<b>0-36</b>	<b>0-72</b>	<b>0-36</b>	<b>0-72</b>	<b>0-72</b>
<b>Total</b>	<b>27</b>	<b>65</b>	<b>24</b>	<b>68</b>	<b>92</b>
<b>The brand of water disinfectant used last time</b>					
Water guard	70.4	47.7	66.7	50.0	54.3
Piyush	29.6	47.7	33.8	45.6	42.4
Other (potassium)	-	4.6	-	4.4	3.3
<b>Total</b>	<b>27</b>	<b>65</b>	<b>24</b>	<b>68</b>	<b>92</b>
<b>Form of water disinfectant used</b>					
Liquid	100.0	96.9	100.0	97.1	97.8
Powder	-	3.1	-	2.9	2.2
<b>Total</b>	<b>27</b>	<b>65</b>	<b>24</b>	<b>68</b>	<b>92</b>
<b>Cost of one bottle/package of disinfectant (in NRs)</b>					
Rs 20-29	11.1	7.7	8.3	8.8	8.7
Rs 30-35	18.5	10.8	12.5	13.2	13.0
Rs 36 or more	3.7	6.2	8.3	4.4	5.4
<b>Mean</b>	<b>32.2</b>	<b>32.5</b>	<b>35.7</b>	<b>31.1</b>	<b>32.4</b>
<b>SD</b>	<b>9.4</b>	<b>9.3</b>	<b>11.0</b>	<b>8.3</b>	<b>9.1</b>
<b>Range</b>	<b>25-55</b>	<b>20-50</b>	<b>20-55</b>	<b>25-50</b>	<b>20-55</b>
Got freely§	55.6	27.7	25.0	39.7	35.9
Do not know	11.1	47.7	45.8	33.8	37.0
<b>Total</b>	<b>27</b>	<b>65</b>	<b>24</b>	<b>68</b>	<b>92</b>

§ Mostly respondents from Bajura, Surkhet and Doti districts reported that they received water disinfectant freely from Red Cross and local NGOs during diarrhea epidemic last year.

The pharmacy was most frequent source (35%, 22% in mountains) where respondents obtained water disinfectant the last time, followed by 26% who obtained it from FCHVs, and 12% (lower in mountains) who said general shops. Nearly 8% (all in the mountains -26%) of the respondents also mentioned the Red Cross (Table 6.10).

**Table 6.10 Percent distribution of unmarried and currently married women aged 15-49 years who have heard of water disinfectant and have ever used water disinfectant by source of supply of disinfectant product and ecological regions**

Sources from where water disinfectant product obtained last time	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<u>Public Sector</u>									
FCHV	20.0	29.4	25.9	21.4	27.5	26.2	20.8	27.9	26.1
Health post	-	-	-	7.1	2.0	3.1	4.2	1.5	2.2
Government hospital/clinic	-	-	-	-	2.0	1.5	-	1.5	1.1
PHC outreach	-	-	-	-	2.0	1.5	-	1.5	1.1
<u>Non-government (NGO) Sector</u>									
Nepal Red Cross	10.0	35.3	25.9	-	-	-	4.2	8.8	7.6
Other NGO	-	5.9	3.7	-	-	-	-	1.5	1.1
<u>Private medical sector</u>									
Pharmacy	30.0	17.6	22.2	42.9	39.2	40.0	37.5	33.8	34.8
Private hospital/clinic	10.0	11.8	11.1	-	-	-	4.2	2.9	3.3
<u>Other source</u>									
Shop	20.0	-	7.4	14.3	13.7	13.8	16.7	10.3	12.0
Friend/relative	10.0	-	3.7	-	5.9	4.6	4.2	4.4	4.3
Other (meeting)	-	-	-	-	5.9	4.6	-	4.4	3.3
Do not know/no answer	-	-	-	14.3	2.0	4.6	8.3	1.5	3.3
<b>Total</b>	<b>10</b>	<b>17</b>	<b>27</b>	<b>14</b>	<b>51</b>	<b>65</b>	<b>24</b>	<b>68</b>	<b>92</b>

The main reason for not using a water disinfectant (among those who never had used) was that they did not think it to be necessary (86%), followed by not knowing the methods (26%) and unavailability of products nearby (12%) (Table 6.11).

**Table 6.11 Percent distribution of unmarried and currently married women aged 15-49 years who have heard of water disinfectant and have never used water disinfectant by reasons for not using the water disinfectant and ecological regions**

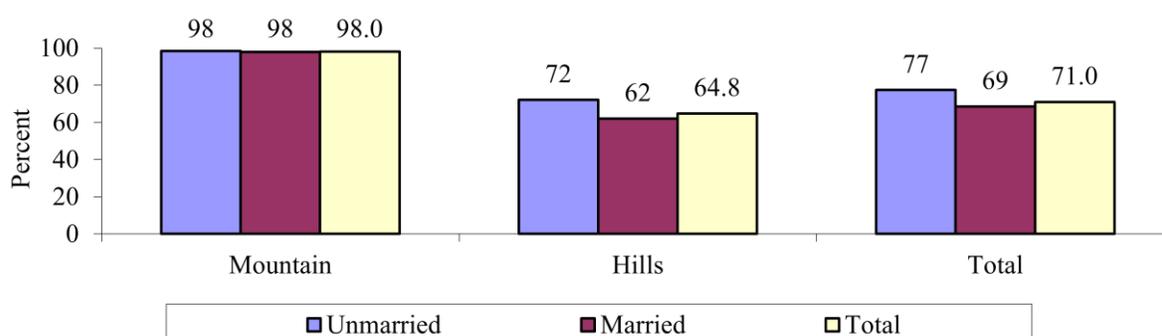
Reasons for not using water disinfectant (Multiple Response)	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Did not feel it necessary	94.3	91.1	92.1	88.4	83.8	85.1	89.5	85.1	86.3
Do not know about the methods	13.2	24.2	20.9	21.9	29.4	27.2	20.3	28.5	26.1
Not available nearby	22.6	12.1	15.3	10.3	12.3	11.7	12.6	12.3	12.3
No tradition; water is already clean	-	-	-	0.9	1.4	1.2	0.7	1.1	1.0
Can be boiled; use potassium; used Fitkiri	-	-	-	1.3	0.7	0.9	1.0	0.6	0.7
Expensive	-	-	-	-	0.5	0.4	-	0.4	0.3
Do not know	-	-	-	0.4	-	0.1	0.3	-	0.1
<b>Total</b>	<b>53</b>	<b>124</b>	<b>177</b>	<b>233</b>	<b>586</b>	<b>819</b>	<b>286</b>	<b>710</b>	<b>996</b>

#### 6.4 Future use intention and willingness to pay

71% (98% in the mountains ( $p < .001$ )) of the 1088 respondents who had heard of water disinfectant indicated that they intend to use it in the future, while a small proportion (9%) of them was undecided<sup>9</sup> (Figure 6,2). Unmarried women were also significantly more willing to say they will use a water disinfectant product in the future than the married women ( $p < .01$ ).

<sup>9</sup> [Undecided=100/1088\*100]

**Figure 6.2 Percentage of unmarried and currently married women aged 15-49 years who have heard of water disinfectant and intended to use it in the future by ecological regions**



n= 310 in mountain and 778 in hills

72% of respondents (100% in the mountains) said yes when asked "would you buy one bottle of water disinfectant that will last for one month for five people in a family at a price of Rs 20?" On average, the respondents were willing to pay the maximum amount of Rs 27 for one bottle of water disinfectant, with 59% saying they would pay Rs 26 or more (28% of these would pay only Rs 25). Almost all (98%) the respondents in mountain and about 62% in hills expressed that they would continue buying the water disinfectant even if its price increased by more than what they said was their maximum price. However, over one-fourth of respondents (all in the hills – most likely those who were not interested in the product at the previous question) said they did not know what they would do if the price were higher than their maximum (Table 6.12).

**Table 6.12 Percent distribution of unmarried and currently married women aged 15-49 years who have heard of water disinfectant by amount they would be willing to pay for a bottle of water disinfectant and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Willingness to buy one bottle of water disinfectant that will last for one month for five people in a family at a price of Rs 20</b>									
Yes	100.0	99.3	99.5	72.1	63.9	66.2	77.7	70.3	72.4
No	-	0.7	0.5	10.9	17.4	15.6	8.7	14.4	12.8
Do not know	-	-	-	17.0	18.7	18.2	13.5	15.3	14.8
<b>Total</b>	<b>63</b>	<b>141</b>	<b>204</b>	<b>247</b>	<b>637</b>	<b>884</b>	<b>310</b>	<b>778</b>	<b>1088</b>
<b>The maximum price you would be willing to pay for one bottle of water disinfectant (in NRs)</b>									
Rs 20-24	17.5	14.9	15.7	11.7	5.3	7.1	12.9	7.1	8.7
Rs 25	57.1	43.3	47.5	23.1	23.2	23.2	30.0	26.9	27.8
Rs 26+	23.8	41.1	35.8	30.8	30.6	30.7	29.4	32.5	31.6
<b>Mean</b>	<b>25.7</b>	<b>26.6</b>	<b>26.3</b>	<b>27.5</b>	<b>28.0</b>	<b>27.9</b>	<b>27.0</b>	<b>27.6</b>	<b>27.4</b>
<b>SD</b>	<b>3.5</b>	<b>3.5</b>	<b>3.5</b>	<b>8.9</b>	<b>7.4</b>	<b>7.8</b>	<b>7.8</b>	<b>6.6</b>	<b>7.0</b>
<b>Range</b>	<b>20-35</b>	<b>20-35</b>	<b>20-35</b>	<b>20-100</b>	<b>20-100</b>	<b>20-100</b>	<b>20-100</b>	<b>20-100</b>	<b>20-100</b>
Do not know	1.6	0.7	1.0	34.4	40.8	39.0	27.7	33.5	31.9
<b>Total</b>	<b>63</b>	<b>141</b>	<b>204</b>	<b>247</b>	<b>637</b>	<b>884</b>	<b>310</b>	<b>778</b>	<b>1088</b>
<b>What would you do if the price of one bottle of water disinfectant will be higher than the maximum price you are willing to pay?</b>									
Continue to buy	95.2	99.3	98.0	65.6	60.0	61.5	71.6	67.1	68.4
Look for other cheaper brand	3.2	-	1.0	2.4	2.5	2.5	2.6	2.1	2.2
Not buy (any brand of) the product	1.6	-	0.5	2.0	2.4	2.3	1.9	1.9	1.9
Would not buy	-	0.7	0.5	0.4	0.2	0.2	0.3	0.3	0.3
Do not know	-	-	-	29.6	35.0	33.5	23.5	28.7	27.2
<b>Total</b>	<b>63</b>	<b>141</b>	<b>204</b>	<b>247</b>	<b>637</b>	<b>884</b>	<b>310</b>	<b>778</b>	<b>1088</b>

## 6.5 Summary of findings: Disinfection of Drinking Water

### 6.5.1 Awareness of product and exposure to messages in the last 6 months

60% (52% in mountains, 78% of unmarried) of respondents were aware of water disinfectant products (i.e., medicine used to purify the drinking water).

57% of those aware of water disinfectant indicated having heard and/or seen some message over the last 6-month period, with the main source being radio (65%), followed by friends or relatives (43%, 51% mountains), television (21%, 13% mountains), and neighbors (20%). In addition, 27% of the unmarried (1% of married) respondents who had heard/or seen a message mentioned a book or school as a source of information.

The most frequently mentioned messages on water disinfectant were: *drink water only after boiling* (39%) and *mero pariwarko swasthyako rachhya dui thopa (paani) le* (two drops protect my family's health (26%)) and *medicines will destroy the germs; drink medicated water* (22%). There were also 13%-15% who mentioned two messages about *Piyush: use Piyush always to purify water* and *Piyush is a chlorine liquid* (24% in mountains) as well as *drink water only after filtration*.

### 6.5.2 Brand awareness, opinions and sources of supply

The brand name mentioned spontaneously most frequently was *Water Guard* (41%), followed by *Piyush* (26%, 32% in mountains and 40% among unmarried women). 60% of respondents did not provide any brand name.

38% (51% in mountains) of respondents who mentioned more than one brand considered *Piyush* the best disinfectant, followed by 35% who mentioned *Water Guard*. Ease of use was the main reason given for for both brands (94% *Piyush* and 76% *Water Guard*), followed by absence of smell (30% *Piyush* and 37% *Water Guard*) and more effective (21% *Piyush* and 16% *Water Guard*).

Pharmacy was the main place mentioned where water disinfectant can be procured (57%). A number of other sources, including shops, were mentioned by 9-12%.

### 6.5.3 Water treatment practices and product use

About one third (35%) of the respondents aware of water disinfectant reported that they did nothing to treat their drinking water. The method of treatment used by the highest proportion of people was boiling (47%, 54% in the mountains) followed by filtration (14%, 7% in mountains) or straining with cloth (12%). Less than 5% of the respondents said they have ever used water disinfectant agents like chlorine, potassium and other agents.

When asked directly, only 9% of respondents reported that they had ever used water disinfectant (7% in the last year), with almost twice as many in mountains (13%) as in hills (7%) ( $p < .01$ ).

Over half (54%, 70% in mountains and 67% of unmarried) of the disinfectant-using respondents used *Water Guard* last time, followed by 42% using *Piyush*. 98% used the disinfectant in liquid form.

More than one-third (36%) of the respondents said that they obtained the disinfectant free of cost and an additional 37% did not remember/know the price that was paid. Among the remaining third, the average price paid was Rs 32.

The pharmacy was most frequent source (35%, 22% in mountains) where the water disinfectant used last time was obtained, followed by 26% who said FCHV and 12% (lower in mountains) who

said a shop. Nearly 8% (all in the mountains- 26%) of the respondents also mentioned the Red Cross.

The main reason for not using a water disinfectant (among those who never had used) was that they did not think it was necessary (86%), followed by not knowing the methods (26%) and unavailability of products nearby (12%).

#### **6.5.4 Future use intention and willingness to pay**

Almost three-fourths (71%, 98% in mountains) of those aware of water disinfectant said that they intend to use the product in the future, while a small proportion (9%) of them was undecided. Unmarried women were significantly more likely than married women to express their willingness to use a water disinfectant product in the future ( $p < .01$ ).

72% (100% of those in the mountains) of the respondents said they would pay Rs 20 for a bottle that would last for one month for a family of five. On average, the maximum price respondents were willing to pay was Rs 27 for one bottle of water disinfectant.

### **6.6 CONCLUSIONS**

- The survey results indicate that about two-fifths of the respondents were not aware of water disinfectant.
- Brand awareness was low (60% of those aware were unable to mention any brand). *Piyush* awareness is lower than *Water Guard*. However, 60% of those aware of the product were unable to mention any brand.
- Similarly, the use of water disinfectant products was also extremely low in both regions, probably due to multiple ways to purify water. However almost all ever users have tried in the last year, so the category could be expanding.
- About one-third of users got their last product free and another third couldn't say or didn't remember how much was paid.
- Prices appear reasonable, but since most people either got the last one for free or don't remember the price, it's hard to know how many would really pay the current or a higher price.

**Table 6.13 Summary of brand and price data across water purification products**

Measure	Water purification
Product awareness among target	n=1800(all unmarried and married women aged 15-49 years) 60%
Ever used	n=1088(unmarried and currently married women aged 15-49 years who have heard of water water disinfectant) 9%
Brand awareness, spontaneous	n=257 (unmarried and currently married women aged 15-49 years who have heard of <b>at least two brands of water disinfectant</b> ) <i>Water Guard</i> -31% <i>Piyush</i> – 26% None: 60%
Brand used last	n=92 (unmarried and currently married women aged 15-49 years who have heard of water water disinfectant and have ever used water disinfectant) <i>Water Guard</i> -54% <i>Piyus</i> -42% Potassium-3%
% got product for free last time Don't remember price Mean price paid	n=92 (unmarried and currently married women aged 15-49 years who have heard of water water disinfectant and have ever used water disinfectant) 36% 37% Rs 32
Willing to pay X, among those who say they'll use in future	n=1088 (unmarried and currently married women aged 15-49 years who have heard of water water disinfectant) 72% would pay Rs 20
Mean price willing to pay, among those who say they'll use in future	n=1088 (unmarried and currently married women aged 15-49 years who have heard of water water disinfectant) Rs 27

**Table 6.14 Summary of reasons for non-use, source of information and source of supply, across products**

Measure	Water disinfectant
<b>Reasons never used this product</b>	N=996 (unmarried and currently married women aged 15-49 years who have heard of water water disinfectant but have never used it)
Not available nearby/easily available	12%
Didn't know about	26%
Not necessary	86%
<b>Source of Information heard in last 6 months</b>	N=620 (unmarried and currently married women aged 15-49 years who have heard or seen any messages or information on water disinfectant in the last 6 months)
FCHV	3%
Radio	65%
Friend/relative	43%
Health facility/worker	-
TV	21%
Neighbor	20%
School/book	9%
<b>Source of supply last time acquired</b>	N=92 (unmarried and currently married women aged 15-49 years who have heard of water water disinfectant and have ever used water disinfectant)
FCHV	26%
Health posts/sub health posts/PHC	3%
Pharmacy	35%
Private hosp/clinic	3%
Shop	12%
NGO	8%

## **6.7 Recommendations**

### **6.7.1 What to promote/positioning**

- Determine some comparative advantage for *Piyush* to distinguish it from *WaterGuard* – possibly “better value”.
- Create a perceived need or encourage people to try once, perhaps an approach like “try it once and see if it doesn’t make a big difference”.
- Promote to fathers – an example: “spending a little today to keep your family’s water clean will save you all from spending more to treat diarrhea or other illness caused by untreated water”.

## Chapter 7 Menstrual Hygiene and Use of Napkins

One of the objectives of the study was to assess the menstrual hygiene practices including the perception and use of sanitary napkins among the unmarried and married women of reproductive age. For this purpose, a series of questions regarding perception of respondents on menstruation, use of napkins and cloth during menstruation, awareness of different brands of sanitary napkins, willingness to use and attitudes towards the use of napkins and cloth were collected from responding women. The survey findings are presented in this chapter.

### 7.1 Menstruation demographics, behaviors and beliefs

Of the 1800 women included in the study, 32 had not yet started menstruation. The mean age at first menstruation was 14.5 years and median age for first menstruation was 14 years, as was the mode (35% of respondents). A substantial proportion (18%) of the women reported that their first menstruation occurred at age 16 or over. (Table 7.1)

The majority (58%) of the respondents in both the mountain and hills told their mothers when they started menstruating, followed by 20% who shared with their sisters, 8 % who informed some other female relative and 4% a school friends (11% among unmarried women). Twelve percent said they informed no one about their first menstruation.

**Table 7.1 Percent distribution of unmarried and currently married women aged 15-49 years who have started mensuration by age at first menstruation and ecological regions**

Description	Mountain			Hills			Both		
	Un married	Married	Total	Un married	Married	Total	Un married	Married	Total
<b>Age at first menstruation (completed year)</b>									
Less than 13 years	8.8	5.6	6.2	3.8	4.4	4.3	4.9	4.6	4.7
13 years	31.3	12.5	16.4	21.9	14.5	16.1	23.9	14.1	16.1
14 years	30.0	33.4	32.7	44.4	32.9	35.3	41.3	33.0	34.7
15 years	22.5	26.2	25.5	17.0	26.6	24.6	18.2	26.5	24.8
16 years	5.0	10.2	9.1	9.4	12.1	11.6	8.4	11.7	11.0
17 Years	1.3	4.6	3.9	2.4	5.2	4.6	2.2	5.1	4.5
18 Years	0.0	4.9	3.9	0.0	2.3	1.8	0.0	2.9	2.3
19 Years	0.0	1.3	1.0	0.3	0.5	0.5	0.3	0.7	0.6
Do Not Know	1.1	1.3	1.3	.8	1.5	1.2	.8	1.4	1.3
<b>Mean</b>	<b>13.8</b>	<b>14.6</b>	<b>14.5</b>	<b>14.2</b>	<b>14.6</b>	<b>14.5</b>	<b>14.1</b>	<b>14.6</b>	<b>14.5</b>
<b>Median</b>	<b>14.0</b>								
<b>SD</b>	<b>1.2</b>	<b>1.5</b>	<b>1.5</b>	<b>1.1</b>	<b>1.3</b>	<b>1.3</b>	<b>1.1</b>	<b>1.4</b>	<b>1.3</b>
<b>Range</b>	<b>11-17</b>	<b>11-19</b>							
Do not know/remember	1.3	1.3	1.3	0.7	1.5	1.3	0.8	1.4	1.3
<b>Total</b>	<b>80</b>	<b>305</b>	<b>385</b>	<b>288</b>	<b>1095</b>	<b>1383</b>	<b>368</b>	<b>1400</b>	<b>1768</b>
<b>Person informed about the first period (Multiple Response)</b>									
Mother	52.3	57.7	56.6	59.0	58.1	58.3	57.6	58.0	57.9
Sister	28.8	21.0	22.6	15.6	19.7	18.9	18.5	20.0	19.7
Other female relative	5.0	7.5	7.0	5.9	9.3	8.6	5.7	8.9	8.3
School friend	8.8	1.0	2.6	12.2	2.6	4.6	11.4	2.3	4.2
Friend	1.3	1.3	1.3	0.7	0.5	0.6	0.8	0.7	0.7
School teacher	-	0.3	0.3	0.3	0.1	0.1	0.3	0.1	0.2
Other (husband; father; brother)	-	4.3	3.4	0.3	0.6	0.6	0.3	1.4	1.2
No one	8.8	11.1	10.6	10.8	13.4	12.9	10.3	12.9	12.4
<b>Total</b>	<b>80</b>	<b>305</b>	<b>385</b>	<b>288</b>	<b>1095</b>	<b>1383</b>	<b>368</b>	<b>1400</b>	<b>1768</b>

Similarly, more than half (56%. 63% in mountains) said they learned about menstruation from their mother, followed by 19% who said sister, 9% who said other female relatives, and 7% (14% among unmarried respondents) who said school friend (Table 7.2).

**Table 7.2 Percent distribution of unmarried and currently married women aged 15-49 years who have started mensuration by persons from whom they first learned about menstruation and ecological regions**

Person from whom first learned about menstruation	Mountain			Hills			Both		
	Un married	Married	Total	Un married	Married	Total	Un married	Married	Total
Mother	53.8	65.6	63.1	48.3	56.1	54.4	49.5	58.1	56.3
Sister	21.3	17.7	18.4	19.1	19.6	19.5	19.6	19.2	19.3
Other female relative	2.5	6.2	5.5	4.9	10.8	9.5	4.3	9.8	8.7
School friend	8.8	1.3	2.9	15.6	5.6	7.7	14.1	4.6	6.6
No one	8.8	7.9	8.1	5.2	5.7	5.6	6.0	6.1	6.1
School teacher	-	0.3	0.3	4.5	0.6	1.4	3.5	0.6	1.2
Book	3.8	-	0.8	2.4	0.6	1.0	2.7	0.5	1.0
Friend	1.3	0.7	0.8	-	0.8	0.7	0.3	0.8	0.7
Other (husband)	-	0.3	0.3	-	-	-	-	0.1	0.1
Do not know/remember	-	-	-	-	0.2	0.1	-	0.1	0.1
<b>Total</b>	<b>80</b>	<b>305</b>	<b>385</b>	<b>288</b>	<b>1095</b>	<b>1383</b>	<b>368</b>	<b>1400</b>	<b>1768</b>

On average, the women had bleeding for the period of 4.2 days with the standard deviation of 1.2. The length of a period was reported to range from 2 to 7 days with 30% reporting bleeding for 4 days, 29% saying 3 days, and 23% saying 5 days. Approximately 14% of the women had bleeding for 6-7 days (Table 7.3).

**Table 7.3 Percent distribution of unmarried and currently married women aged 15-49 years who have started mensuration by number of days of bleeding during their period, frequency of wearing panties and ecological regions**

Description	Mountain			Hills			Both		
	Un married	Married	Total	Un married	Married	Total	Un married	Married	Total
<b>Duration of bleeding for each period (in number of days)</b>									
2	5.0	5.2	5.2	1.7	3.6	3.2	2.4	3.9	3.6
3	25.0	22.0	22.6	32.3	29.7	30.2	30.7	28.0	28.6
4	26.3	29.8	29.1	32.3	29.9	30.4	31.0	29.9	30.1
5	25.0	25.2	25.2	22.9	22.8	22.8	23.4	23.4	23.4
6	8.8	6.2	6.8	5.6	6.7	6.4	6.3	6.6	6.5
7	10	11.0	10.9	4.9	6.6	6.2	6.0	7.6	7.2
<b>Mean</b>	<b>4.4</b>	<b>4.4</b>	<b>4.4</b>	<b>4.3</b>	<b>4.2</b>	<b>4.2</b>	<b>4.2</b>	<b>4.2</b>	<b>4.2</b>
<b>Median</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>
<b>SD</b>	<b>1.4</b>	<b>1.3</b>	<b>1.3</b>	<b>1.1</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>1.3</b>	<b>1.2</b>
<b>Range</b>	<b>2-7</b>	<b>2-7</b>	<b>2-7</b>	<b>2-7</b>	<b>2-7</b>	<b>2-7</b>	<b>2-7</b>	<b>2-7</b>	<b>2-7</b>
Irregular	-	0.3	0.3	0.3	0.8	0.7	0.3	0.7	0.6
<b>Total</b>	<b>80</b>	<b>305</b>	<b>385</b>	<b>288</b>	<b>1095</b>	<b>1383</b>	<b>368</b>	<b>1400</b>	<b>1768</b>
<b>Frequency of wearing panties</b>									
All the time	88.8	51.1	59.0	97.9	62.1	69.6	95.9	59.7	67.3
Only when menstruating	8.8	22.0	19.2	2.1	18.4	15.0	3.5	19.1	15.9
Only when NOT menstruating	-	2.0	1.6	-	1.6	1.2	-	1.6	1.3
When I got out of the house	-	2.0	1.6	-	1.3	1.0	-	1.4	1.1
Never use panty	2.5	23.0	18.7	-	16.7	13.2	0.5	18.1	14.4
<b>Total</b>	<b>80</b>	<b>305</b>	<b>385</b>	<b>288</b>	<b>1095</b>	<b>1383</b>	<b>368</b>	<b>1400</b>	<b>1768</b>

Overall, 2-in-3 women reported wearing panties all the time with 16% saying they did so during menstruation only. Nearly the same proportion (14%) stated they never wore panties. The practice

of wearing panties all the time was higher among the unmarried and those residing in hills than their respective counterparts.

Table 7.4 shows that using old cloth pieces to absorb menstrual flow was considered as the best way by 55% of respondents, with much higher mention among the women of mountains (72%). About one-fourth of women (only 17% in the mountains) considered sanitary pads to be the best way to absorb the flow. A higher proportion of unmarried women of both regions (31%-44%) regarded sanitary napkins as the best way for absorbing menstrual flow than among married ones (13%-24%). 9% mentioned new cloth pieces as the best way to absorb menstrual flow and 6% said they did not know.

**Table 7.4 Percent distribution of unmarried and currently married women aged 15-49 years who have started mensuration by opinion on the best way to absorb menstrual flow and ecological regions**

Description	Mountain			Hills			Both		
	Unma rried	Mar ried	Total	Unma rried	Mar ried	Total	Unma rried	Mar ried	Total
<b>Opinion on the one best way to absorb menstrual flow</b>									
Old cloth pieces	58.8	75.7	72.2	33.7	54.1	49.8	39.1	58.8	54.7
Sanitary pads	31.3	12.8	16.6	44.1	23.7	27.9	41.3	21.3	25.5
New cloth pieces	8.8	5.6	6.2	12.5	8.9	9.7	11.7	8.2	8.9
New cotton cloth; soft cotton cloth	1.3	0.3	0.5	4.9	2.6	3.0	4.1	2.1	2.5
Cotton	-	-	-	0.3	0.1	0.1	0.3	0.1	0.1
Do nothing	-	3.6	2.9	1.0	3.3	2.8	0.8	3.4	2.8
Do not know	-	2.0	1.6	3.5	7.4	6.6	2.7	6.2	5.5
<b>Total</b>	<b>80</b>	<b>305</b>	<b>385</b>	<b>288</b>	<b>1095</b>	<b>1383</b>	<b>368</b>	<b>1400</b>	<b>1768</b>

Further analysis shows that 84% of those who used both sanitary napkins and cloths during menstruation thought that, sanitary napkins is better absorbing menstrual flow (Table 7.5). As expected almost all (97.7 %) who use only napkins think napkins are best and almost all who use only cloths (90.7%) believe that cloths are best..

**Table 7.5 Percent distribution of unmarried and currently married women aged 15-49 years who have started mensuration by opinion on the best way to absorb menstrual flow according to the pattern of use of napkins and/or cloths**

Opinion on the one best way to absorb menstrual flow	Use status			
	Sanitary pad Only	Cloth Only	Both	None or menopause
Sanitary napkin	97.7	6.4	84.3	2.6
Cloth	2.3	90.7	15.7	54.3
Do not know	0.0	3.0	0.0	43.1
Total %	100.0	100.0	100.0	100.0
Total (n)	87	1070	344	267

Note: 32 women reported that they are not yet menstruated so are excluded in the table.

Respondents were asked about the positive as well negative aspects of menstruation. To the question "what do you think are the positive things about having your period?" the most frequent response (63%) was that having menstruation would confirm that a woman is not currently pregnant, followed by being able to avoid sexual intercourse (34%), not having to work (26%), and I am taken care of (16%). Responses for all four of these were proportionally higher among women in mountains than in the hills. The first two – not being pregnant and can avoid sex – were much

higher among married women than among unmarried ones. Other positive things mentioned were still being able to go to college and/or outside (9%), and extra consideration from others (6%). 16% (22% of unmarried women) said there were no benefits to having their period (Table 7.6).

**Table 7.6 Percent distribution of unmarried and currently married women aged 15-49 years who have started mensuration by opinion regarding the positive aspects of having period and ecological regions**

Description	Mountain			Hills			Both		
	Unm arried	Mar ried	Total	Unm arried	Mar ried	Total	Unm arried	Mar ried	Total
<b>Opinion regarding the positive things about having period (Multiple Response)</b>									
I know I am not pregnant	32.5	84.3	73.5	25.3	69.4	60.2	26.9	72.6	63.1
Can avoid sex	11.3	54.1	45.2	3.8	38.4	31.2	5.4	41.9	34.3
Do not have to work	57.5	37.0	41.3	23.3	20.7	21.3	30.7	24.3	25.6
I am taken care of	45.0	26.2	30.1	20.1	9.9	12.0	25.5	13.4	16.0
I can still go to college and outside	23.8	3.0	7.3	24.3	4.7	8.8	24.2	4.4	8.5
Extra consideration from others	17.5	4.9	7.5	12.5	3.9	5.7	13.6	4.1	6.1
Discards spoiled blood; discards dirty blood	1.3	1.0	1.0	8.7	4.6	5.4	7.1	3.8	4.5
Feeling of healthy; good for health; body becomes healthy	-	-	-	5.2	2.8	3.3	4.1	2.2	2.6
I do not have to go to school/college	6.3	1.0	2.1	8.3	0.1	1.8	7.9	0.3	1.9
Feel healthy and smart	-	-	-	0.3	0.6	0.6	0.3	0.5	0.5
Other±	-	-	-	1.0	0.3	0.4	0.8	0.2	0.3
Nothing	6.3	2.3	3.1	26.0	18.4	20.0	21.7	14.9	16.3
Do not know	-	-	-	-	0.2	0.1	-	0.1	0.1
<b>Total</b>	<b>80</b>	<b>305</b>	<b>385</b>	<b>288</b>	<b>1095</b>	<b>1383</b>	<b>368</b>	<b>1400</b>	<b>1768</b>

± Other includes: can continue working; feeling of wholesome woman; can go to office even during menses; do not need to do heavy work; protection to the body

The two main responses for negative things about having a period were physical symptoms, with three-fifths of the women (67% among unmarried and 64% in mountains) saying stomach pain followed and 54% tiredness. Just over one-third said they were embarrassed that others would know and 28% said both having to deal with pads/someone might see and that blood might show. Women in the mountains were more likely than those in the hills to mention all of the above five reasons. Some of the women mentioned social isolation, such as hard to go out (22%), not able to do things they normally do (21%) and restrictions on visiting temples (19%). 15% mentioned the possibility of getting blood on the bed and 13% the need to sleep somewhere else. Only 7% did not mention anything negative (Table 7.7).

**Table 7.7 Percent distribution of unmarried and currently married women aged 15-49 years who have started mensuration by opinion regarding the negative aspects of having period and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Opinion regarding the negative things about having period (Multiple Response)</b>									
Have stomach pain	68.8	63.3	64.4	66.7	57.5	59.4	67.1	58.8	60.5
More tired	56.3	58.7	58.2	53.1	52.3	52.5	53.8	53.7	53.7
Too embarrassed that people know	66.3	55.4	57.7	30.9	27.8	28.4	38.6	33.8	34.8
Having to deal with pad/cloths – someone might see	40.0	40.0	40.0	23.6	25.2	24.9	27.2	28.4	28.2
Worried that blood will show	40.0	34.1	35.3	27.1	25.5	25.8	29.9	27.4	27.9
Hard to go out/do things	21.3	15.4	16.6	26.0	23.5	24.0	25.0	21.7	22.4
Cannot do things I normally do	13.8	15.7	15.3	25.0	22.1	22.7	22.6	20.7	21.1
Cannot go to temple	26.3	20.3	21.6	18.8	17.4	17.6	20.4	18.0	18.5
Could get blood on the bed	16.3	21.0	20.0	13.2	14.1	13.9	13.9	15.6	15.2
Have to sleep somewhere else	8.8	14.1	13.0	12.2	13.9	13.5	11.4	13.9	13.4
Have to worry about disposing and drying	8.8	8.2	8.3	13.5	11.1	11.6	12.5	10.4	10.9
Have to stay away from family members	8.8	9.8	9.6	6.6	7.7	7.4	7.1	8.1	7.9
Husband won't touch me	1.3	2.3	2.1	0.7	9.1	7.4	0.8	7.6	6.2
Pain in waist; back pain; head ache; dizziness; low appetite; irritation by the cloth; uneasiness while walking	-	0.3	0.3	7.6	6.0	6.4	6.0	4.8	5.0
People consider me impure	1.3	3.3	2.9	3.8	4.7	4.6	3.3	4.4	4.2
Hard to go to school/outside	6.3	1.0	2.1	12.2	1.7	3.9	10.9	1.6	3.5
Other (have to depend on others for food)	-	-	-	0.3	0.8	0.7	0.3	0.6	0.6
Nothing	-	0.7	0.5	8.7	8.8	8.7	6.8	7.0	7.0
Do not know	-	-	-	-	0.1	0.1	-	0.1	0.1
<b>Total</b>	<b>80</b>	<b>305</b>	<b>385</b>	<b>288</b>	<b>1095</b>	<b>1383</b>	<b>368</b>	<b>1400</b>	<b>1768</b>

± Other includes: can continue working; feeling of wholesome woman; can go to office even during menses; do not need to do heavy work; protection to the body

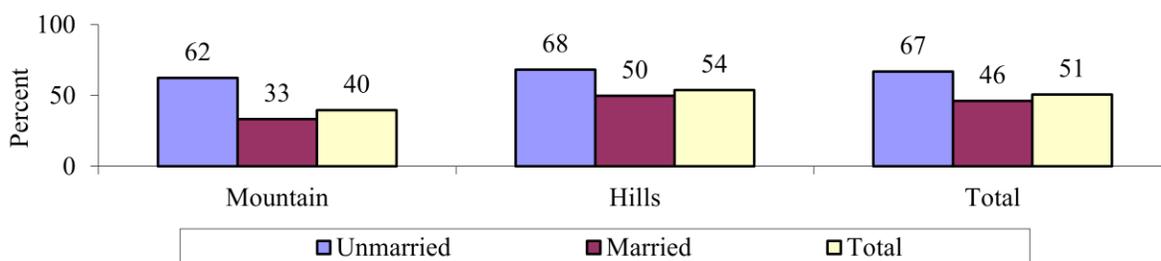
## 7.2 Exposure to different brands of sanitary napkins and willingness to use

There are several brands of such napkins available in the Nepali market. This study tried to capture information on the women's exposure to messages on napkins, awareness of brands, opinion about the brands, future intention to use and willingness to pay the cost of the napkins. The findings are described in this section.

### 7.2.1 Awareness of product and exposure to messages in the last 6 months

All the unmarried and married women included in the survey were asked if they had ever heard of sanitary napkins. Overall, half (51%) of the women reported having heard of sanitary napkins (Figure 7.1). The unmarried and those residing in hills were significantly more likely to have ever heard of sanitary napkins than married and mountain women ( $p < .001$ ).

**Figure 7.1 Percentage of unmarried and currently married women aged 15-49 years who have heard of sanitary napkins by ecological regions**



n= 1800

Among those (n=915) aware of sanitary napkins, nearly three-fifths (58%) reported having heard or seen some message or information on napkins in the last 6 months, with unmarried women more likely to report having heard or seen some message than married women ( $p<.001$ ) (Table 7.8). Likewise, the percentage of women who had heard a message or information about sanitary napkins in the last 6 months was significantly higher in hills than in mountain ( $p<.05$ ).

The main sources of information on sanitary napkins were friends or relatives (68%) followed by radio (37%) and television (36%). A higher proportion of women in mountain (83%) reported receiving information on sanitary napkins in the past six months from friends or relatives with a lower proportion mentioning radio and television than those in the hills.

**Table 7.8 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins by exposure to messages in the last 6 months, source of information and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Exposure to any messages or information from any source about sanitary napkins over the last 6 months</b>									
Yes	52.8	51.0	51.6	72.1	54.5	59.5	68.3	53.9	58.1
No	47.2	49.0	48.4	27.9	42.4	38.3	31.7	43.4	40.0
Do not know	-	-	-	-	3.1	2.2	-	2.6	1.9
<b>Total</b>	<b>53</b>	<b>102</b>	<b>155</b>	<b>215</b>	<b>545</b>	<b>760</b>	<b>268</b>	<b>647</b>	<b>915</b>
<b>Sources of information about sanitary napkins in the last 6 months (Multiple Response)</b>									
Friends/relatives	85.7	80.8	82.5	67.1	65.3	65.9	69.9	67.6	68.4
Radio	21.4	28.8	26.3	41.9	36.7	38.5	38.8	35.5	36.7
Television	10.7	11.5	11.3	41.3	40.4	40.7	36.6	36.1	36.3
Neighbor	17.9	17.3	17.5	17.4	26.6	23.5	17.5	25.2	22.6
In a shop/medical shop	3.6	17.3	12.5	8.4	9.8	9.3	7.7	10.9	9.8
Newspaper/magazine/broacher	10.7	7.7	8.8	4.5	2.7	3.3	5.5	3.4	4.1
Poster/ hoarding board	7.1	7.7	7.5	4.5	2.7	3.3	4.9	3.4	3.9
School; book	7.1	1.9	3.8	7.7	-	2.7	7.7	0.3	2.8
FCHV	-	1.9	1.3	-	1.0	0.7	-	1.1	0.8
Street dramas	7.1	-	2.5	0.6	-	0.2	1.6	-	0.6
Cinema hall/Theater	-	-	-	-	-	0.3	-	0.3	0.2
Other±	-	-	-	0.6	2.7	2.0	0.5	2.3	1.7
<b>Total</b>	<b>28</b>	<b>52</b>	<b>80</b>	<b>155</b>	<b>297</b>	<b>452</b>	<b>183</b>	<b>349</b>	<b>532</b>

± Other includes: health worker; health facility; community meeting; local groups.

Among those (n=532) who had heard or seen a message about sanitary napkins in the last 6 months, the most frequently (36%, 16% in mountains) heard or seen message mentioned was that the napkins (pads) were for using during menses (Table 7.9), followed by “*it is perfect*” (29%, 63% in mountains) and “*have happy period*” (20%, 36% in mountains). Other messages mentioned by more than 10% of the women were: *always Safety, always wealthy* (12%, 30% in mountains) and *Ab bakt hai bdalne ka* i.e. now is the time to change thinking (11%, 1% in mountains).

The slogan “have happy period” is associated with Whisper brand, “always Safety, always wealthy” is associated with Safety brand and “Ab bakt hai bdalne ka” is associated with Stayfree brand.

**Table 7.9 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and have exposure to messages in the last 6 months by type of or messages and ecological regions**

Kind of information seen/heard about sanitary napkins in the last 6 months (Multiple Responsible)	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Pad used during menses	14.3	17.3	16.3	32.9	42.4	39.2	30.1	38.7	35.7
It is perfect	60.7	63.5	62.5	26.5	21.9	23.5	31.7	28.1	29.3
Have happy period	42.9	32.7	36.3	21.9	15.2	17.5	25.1	17.8	20.3
Always Safety always wealthy	28.6	30.8	30.0	9.7	7.4	8.2	12.6	10.9	11.5
Aab bakt he badal ne ka (now is the time to change thinking)	3.6	-	1.3	14.8	11.4	12.6	13.1	9.7	10.9
Will be safe; pad preventing outflow of blood; blood absorbing pad	3.6	-	1.3	6.5	9.8	8.6	6.0	8.3	7.5
I am safe thank you Safety	-	9.6	6.3	3.9	1.7	2.4	3.3	2.9	3.0
It is comfortable	3.6	5.8	5.0	0.6	2.4	1.8	1.1	2.9	2.3
Disposable pad after the use	-	-	-	1.9	3.0	2.7	1.6	2.6	2.3
Long drying pad	-	-	-	3.2	0.3	1.3	2.7	0.3	1.1
Becomes clean using it	-	-	-	1.3	1.3	1.3	1.1	1.1	1.1
Other±	-	-	-	3.9	2.0	2.7	3.3	1.7	2.3
Do not know	-	-	-	-	0.3	0.2	-	0.3	0.2
<b>Total</b>	<b>28</b>	<b>52</b>	<b>80</b>	<b>155</b>	<b>297</b>	<b>452</b>	<b>183</b>	<b>349</b>	<b>532</b>

± Other includes: becomes healthy; easy to use during long bus travel; can be carried along wherever needs to go; modern pad which is available in the market; not need to wash; prevent from disease.

## 7.2.2 Brand awareness, opinions and source of supply

Overall, 51% of respondents aware of sanitary napkins were able to spontaneously recall at least one brand name of sanitary napkins. Unmarried women were significantly more likely to recall at least one brand of sanitary napkins compared to the married ones (p<.001). However, no significant difference was observed with respect to recall of at least one brand of sanitary napkins across the region of residence of respondents. After probing, the percentage of women reporting at least one brand increased to 64% with a higher level in mountain (73%). The most frequently cited brand names were *Safety* (30% spontaneously and 44% after probing), *Stayfree* (24% spontaneously and 29% after probing) and *Whisper* (18% spontaneously and 23% after probing). Safety and Whisper had higher brand awareness, both unaided and aided, in the mountains, whereas Stayfree was the same (aided plus unaided) in both areas, and Feme was mentioned more often in the hills.

Overall, 29% (n=267) of the respondents were aware of two or more brands of sanitary napkins. These women were further asked about their opinion regarding the best brand. (36%) *Safety* received the most votes (36%) followed by *Stayfree* (30%) and *Whisper* (22%). Only a small proportion (5%) of the respondents considered *Feme* as the best brand (Table 7.10).

**Table 7.10 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins by knowledge about different brands of sanitary napkins, sanitary napkin brand name recall, opinion on best brand of napkins among those who reported to know at least two brands of sanitary napkins and ecological regions, FP/RH/MCH survey**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Spontaneously recalled of brand names for sanitary napkins (Multiple Response)</b>									
Safety	37.7	35.3	36.1	38.1	25.5	29.1	38.1	27.0	30.3
Stay free	18.9	21.6	20.6	28.8	22.4	24.2	26.9	22.3	23.6
Whisper	30.2	34.3	32.9	20.9	12.7	15.0	22.8	16.1	18.0
Feme	-	2.0	1.3	9.8	6.1	7.1	7.8	5.4	6.1
Other±	-	-	-	-	0.4	0.3	-	0.3	0.2
Do not know	43.4	43.1	43.2	38.1	55.4	50.5	39.2	53.5	49.3
<b>Total</b>	<b>53</b>	<b>102</b>	<b>155</b>	<b>212</b>	<b>545</b>	<b>760</b>	<b>268</b>	<b>647</b>	<b>915</b>
<b>Brand names of sanitary napkins recalled (spontaneous and after probing) (Multiple Response)</b>									
Safety	45.3	50.0	48.4	52.6	38.5	42.5	51.1	40.3	43.5
Stay free	24.5	30.4	28.4	32.6	27.0	28.6	31.0	27.5	28.5
Whisper	32.1	34.3	33.5	27.9	18.3	21.1	28.7	20.9	23.2
Feme	1.9	2.0	1.9	13.5	9.0	10.3	11.2	7.9	8.9
Other ±	-	-	-	0.5	0.9	0.8	0.4	0.8	0.7
Do not know	30.2	25.5	27.1	26.0	43.3	38.4	26.9	40.5	36.5
<b>Total</b>	<b>53</b>	<b>102</b>	<b>155</b>	<b>212</b>	<b>545</b>	<b>760</b>	<b>268</b>	<b>647</b>	<b>915</b>
<b>Opinion regarding the best brand of sanitary napkins</b>									
Safety	22.2	48.6	40.0	33.8	36.2	35.4	31.5	38.9	36.3
Stay free	22.2	27.0	25.5	27.0	34.1	31.6	26.1	32.6	30.3
Whisper	55.6	24.3	34.5	27.0	14.5	18.9	32.6	16.6	22.1
Feme	-	-	-	5.4	7.2	6.6	4.3	5.7	5.2
Other ±	-	-	-	-	1.4	0.9	-	1.1	0.7
Do not know	-	-	-	6.8	6.5	6.6	5.4	5.1	5.2
<b>Total</b>	<b>18</b>	<b>37</b>	<b>55</b>	<b>74</b>	<b>138</b>	<b>212</b>	<b>92</b>	<b>175</b>	<b>267</b>

± Other includes: Pentyliner; Cotex; Salt; Softlite

Table 7.11 shows data on the reasons for choosing a specific brand as best. 4-in-5 or more respondents gave the same reasons – absorbent and easy to use. There were no significant differences in ratings by brand, though a somewhat higher proportion of respondents mentioned absorbent for Safety than the other two main brands mentioned.

**Table 7.11 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins reporting the three brands of sanitary napkins as best brands by reasons for believing a particular brand to be the best**

For what reason do you believe that brand is the best for <u>Sanitary Napkins</u> ?	Safety	Whisper	Stay free
More absorption	91.8	81.4	81.5
Easy to use	81.4	84.7	79.0
Cheap	6.2	5.1	4.9
Other (available everywhere)	1.0	-	2.5
Do not know	-	3.4	6.2
<b>Total</b>	<b>97</b>	<b>59</b>	<b>81</b>

Overall, more than 95% of the respondents aware of sanitary napkins mentioned at least one source of supply of sanitary napkins (Table 7.12). The source mentioned most often was pharmacies

(87%), followed by general shops (44%, only 7% in mountains), private hospitals/clinics (24%, 55% in mountains), government hospitals (12%) and health posts (11%)

**Table 7.12 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins by knowledge about source of supply and ecological regions**

Knowledge about the places where one can get/buy sanitary napkins (Multiple Response)	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Public Sector</b>									
Government hospital/clinic	9.4	26.5	20.6	12.1	9.0	9.9	11.6	11.7	11.7
Health post	13.2	15.7	14.8	10.7	10.5	10.5	11.2	11.3	11.3
Subhealth post	3.8	3.9	3.9	0.5	1.5	1.2	1.1	1.9	1.6
Other government	-	2.9	1.9	-	-	-	-	0.5	0.3
FCHV	-	-	-	0.5	0.2	0.3	0.4	0.2	0.2
<b>Non-government (NGO) Sector</b>									
FPAN	-	2.0	1.3	1.4	0.6	0.8	1.1	0.8	0.9
UMN	-	-	-	0.5	0.2	0.3	0.4	0.2	0.2
Marie Stopes	-	-	-	0.5	-	0.1	0.4	-	0.1
<b>Private medical sector</b>									
Pharmacy	86.8	84.3	85.2	87.0	87.5	87.4	86.9	87.0	87.0
Private hospital/clinic	60.4	52.9	55.5	24.7	14.9	17.6	31.7	20.9	24.0
Sangini outlet	-	1.0	0.6	0.9	0.9	0.9	0.7	0.9	0.9
Other private	1.9	2.0	1.9	0.9	-	0.3	1.1	0.3	0.5
<b>Other source</b>									
Shop	-	10.8	7.1	56.7	49.2	51.3	45.5	43.1	43.8
Friend/relative	3.8	5.9	5.2	2.8	1.7	2.0	3.0	2.3	2.5
Cosmetic shops; beauty parlor	-	-	-	6.0	3.3	4.1	4.9	2.8	3.4
Do not know/no answer	9.4	5.9	7.1	3.7	4.6	4.3	4.9	4.8	4.8
<b>Total</b>	<b>53</b>	<b>102</b>	<b>155</b>	<b>212</b>	<b>545</b>	<b>760</b>	<b>268</b>	<b>647</b>	<b>915</b>

### 7.3 What used to absorb menstrual flow?

Of the 1800 women included in the study 1715 women were currently menstruating (32 had not yet started and 53 had reached menopause). When asked what they currently did to absorb flow when they get their menstrual period, 59 % of the women reported to use cloth only and another 5% mentioned only disposable sanitary napkins or pad. Similarly, 19 % of the women reported to use both (i.e., sanitary napkin as well as cloth). A notable proportion (12%) of the respondents said they did not use anything to absorb flow (Table 13).

The data reveals that women in hills are significantly more like to use both sanitary pad and cloths than in the mountains. Among non-users, increased age is found to be positively associated with non-use of anything to absorb menstrual flow. Among sanitary napkin users, women with increasing age are likely to decrease the use of sanitary napkin.

Increased education leading to increase use of sanitary pad and decrease use of cloth is clearly evident in the analysis. No difference in the use of sanitary napkin is observed by religion, caste-ethnicity and migration status of the women. However, the analysis reveals that hill Janajati and hill Dalit are more likely to use cloth to absorb menstrual flow than Brahmins/Chhetri and Newar. Similarly, migrants are significantly more likely to use cloth than non-migrants.

The analysis also reveals that increased number of types of media leading to increased use of sanitary napkins and decrease use in cloth to absorb menstrual flow. A clear association between

wealth quintile and use of sanitary napkin is also observed in the analysis. For example, use of sanitary napkin has increased with the increase in the quintile groups from poor to rich. In contrast, the pattern is found to be reversed in the case of use of cloth napkin (Table 7.13).

**Table 7.13 Percent distribution of unmarried and currently married women aged 15-49 years by type of napkins used to absorb menstrual flow and their selected background characteristics**

Background characteristics	Types of Napkin use to absorb menstrual flow					Total
	Disposable Sanitary Napkin/pad only	Cloth only (cotton, gauze, soft tissue)	Both	Nothing	Menopause/ no menstruation yet	
<b>Region of residence</b>						
Mountain hills	3.6	62.6	14.6	12.1	7.2	390
	5.2	58.6	20.4 *	11.8	4.0	1410
<b>Age of women (In years)</b>						
15 to 19	9.4	55.3	24.9	2.7	7.7	414
20 to 29	6.0	59.3	24.1	10.4 *	0.3	705
30-49	0.9 *	62.1 *	10.4 *	19.1 *	7.5	681
<b>Level of education</b>						
No schooling/illiterate	1.3	64.2	5.0	23.6	5.9	779
Some primary	1.3	72.8 *	13.1 *	6.7 *	6.1	312
Some secondary	9.8 *	55.5 *	28.2 *	1.9 *	4.7	429
SLC or above	11.1 *	37.5 *	51.1 *	0.4 *	0.0	280
<b>Religion</b>						
Hindu	4.5	57.2	20.1	13.4	4.8	1393
Non-Hindu	6.1	67.1 *	15.7	6.6 *	4.4	407
<b>Caste/ethnicity</b>						
Hill Brahmin/Chhetri	4.9	51.7	21.9	15.7	5.7	629
Hill Janajati	5.4	63.7 *	19.6	6.8 *	4.4	790
Hill Dalit	2.9	66.4 *	7.3 *	19.0	4.4	274
Newar	4.7	56.1	29.0	8.4	1.9	107
<b>Migration Status</b>						
Non-Migrant	6.5	53.0	25.7	12.2	2.6	230
Migrant	4.6	60.4 *	18.2 *	11.8	5.0	1570
<b>Exposure to media</b>						
None	1.6	57.0	5.7	28.5	7.1	561
Only one	3.5 *	71.5 *	12.2 *	7.5 *	5.2	650
Only two	7.5 *	57.6 *	31.4 *	1.4 *	2.0	347
All three	12.0 *	35.1 *	51.2 *	0.0	1.7	242
<b>SES Index</b>						
Poorest	0.6	58.6	1.4	33.6	5.8	360
Second	2.8 *	67.2 *	7.2 *	13.9 *	8.9	360
Third	4.7 *	70.8 *	15.0 *	6.9 *	2.5	360
Fourth	5.8 *	58.1	28.6 *	3.9 *	3.6	360
Richest	10.3 *	42.5 *	43.3 *	1.1	2.8	360
Total	4.8	59.4	19.1	11.9	4.7	1800

### 7.3.1 Use of sanitary napkins in last year and ever

Nearly one fourth of women who have heard of sanitary napkin and are menstruating had ever used sanitary napkins. Proportion of unmarried reporting to have ever used sanitary napkins is about twice as high as ever users married women. Similarly, proportion of unmarried reporting to have ever used sanitary napkin in both the hills and mountains are significantly high compared to their married counterpart (Table 7.14).

Among those (n=431) who reported having ever used the sanitary napkins, a vast majority (93%) of them used them most recently in the last year, while the remaining ones (7%) had used one to two years ago (Table not shown). (Mean: 3.2 months; Median: 1 ; SD: 4.8; Range: 0-24).

Overall, 22.5% of the women who have heard of sanitary napkin and are menstruation had used sanitary napkins in the last year (Table 7.14). Again, proportion of unmarried reporting to have used sanitary napkins last years are significantly higher compared to their counterpart married, and is true for both the hills and mountain ecological regions. Furthermore, women reporting to have used a sanitary napkin last year in hills are significantly higher than in the mountains (16.6% versus 24.1%) (Table 7.14).

**Table 7.14 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle by pattern of use of sanitary napkin and eco logical regions**

Ever used sanitary pad	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
No	63.8	85.1	80.4	58.7	77.4	73.4	59.8	79.0	74.9
Yes	36.3	14.9	19.6	41.3	22.6	26.6	40.2	21.0	25.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sanitary pad used last year									
No	63.8	89.0	83.4	60.1	80.2	75.9	60.9	82.0	77.5
Yes	36.3	11.0	16.6	39.9	19.8	24.1	39.1	18.0	22.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (n)	80	282	362	288	1065	1353	368	1347	1715

### 7.3.1.1 Source of supply of sanitary napkins

Respondents (n=431) who had ever used sanitary napkins were asked where they obtained them the last time. Approximately, three-fifths of the women obtained them from pharmacies followed by another one-third acquired from general shops. Married women were more likely to acquire them from pharmacies than their unmarried counterparts, who were more likely to acquire them from shops. When asked who acquired the sanitary napkins that they used, a vast majority (94%) of the responses was my-self, followed by other female family members (18%) and husband (13%) (Table 7.15)

**Table 7.15 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle and have used are ever user of sanitary napkins by source of supply, persons acquiring the napkins and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Places from where the sanitary pads used last time was acquired</b>									
Pharmacy	65.5	73.8	70.4	52.1	65.1	60.8	54.7	66.4	62.4
Shop/retail outlet nearby	24.1	19.0	21.1	42.9	32.8	36.1	39.2	30.7	33.6
Cosmetic shop	10.3	7.1	8.5	4.2	2.1	2.8	5.4	2.8	3.7
Other (school)	-	-	-	0.8	-	0.3	0.7	-	0.2
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>
<b>Persons who acquired the sanitary napkins used over time (Multiple answers possible)</b>									
Myself	93.1	97.6	95.8	91.6	93.8	93.1	91.9	94.3	93.5
Other female family member	17.2	14.3	15.5	29.4	13.7	18.9	27.0	13.8	18.3
Husband	-	16.7	9.9	-	20.7	13.9	-	20.1	13.2
Friend	6.9	2.4	4.2	7.6	2.1	3.9	7.4	2.1	3.9
Other male relatives	-	-	-	0.8	-	0.3	0.7	-	0.2
Other (teacher in school)	-	-	-	0.8	-	0.3	0.7	-	0.2
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>

### 7.3.1.2 Type of napkins used

Respondents were asked what type of napkins they used each period and were read a list of four different types. The most frequently (74%) mentioned type of napkin was *extra absorbent* followed by *regular* (22%) and *ultra thin* (9%) respectively (Table 7.16). Among the mountain respondents, regular was mentioned more than extra absorbent.

**Table 7.16 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle and are ever user of sanitary napkins users by type of sanitary napkins used each period and ecological regions**

Type of sanitary napkins used each period (Multiple Response)	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Extra absorbent	51.7	45.2	47.9	82.4	78.0	79.4	76.4	73.1	74.2
Regular	48.3	64.3	57.7	16.0	13.7	14.4	22.3	21.2	21.6
Ultra-thin	6.9	4.8	5.6	10.1	9.5	9.7	9.5	8.8	9.0
Do not know Thick	0.0	0.0	0.0	1.7	6.2	4.7	1.4	5.3	3.9
	-	-	-	1.7	6.2	4.7	1.4	5.3	3.9
Total	29	42	71	119	241	360	148	283	431

Women (n=431) who reported had ever used the sanitary napkins were asked what brand of napkin they used last time. The brand mentioned most often was *Safety* (47%), followed by *Stay free* (21%) and *Whisper* (11%). A small proportion (7%) of the women also reported using *Feme*. About 13% of the women could not recall the brand of napkin they used (Table 7.17). *Safety* was mentioned by a higher proportion of unmarried than married women and by a higher proportion of mountain than hills women.

**Table 7.17 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle and are ever user of sanitary napkins mentioning the brand used during last menstruation by ecological regions**

Brands of sanitary napkins used last time	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Safety	48.3	61.9	56.3	50.4	42.7	45.3	50.0	45.6	47.1
Stay free	24.1	21.4	22.5	21.0	21.2	21.1	21.6	21.2	21.3
Whisper	20.7	11.9	15.5	10.9	10.0	10.3	12.8	10.2	11.1
Feme	3.4	2.4	2.8	8.4	7.5	7.8	7.4	6.7	7.0
Other (salt; softlite; napkin)	-	-	-	-	1.2	0.8	-	1.1	0.7
Do not know; cannot remember	3.4	2.4	2.8	9.2	17.4	14.7	8.1	15.2	12.8
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>

Among 203 respondents who reported using *safety* during last menstruation 61% said that they paid Rs 35-39 for one package of *safety* followed by 31% who paid Rs 50-60. Likewise, among 92 respondents who used *stay free* nearly half (45%) of them said that they paid Rs 35-49 for a package of *stay free* and another 38% paid of Rs 50-60. The average amount they spent for one package of sanitary napkins was Rs 47 for *safety* and Rs 52 for *stay free*. On average, there were about eight pads in one package of both the *safety* and *stay free* (Table 7.18).

**Table 7.18 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle and have used safety and stay-free sanitary napkin brands by amount paid and number of pads of these top two brands (safety and stay free) used**

Description	Safety	Stay free
<b>How much was paid for the one package used last time (Rs)</b>		
35-49	60.6	44.6
50-60	30.5	38.0
61+	3.4	9.8
<b>Mean (SD)</b>	<b>47.0 (8.8)</b>	<b>51.9 (16.6)</b>
<b>Median</b>	<b>45.0</b>	<b>50.0</b>
<b>Range (minimum-maximum)</b>	<b>35-85</b>	<b>40-120</b>
Do not know	5.4	7.6
<b>Total</b>	<b>203</b>	<b>92</b>
<b>How many pads were in the package (pieces)</b>		
6-7	16.3	22.8
8-9	61.6	64.1
10-15	18.2	7.6
<b>Mean (SD)</b>	<b>8.1 (1.2)</b>	<b>7.8 (1.5)</b>
<b>Median</b>	<b>8.0</b>	<b>8.0</b>
<b>Range (minimum-maximum)</b>	<b>6-12</b>	<b>6-15</b>
98= Do not know	3.9	5.4
<b>Total</b>	<b>203</b>	<b>92</b>

### 7.3.1.3 Behavior comparison between the sanitary napkin users and the cloth users

This section compares the behavior of the sanitary napkin users and the cloth users to absorb menstrual flow. There were 431 respondents who reported to use sanitary napkins. They were asked about the average number of sanitary napkins they used during one period. The analysis shows that on average each woman used 5 pads per period (Table 7.19). Approximately one-third reported using 4-5 pads per period followed by 27% using less than 4, 22% using 6-7 pads and 16% using 8 or more pads per period. The information indicates that on an average a woman used just over one pad per day for a normal menstrual period of 4 days. Women in the mountains were more than twice as likely to use 8+ pads per period as women in the hills.

**Table 7.19 Percentage of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle and are ever user of sanitary napkins by number of pads used during a period and ecological regions**

Number of pads used during one period	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<4	13.8	23.8	19.7	23.5	30.7	28.3	21.6	29.7	26.9
4-5	34.5	33.3	33.8	33.6	33.6	33.6	33.8	33.6	33.7
6-7	13.8	14.3	14.1	28.6	20.3	23.1	25.7	19.4	21.6
8-9	31.0	23.8	26.8	12.6	11.2	11.7	16.2	13.1	14.2
10	3.4	4.8	4.2	0.0	0.8	0.6	0.7	1.4	1.2
12	3.4	0.0	1.4	0.8	0.8	0.8	1.4	0.7	0.9
<b>Mean</b>	<b>6.0</b>	<b>5.3</b>	<b>5.6</b>	<b>5.0</b>	<b>4.8</b>	<b>4.9</b>	<b>5.2</b>	<b>4.9</b>	<b>5.0</b>
<b>SD</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>1.9</b>	<b>2.0</b>	<b>1.9</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>
<b>Median</b>	<b>6.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>4.0</b>	<b>5.0</b>	<b>5.0</b>	<b>4.0</b>	<b>5.0</b>
<b>Range</b>	<b>3-12</b>	<b>2-10</b>	<b>2-12</b>						
Do not know	-	-	-	0.8	2.5	1.9	0.7	2.1	1.6
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>

Among 1376 cloth users, on average 3.6 cloths were reported to be used during one period, with 53% (70% in mountains) saying they used three or fewer cloths (which may be washed and reused) during one menstrual period. Similarly, about 2-in-5 reported using 4-5 cloths and about one-tenth mentioned using more than 6 or more different cloths during one period (Table 7.20).

**Table 7.20 Percent distribution of unmarried and currently married women aged 15-49 years who have used cloth napkins last year to absorb menstrual flow by number of cloths used during one period and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Number of different clothes used during one period</b>									
Less than 4	62.3	72.7	70.2	43.2	50.4	48.7	47.2	55.0	53.2
4 -5	33.3	23.2	25.6	45.5	40.0	41.3	42.9	36.5	38.0
6+	4.3	3.2	3.5	11.3	9.6	10.0	9.8	8.3	8.6
Do not know	-	0.9	0.7	-	-	-	-	0.2	0.1
<b>Mean</b>	<b>3.4</b>	<b>3.1</b>	<b>3.1</b>	<b>3.9</b>	<b>3.7</b>	<b>3.8</b>	<b>3.8</b>	<b>3.6</b>	<b>3.6</b>
<b>SD</b>	<b>1.3</b>	<b>1.1</b>	<b>1.2</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>
<b>Median</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>4.0</b>	<b>3.0</b>	<b>4.0</b>	<b>4.0</b>	<b>3.0</b>	<b>3.0</b>
<b>Range</b>	<b>1-8</b>	<b>1-10</b>	<b>1-10</b>	<b>2-10</b>	<b>1-10</b>	<b>1-10</b>	<b>1-10</b>	<b>1-10</b>	<b>1-10</b>
<b>Total</b>	<b>69</b>	<b>220</b>	<b>289</b>	<b>257</b>	<b>830</b>	<b>1087</b>	<b>326</b>	<b>1050</b>	<b>1376</b>

The proportion of women using less than 4 sanitary napkin pads are half of that of the women using less than 4 cloths to absorb their menstruation flow. The analysis leads to the conclusion that women who are using cloths needs less number of pieces of cloths to absorb their menstrual flow compared to the number of sanitary napkin pad required for pad users. For example the proportion of women who are using 5 or less number of pads are 60 % as against 90 % ( $p < .001$ ) of women who reported to require same number of pieces of cloths for a duration of one period. The analysis however is not clear on the size/length of the pieces of cloth used by women to absorb menstrual flow due to data limitation.

A total of 1414 women (n=301 in mountain and 1113 in hills) had ever used sanitary cloth or napkins, 97% of whom said they used cloth napkins in the last one year. The vast majority (83%) of those who used cloth in the last year said that they used were made from old cloth, 10% said cotton cloths, and 7% said sari (Table 7.21). The proportion of the women who reported using old cloth was considerably high in mountain (93%) than in hill (80%) areas and slightly higher among the married compared to unmarried women in both regions.

**Table 7.21 Percent distribution of unmarried and currently married women aged 15-49 years who have used cloth napkins last year to absorb menstrual flow by type of cloth napkins used in the last one year by ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Materials from which pad was made from</b>									
Old cloth	85.5	95.5	93.1	77.0	80.8	79.9	78.8	83.9	82.7
Cotton cloth; soft; clean cloth	4.3	1.4	2.1	16.0	11.2	12.3	13.5	9.1	10.2
Sari	7.2	2.3	3.5	6.2	7.6	7.3	6.4	6.5	6.5
Felatin	1.4	0.5	0.7	0.4	0.1	0.2	0.6	0.2	0.3
Other (new cloth)	1.4	0.5	0.7	0.4	0.2	0.3	0.6	0.3	0.4
<b>Total</b>	<b>69</b>	<b>220</b>	<b>289</b>	<b>257</b>	<b>830</b>	<b>1087</b>	<b>326</b>	<b>1050</b>	<b>1376</b>

Overall, 94% of the women who used cloth napkins in the last year said that they washed the cloth napkins with water and soap, and a small proportion (5%) said they used cold water only. Nearly half of the women who used cloth in the last year said that they washed the cloth napkins at the public tap followed by nearly one-fifth did so in river (18%) and inside toilet at the house (17%). About one-tenth used the tap in their house. The vast majority (96%) of the respondents said that they usually dried the washed napkins in the sun and only 4% dried the napkins inside the home (Table not shown).

All napkin users from both mountain and hills reported that they use panties to keep sanitary napkins in place). On average, sanitary napkin users said they changed sanitary napkins twice a day during a heavy menstrual day. Just over two-thirds (68%) said they changed two times during a heavy day (76% among the unmarried), followed by about one-fifth saying once. A small proportion (6%) of the users reported using the same napkin for more than one day before changing it.

On average, the women said they used one sanitary napkin for seven and half hours (lower among unmarried women and those in mountains). 29% said they used one for 5 to 6 hours and 22% said 7-8 hours. About one-third of users reported using the same napkins for more than eight hours, with 12% reporting they used one napkin for 12 hours or more. (Table 7.22)

**Table 7.22 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle and are ever user of sanitary napkins in the past by frequency of using the sanitary napkins during menstruation and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>How do you keep the sanitary napkins in place?</b>									
Using panties	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cloth belt around the waist	-	-	-	-	-	-	-	-	-
Tuck it to the in skirt Pins	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>
<b>Number times change the sanitary napkins during a heavy day</b>									
1	10.3	31.0	22.5	17.6	22.4	20.8	16.2	23.7	21.1
2	86.2	66.7	74.6	73.9	62.2	66.1	76.4	62.9	67.5
3	3.4	-	1.4	5.9	6.2	6.1	5.4	5.3	5.3
<b>Mean</b>	<b>1.9</b>	<b>1.7</b>	<b>1.8</b>	<b>1.9</b>	<b>1.8</b>	<b>1.8</b>	<b>1.9</b>	<b>1.8</b>	<b>1.8</b>
<b>Median</b>	<b>2.0</b>								
<b>SD</b>	<b>0.4</b>	<b>0.5</b>	<b>0.4</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>
<b>Range</b>	<b>1-3</b>	<b>1-2</b>	<b>1-3</b>						
Use for more than one day before changing	-	2.4	1.4	2.5	9.1	6.9	2.0	8.1	6.0
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>
<b>Number of hours the same sanitary napkin used before changing</b>									
Up to 4 hours	31.0	38.1	35.2	9.2	12.4	11.4	13.5	16.3	15.3
5-6 hours	24.1	23.8	23.9	38.7	25.3	29.7	35.8	25.1	28.8
7-8 hours	20.7	21.4	21.1	26.1	19.5	21.7	25.0	19.8	21.6
9-10 hours	20.7	9.5	14.1	14.3	16.6	15.8	15.5	15.5	15.5
11-12 hours	3.4	-	1.4	4.2	10.0	8.1	4.1	8.5	7.0
More than 12 hours	-	7.1	4.2	7.6	16.2	13.3	6.1	14.8	11.8
<b>Mean</b>	<b>5.9</b>	<b>5.6</b>	<b>5.7</b>	<b>7.2</b>	<b>8.1</b>	<b>7.8</b>	<b>6.9</b>	<b>7.7</b>	<b>7.4</b>
<b>Median</b>	<b>5.5</b>	<b>5.5</b>	<b>5.5</b>	<b>7.5</b>	<b>7.5</b>	<b>7.5</b>	<b>7.5</b>	<b>7.5</b>	<b>7.5</b>
<b>SD</b>	<b>3.1</b>	<b>3.5</b>	<b>3.3</b>	<b>3.0</b>	<b>3.7</b>	<b>3.5</b>	<b>3.0</b>	<b>3.8</b>	<b>3.5</b>
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>

Among cloth users, on average, the women said they changed cloths 2.3 times during a heavy menstrual flow day. Just over half (53%) of the respondents in both regions found to have changed cloth napkins 2 times during a heavy discharging day while another one-fourth did so three times (Table 7.23).

On average, women reported using the same cloth for 6.2 hours before changing. The most frequently reported (32%) duration of using the same cloth napkin was 5-6 hours followed by 7-8 hours (28%), and 24% reported using one napkin less than 5 hours; (4% reported using one napkin for more than 12 hours).

**Table 7.23 Percent distribution of unmarried and currently married women aged 15-49 years who have ever used cloth napkins to absorb menstrual flow by frequency of changing cloth pads during menstruation and ecological regions**

Description	Mountain			Hills			Both		
	Unma rried	Marr ied	Total	Unmar ried	Married	Total	Unma rried	Marr ied	Total
<b>How do you keep the <u>Cloth</u> in place?</b>									
Using panties	97.1	93.1	94.0	100.0	93.6	95.1	99.4	93.5	94.8
Cloth belt around the waist	1.4	6.9	5.6	-	6.4	4.9	0.3	6.5	5.1
3= Tuck it to the in skirt Pins	1.4	-	0.3	-	-	-	0.3	-	0.1
<b>Total</b>	<b>70</b>	<b>231</b>	<b>301</b>	<b>259</b>	<b>854</b>	<b>1113</b>	<b>329</b>	<b>1085</b>	<b>1414</b>
<b>Number times change the cloth during a heavy day</b>									
1	7.1	10.4	9.6	8.9	12.9	11.9	8.5	12.4	11.5
2	51.4	58.0	56.5	51.0	53.0	52.6	51.1	54.1	53.4
3	35.7	26.4	28.6	31.3	25.5	26.9	32.2	25.7	27.2
4	4.3	1.3	2.0	5.4	5.0	5.1	5.2	4.2	4.5
<b>Mean</b>	<b>2.4</b>	<b>2.2</b>	<b>2.2</b>	<b>2.3</b>	<b>2.2</b>	<b>2.3</b>	<b>2.4</b>	<b>2.2</b>	<b>2.3</b>
<b>Median</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>
<b>SD</b>	<b>0.7</b>	<b>0.6</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>
<b>Range</b>	<b>1-4</b>	<b>1-4</b>	<b>1-4</b>	<b>1-4</b>	<b>1-4</b>	<b>1-4</b>	<b>1-4</b>	<b>1-4</b>	<b>1-4</b>
Use for more than one day before changing	1.4	3.9	3.3	3.5	3.5	3.5	3.0	3.6	3.5
<b>Total</b>	<b>70</b>	<b>231</b>	<b>301</b>	<b>259</b>	<b>854</b>	<b>1113</b>	<b>329</b>	<b>1085</b>	<b>1414</b>
<b>Number of hours using the same <u>cloth</u> before changing</b>									
Up to 4 hours	28.6	22.9	24.3	26.3	23.1	23.8	26.7	23.0	23.9
5-6 hours	34.3	28.6	29.9	35.5	30.9	32.0	35.3	30.4	31.5
7-8 hours	27.1	37.7	35.2	23.9	26.6	26.0	24.6	28.9	27.9
9-10 hours	5.7	3.9	4.3	7.7	9.6	9.2	7.3	8.4	8.1
11-12 hours	2.9	2.6	2.7	3.5	5.2	4.8	3.3	4.6	4.3
More than 12 hours	1.4	4.3	3.7	3.1	4.7	4.3	2.7	4.6	4.2
<b>Mean</b>	<b>5.6</b>	<b>6.1</b>	<b>6.0</b>	<b>5.8</b>	<b>6.3</b>	<b>6.2</b>	<b>5.8</b>	<b>6.3</b>	<b>6.2</b>
<b>Median</b>	<b>5.5</b>	<b>5.5</b>	<b>5.5</b>	<b>5.5</b>	<b>5.5</b>	<b>5.5</b>	<b>5.5</b>	<b>5.5</b>	<b>5.5</b>
<b>SD</b>	<b>2.8</b>	<b>2.9</b>	<b>2.9</b>	<b>3.0</b>	<b>3.2</b>	<b>3.1</b>	<b>2.9</b>	<b>3.1</b>	<b>3.1</b>
<b>Total</b>	<b>70</b>	<b>231</b>	<b>301</b>	<b>259</b>	<b>854</b>	<b>1113</b>	<b>329</b>	<b>1085</b>	<b>1414</b>

All women using sanitary napkin pad reported that they use panty to keep sanitary napkin in place. Using panty to keep the sanitary cloth napkins among cloth users was practiced only by 94.8 %. About 5 % of these cloth napkin users said that they use cloth belt around the waist and less than 1 % said that they tuck cloth napkin to in-skirt Pins.

The number of time the sanitary napkin users reporting to change the sanitary pad during a heavy day ranges between 1-4, with majority reporting 2 times (67.5 %). For cloth users, the range is 1-4 times with majority again reporting 2 times (53.4 %). Proportion of women who reported to change the sanitary napkin at least two times during heavy flow is significantly lower (73 %) compared to

the proportion of women reporting to use cloth at least two times a day during heavy flow (85 %) ( $p < .001$ ). The average number of hours the same pad use among sanitary napkin users is 7.4 as against 6.2 hours among cloth users ( $p < .001$ ).

All the respondents said they disposed of the sanitary napkins when they changed to the next one (Table 7.24). Just over half of the respondents (38% in mountains) said they threw the used napkins in the bush, followed by 17% who bury them, 13% who put them with domestic trash, 7% in the toilet, and 3% in the stream.

58% of the respondents (72% in mountains) reported that they wrapped the used napkins in plastic before their disposal. A higher proportion of the respondents in hills (33%) than in mountains (10%) reported not wrapping them in anything.

**Table 7.24 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle and are ever user of sanitary napkins by ways of disposing the used napkins and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>What do you do with the <u>Sanitary Napkins</u> when you change to the next one?</b>									
Dispose of it	100.0	100.0	100.0	95.8	95.9	95.8	96.6	96.5	96.5
Bury	-	-	-	4.2	4.1	4.2	3.4	3.5	3.5
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>
<b>Ways of disposing used sanitary napkin</b>									
Throw in bush	37.9	38.1	38.0	58.0	58.1	58.1	54.1	55.1	54.8
Bury	31.0	21.4	25.4	14.3	16.2	15.6	17.6	17.0	17.2
With domestic trash	17.2	16.7	16.9	10.9	13.3	12.5	12.2	13.8	13.2
In the toilet	-	4.8	2.8	10.9	7.1	8.3	8.8	6.7	7.4
Burn	10.3	9.5	9.9	3.4	2.9	3.1	4.7	3.9	4.2
Stream	3.4	9.5	7.0	2.5	2.5	2.5	2.7	3.5	3.2
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>
<b>What, if anything, do you wrap them in before disposing <u>Sanitary Napkins</u>?</b>									
Paper	17.2	14.3	15.5	5.9	9.1	8.1	8.1	9.9	9.3
Other cloth	-	2.4	1.4	-	0.4	0.3	-	0.7	0.5
Little package they come in	3.4	-	1.4	5.0	3.3	3.9	4.7	2.8	3.5
Plastic	72.4	71.4	71.8	56.3	53.9	54.7	59.5	56.5	57.5
Nothing	6.9	11.9	9.9	32.8	33.2	33.1	27.7	30.0	29.2
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>

Among cloth users, almost all (97%) cloth users said that they washed and reused a cloth when asked what they do with it after they changed to the next one. About half (48%) said they did not dispose of cloth, but re-used it, followed by 28% who said they threw it in the bush, 9% who said they buried it and 7% who said they burned it.

Among those who reported not to re-use the cloth napkins (734) When asked what they wrapped used cloth in before disposing, over half of them (59.7 %) said that they did nothing while one fourth said that they wrapped them in plastic, and another 10% did so by paper (Table 7.25).

All sanitary napkin pad users reported to dispose the napkin pads after use. Among cloth users, 98.6% (96.9 + 1.7) reported to re-use them. Only 1.3 % said that they throw it. Among sanitary napkin uses, 54 % reported to throw the sanitary napkin in the bush after use followed by 17 % reporting to bury it, 13 % reporting to put into domestic trash, 7 % throwing it in the toilet, 4 % reporting to burn and the remaining 3 % reporting to throw in the stream. Among cloth users, 48 %

reported to re-use them followed by 28 % throwing in the bush, 7 % reporting to burn and remaining reporting to throw in the domestic trash, stream and/or toilet.

**Table 7.25 Percent distribution of unmarried and currently married women aged 15-49 years who have ever used cloth napkins to absorb menstrual flow by what they do with the used sanitary napkin cloth and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>What do you do with the <u>Cloth</u> when you change to the next one?</b>									
I wash and re-use it	97.1	98.7	98.3	96.9	96.4	96.5	97.0	96.9	96.9
I wrap it and wash it later	1.4	0.9	1.0	1.5	2.0	1.9	1.5	1.8	1.7
I throw it	1.4	0.4	0.7	1.5	1.5	1.5	1.5	1.3	1.3
Other (burning)	-	-	-	-	0.1	0.1	-	0.1	0.1
<b>Total</b>	<b>70</b>	<b>231</b>	<b>301</b>	<b>259</b>	<b>854</b>	<b>1113</b>	<b>329</b>	<b>1085</b>	<b>1414</b>
<b>How do you dispose of <u>Cloth</u>?</b>									
With domestic trash	1.4	3.9	3.3	2.3	2.0	2.1	2.1	2.4	2.3
Burn	14.3	11.3	12.0	6.6	5.5	5.8	8.2	6.7	7.1
Bury	20.0	15.6	16.6	6.2	7.5	7.2	9.1	9.2	9.2
Throw in bush	10.0	21.6	18.9	28.2	31.4	30.6	24.3	29.3	28.1
Reuse it	50.0	45.0	46.2	49.8	48.2	48.6	49.8	47.6	48.1
<b>Stream</b>	<b>4.3</b>	<b>2.2</b>	<b>2.7</b>	<b>3.5</b>	<b>2.6</b>	<b>2.8</b>	<b>3.6</b>	<b>2.5</b>	<b>2.8</b>
<b>In the toilet</b>	<b>-</b>	<b>0.4</b>	<b>0.3</b>	<b>3.5</b>	<b>2.8</b>	<b>3.0</b>	<b>2.7</b>	<b>2.3</b>	<b>2.4</b>
<b>Total</b>	<b>70</b>	<b>231</b>	<b>301</b>	<b>259</b>	<b>854</b>	<b>1113</b>	<b>329</b>	<b>1085</b>	<b>1414</b>
<b>What, if anything, do you wrap them in before disposing cloth <u>Napkins</u>?</b>									
Paper	22.9	26.0	25.3	8.5	9.3	9.1	11.5	13.0	12.7
Other cloth	0.0	0.8	0.6	3.1	1.1	1.6	2.4	1.1	1.4
Plastic	51.4	45.7	46.9	22.3	19.9	20.5	28.5	25.7	26.3
Nothing	25.7	27.6	27.2	66.2	69.7	68.9	57.6	60.3	59.7
<b>Total</b>	<b>35</b>	<b>127</b>	<b>162</b>	<b>130</b>	<b>442</b>	<b>572</b>	<b>165</b>	<b>569</b>	<b>734</b>

The comparative analysis shows that irrespective of the napkin users or cloth users, majority practice to throw the used napkin or cloth in the bush with higher proportion among napkin users adopting this practice than cloth users. Among sanitary napkin users 58 % reported to wrapping it in a plastic before disposing it followed by 29 % reporting to dispose them without wrapping into anything. Among cloth users who reported to not re-use the cloth, 26 % reported to wrap in a plastic and very high proportion compared to sanitary users (29.2 %), 60 % of the cloth users reported to dispose the sanitary cloth without using anything to wrap them.

**Table 7.26 Percent distribution of unmarried and currently married women aged 15-49 years who have ever used cloth napkins to absorb menstrual flow by number of periods each cloth lasted and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Number of periods each cloth lasted</b>									
1-4	68.6	77.9	75.7	53.3	41.0	43.8	56.5	48.8	50.6
5-6	28.6	13.9	17.3	31.3	34.3	33.6	30.7	30.0	30.1
7+	2.9	8.2	7.0	15.4	24.7	22.6	12.8	21.2	19.2
<b>Mean</b>	<b>3.8</b>	<b>4.0</b>	<b>3.9</b>	<b>4.7</b>	<b>5.3</b>	<b>5.2</b>	<b>4.5</b>	<b>5.0</b>	<b>4.9</b>
<b>Median</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>5.0</b>	<b>5.0</b>	<b>4.0</b>	<b>5.0</b>	<b>4.0</b>
<b>SD</b>	<b>1.3</b>	<b>1.7</b>	<b>1.6</b>	<b>2.2</b>	<b>2.4</b>	<b>2.4</b>	<b>2.1</b>	<b>2.4</b>	<b>2.3</b>
<b>Range</b>	<b>1-7</b>	<b>1-12</b>	<b>1-12</b>	<b>1-15</b>	<b>1-15</b>	<b>1-15</b>	<b>1-15</b>	<b>1-15</b>	<b>1-15</b>
<b>Total</b>	<b>70</b>	<b>231</b>	<b>301</b>	<b>259</b>	<b>854</b>	<b>1113</b>	<b>329</b>	<b>1085</b>	<b>1414</b>

± Other includes: underneath the bead; underneath the staircase; underneath the mat; underneath the bed; cow shed.

On average, those who ever used cloth said that one cloth lasted for about 5 periods – with mountain and unmarried cloth users using for a shorter time than counterparts (3.9 periods for mountain women and 4.5 periods for unmarried women). Approximately half of the cloth ever-users (56% of unmarried said that each cloth lasted for 4 or fewer periods. Nearly one-third used each cloth for 5-6 periods and another one-fifth used for seven or more periods (Table 7.26).

Respondents were also asked where they usually keep the sanitary napkins between periods. In response, 56 % in mountains and 35 % in hills reported to keep sanitary napkins with other cloths. This is followed by plastic bag (23 % in mountain and 32 % in hills. Overall, nearly 40% of the respondents reported keeping sanitary napkins with their clothes, followed by about 31% who mentioned plastic bags. About 15% of the respondents said they usually keep in cupboard and another 15% said in the roof, bathroom, bed, or other (Table 7.27).

**Table 7.27 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle and are ever user of sanitary napkins by place of storing sanitary napkins between periods, and ecological regions**

place of where they usually keep the sanitary napkins between periods	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
With clothes	58.6	54.8	56.3	37.0	35.3	35.8	41.2	38.2	39.2
Insert it in the roof	0.0	2.4	1.4	2.5	3.3	3.1	2.0	3.2	2.8
Bathroom	0.0	0.0	0.0	0.8	2.1	1.7	0.7	1.8	1.4
Plastic bag; bag	17.2	26.2	22.5	32.8	32.4	32.5	29.7	31.4	30.9
Cupboard; on the cupboard	6.9	9.5	8.5	16.0	17.0	16.7	14.2	15.9	15.3
Box; carton box	17.2	4.8	9.9	5.0	3.7	4.2	7.4	3.9	5.1
In room; in room inside cloth	0.0	0.0	0.0	4.2	4.6	4.4	3.4	3.9	3.7
Other (underneath the bead; underneath the staircase)	0.0	2.4	1.4	1.7	1.7	1.7	1.4	1.8	1.6
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>

Among cloth users, users, 61% of the women said that they keep the cloth pads in between the period with other clothes followed by another one-fifth reported keeping them in a plastic bag/plastic (higher among unmarried women and those in hills than their counterparts), and 10% insert it in the roof.

**Table 7.28 Percent distribution of unmarried and currently married women aged 15-49 years who have ever used cloth napkins to absorb menstrual flow by place of storing cloth pads between periods and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Place where the cloth is kept in between periods</b>									
With clothes	65.7	74.0	72.1	56.8	59.0	58.5	58.7	62.2	61.4
Plastic bag; bag	17.1	14.7	15.3	26.6	19.2	20.9	24.6	18.2	19.7
Insert it in the roof	4.3	4.8	4.7	7.7	11.7	10.8	7.0	10.2	9.5
Cupboard; on the cupboard	2.9	2.6	2.7	2.3	2.7	2.6	2.4	2.7	2.6
In room; in room inside cloth	1.4	0.4	0.7	3.1	2.6	2.7	2.7	2.1	2.3
Box; carton box	7.1	1.7	3.0	1.2	1.4	1.3	2.4	1.5	1.7
Bathroom	-	0.4	0.3	-	0.6	0.4	-	0.6	0.4
Other±	1.4	1.3	1.3	2.3	2.8	2.7	2.1	2.5	2.4
<b>Total</b>	<b>70</b>	<b>231</b>	<b>301</b>	<b>259</b>	<b>854</b>	<b>1113</b>	<b>329</b>	<b>1085</b>	<b>1414</b>

± Other includes: underneath the bead; underneath the staircase; underneath the mat; underneath the bed; cow shed.

Among sanitary napkin users and the cloth users, both the married and unmarried women as well as those in the hills and mountains have similar pattern of practice of storing sanitary napkins and the cloth used for absorbing menstrual flow. However, those who reported to use cloths are more likely to store the cloth they used for absorbing menstrual flow with their other cloths (61 %) than women who reported to store sanitary napkins along with other cloths (39.2). In contrast, sanitary napkin users who said to use plastic bag to store sanitary napkins is almost twice (31%) larger than the cloth napkin users who said to use plastic bag to store cloth napkin (19 %).

Respondents (n=431) who ever used sanitary napkins were asked about the number of times they had infections or rashes when using the sanitary napkins last year. Majority respondents (93% unmarried and 83% married) reported not experiencing any kind of infection during that period while less than 5% of the women with slightly a higher percentage of unmarried (5%) than married (3%) had experienced infections or rashes. Among those who reported to have experienced infections or rashes (n=16), 40 percent reported to have experienced 1-2, times, 25 % reported to have experienced 3-5 times and the remaining 35 % reported to experienced 6 to 9 times. About 10% said that they could not recall. No further analysis on this was possible due to small number of cases (Table not shown).

However, nearly one-tenth of the cloth users reported experiencing infections or rashes from the use of cloth napkins which is more than twice as high as using sanitary napkins. The proportion of those reporting to experience infections or rashes 1-2 times in last year among sanitary napkin users and the cloth users are same (40 %). However, those who reported to experienced 3-5 infections or rashes among cloth users is almost twice high (51 %) compared to women with same number of infections or rashes among sanitary napkin users (25 %).

The average number of infections or rashes experienced by cloth users is 3.18 (mean), (Median:3.0; SD:1.8) compared to the average number of infections or rashes experienced by the sanitary napkin users (mean: 3.25; median 2.5, SD 2.3). However this comparison should be treated with cautions as the number of those who experienced infections or rashes among sanitary napkin users is very small (16) (Table not shown)

All respondents who ever used napkins and cloths were asked what they thought were positive and negative things about sanitary napkins and cloths. The results are presented in Table 7.29 and (7.30).

Over 4-in-5 respondents in both regions mentioned at least three positive things about using sanitary napkins. The most frequently cited positive aspects were: comfort (75%), better absorption of the discharge (61%), and not soiling clothes (50%). Other aspects mentioned by 20% or more included: No need to clean it (35%), Easy to use/handle (29%), No itching (26%), and More hygienic (20%).

The positive aspects reported by the sanitary napkins are compared with the negative aspects reported by the cloth users (Table 7.29). The negative aspects of using cloth as reported by users were: the nuisance of cleaning (i.e. washing and drying – 83%) followed by possibility of others seeing their cloths during washing and drying (68%). 28% of respondents stated that cloths were not hygienic, 23% worried that they might drop if not well-fastened, 18% said it was hard to go out when wearing cloths, 12% that they were hard to use, and 9% mentioned absorbs less.

**Table 7.29 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle, ever user of sanitary napkins by their opinion regarding the positive and negative aspects of sanitary napkins and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Perceived positive things about using sanitary napkins (Multiple Response)</b>									
Better absorption	65.5	64.3	64.8	60.5	60.2	60.3	61.5	60.8	61.0
Comfort	79.3	88.1	84.5	74.8	71.4	72.5	75.7	73.9	74.5
Do not soil clothes	24.1	21.4	22.5	54.6	56.4	55.8	48.6	51.2	50.3
No need to clean it	27.6	19.0	22.5	42.9	35.3	37.8	39.9	32.9	35.3
Easy to use/handle	31.0	33.3	32.4	26.1	29.9	28.6	27.0	30.4	29.2
No itching	17.2	16.7	16.9	25.2	29.0	27.8	23.6	27.2	26.0
More hygienic	6.9	21.4	15.5	18.5	21.6	20.6	16.2	21.6	19.7
Can go anywhere	6.9	14.3	11.3	10.9	19.5	16.7	10.1	18.7	15.8
No discharge	17.2	26.2	22.5	14.3	12.0	12.8	14.9	14.1	14.4
I feel cleaner	6.9	11.9	9.9	8.4	10.8	10.0	8.1	11.0	10.0
Easier to keep people from knowing you have your period	6.9	9.5	8.5	3.4	6.2	5.3	4.1	6.7	5.8
Lack of access to water	10.3	9.5	9.9	5.0	2.9	3.6	6.1	3.9	4.6
Fear of health problem	-	-	-	5.9	2.1	3.3	4.7	1.8	2.8
I feel modern	-	-	-	3.4	0.8	1.7	2.7	0.7	1.4
Other±	-	-	-	-	0.8	0.6	-	0.7	0.5
<b>Mention at least 3 positive things</b>	<b>72.4</b>	<b>92.9</b>	<b>84.5</b>	<b>84.9</b>	<b>82.2</b>	<b>83.1</b>	<b>82.4</b>	<b>83.7</b>	<b>83.3</b>
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>
<b>Perceived negative things about using cloths (Multiple Response)</b>									
Need to clean it (wash/dry)	94.3	95.2	95.0	78.4	79.9	79.5	81.8	83.1	82.8
People can see when your cloths are drying	78.6	75.8	76.4	64.9	65.7	65.5	67.8	67.8	67.8
Not hygienic	35.7	34.6	34.9	23.9	26.6	26.0	26.4	28.3	27.9
Can drop when not well fastened	24.3	28.1	27.2	22.0	21.3	21.5	22.5	22.8	22.7
Hard to go out/do things	27.1	22.1	23.3	17.8	16.7	17.0	19.8	17.9	18.3
Harder to use/handle	12.9	11.7	12.0	13.1	11.6	11.9	13.1	11.6	12.0
Absorbs less	8.6	9.1	9.0	11.2	9.0	9.5	10.6	9.0	9.4
Less comfort	5.7	10.4	9.3	9.3	5.6	6.5	8.5	6.6	7.1
Fear of health problem	2.9	0.9	1.3	2.3	1.8	1.9	2.4	1.6	1.8
Need more knowledge about menstrual hygiene	1.4	1.7	1.7	3.1	1.1	1.5	2.7	1.2	1.6
Other (irritation by cloth; itching)	1.4	0.4	0.7	0.8	0.8	0.8	0.9	0.7	0.8
<b>Mention at least 3 negative things</b>	<b>67.1</b>	<b>66.2</b>	<b>66.4</b>	<b>51.0</b>	<b>48.9</b>	<b>49.4</b>	<b>54.4</b>	<b>52.6</b>	<b>53.0</b>
Do not know	-	-	-	8.5	10.9	10.3	6.7	8.6	8.1
<b>Total</b>	<b>70</b>	<b>231</b>	<b>301</b>	<b>259</b>	<b>854</b>	<b>1113</b>	<b>329</b>	<b>1085</b>	<b>1414</b>

± Other includes: can be used urgently; easy to walk.

The most often-mentioned positive aspects about cloth pads among users were: they do not cost money or were economical to use (71%), followed by another half who said it was both their usual practice to use cloths and that cloths keep clothes from getting soiled. About 30% said cloths provided comfort and absorption. Other positive things mentioned by more than 10% were no itching (12%) and no discharge (10%). More than 3-in-5 respondents mentioned three or more positive aspects cloth pad.

As earlier, the positive aspects reported by the cloth users are compared with the negative aspects reported by the sanitary napkin users (Table 7.30). The most frequently cited negative aspects were of the napkins were cost (78%), unavailability (49%) and problem of disposing (46%). Nearly 3-in-10 women mentioned at least three negative things about using sanitary napkins.

**Table 7.30 Percent distribution of unmarried and currently married women aged 15-49 years who have ever used cloth napkins to absorb menstrual flow by opinion regarding the positive/Negative aspects about using cloth and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Perceived positive things about using cloth (Multiple Response)</b>									
It does not cost money/ economical	71.4	79.7	77.7	73.7	68.4	69.6	73.3	70.8	71.4
Using from the beginning	50.0	64.9	61.5	47.9	50.8	50.1	48.3	53.8	52.5
Do not soil clothes	41.4	33.8	35.5	54.1	53.6	53.7	51.4	49.4	49.9
Q757b18r:Comfort	47.1	49.4	48.8	22.4	28.2	26.9	27.7	32.7	31.5
Better absorption	40.0	29.4	31.9	27.4	26.3	26.6	30.1	27.0	27.7
No discharge	12.9	8.7	9.6	9.3	10.8	10.4	10.0	10.3	10.3
No itching	2.9	5.2	4.7	12.7	14.5	14.1	10.6	12.5	12.1
Feel cleaner	5.7	3.0	3.7	10.4	6.4	7.4	9.4	5.7	6.6
Lack of knowledge how to use other products	8.6	7.4	7.6	5.0	7.8	7.2	5.8	7.7	7.3
Sanitary pads not available	8.6	10.0	9.6	6.2	3.2	3.9	6.7	4.6	5.1
Can be reused	1.4	-	0.3	2.3	1.3	1.5	2.1	1.0	1.3
Too embarrassed to buy napkins	-	-	-	1.5	1.3	1.3	1.2	1.0	1.1
Fear of health problem	-	0.4	0.3	1.5	0.6	0.8	1.2	0.6	0.7
Other (blood cannot be seen; no one can know)	-	-	-	0.8	0.2	0.4	0.6	0.2	0.3
<b>Mention at least 3 positive things</b>	<b>71.4</b>	<b>72.3</b>	<b>72.1</b>	<b>60.6</b>	<b>57.1</b>	<b>58.0</b>	<b>62.9</b>	<b>60.4</b>	<b>61.0</b>
<b>Total</b>	<b>70</b>	<b>231</b>	<b>301</b>	<b>259</b>	<b>854</b>	<b>1113</b>	<b>329</b>	<b>1085</b>	<b>1414</b>
<b>Perceived negative things about using sanitary napkins (Multiple Response)</b>									
Expensive	82.8	81.0	81.7	76.5	76.8	76.7	77.7	77.4	77.5
Not available	72.4	81.0	77.5	45.4	43.2	43.9	50.7	48.8	49.4
Have to throw all out/bury/burn	34.5	42.9	39.4	46.2	46.9	46.7	43.9	46.3	45.5
Need more knowledge about menstrual hygiene	24.1	14.3	18.3	5.9	7.9	7.2	9.5	8.8	9.0
Too embarrassed to buy	-	7.1	4.2	2.5	5.8	4.7	2.0	6.0	4.6
Lack of knowledge how to use	3.4	7.1	5.6	4.2	3.7	3.9	4.1	4.2	4.2
Causes itching/rashes	-	-	-	5.0	3.7	4.2	4.1	3.2	3.5
Less absorbent	3.4	2.4	2.8	6.7	1.7	3.3	6.1	1.8	3.2
Cannot be reused	-	-	-	3.4	2.5	2.8	2.7	2.1	2.3
Less cleaner	-	-	-	1.7	1.2	1.4	1.4	1.1	1.2
Fear of health problem	-	4.8	2.8	1.7	0.4	0.8	1.4	1.1	1.2
<b>Mentioned at least 3 negative things</b>	<b>31.0</b>	<b>40.5</b>	<b>36.6</b>	<b>30.3</b>	<b>26.6</b>	<b>27.8</b>	<b>30.4</b>	<b>28.6</b>	<b>29.2</b>
Nothing	-	-	-	-	1.7	1.1	-	1.4	0.9
Do not know	3.4	-	1.4	8.4	9.5	9.2	7.4	8.1	7.9
<b>Total</b>	<b>29</b>	<b>42</b>	<b>71</b>	<b>119</b>	<b>241</b>	<b>360</b>	<b>148</b>	<b>283</b>	<b>431</b>

Respondents (n=344) who had ever used both the sanitary napkins and cloths in the past were asked about when they prefer to use sanitary napkins and when use cloth. Almost all (97% of) the unmarried and married women said that they would prefer to use napkins while going out followed by about three-fifths said that they would prefer to use them while walking (Table 7.31). A sizeable proportion of the respondents also reported preferring to use napkins during sickness (30%), functions or events (27%) and while working (21%).

**Table 7.31 Percent distribution of unmarried and currently married women aged 15-49 years who had ever used both the sanitary napkins and cloths, by condition when they would prefer to use sanitary napkins during menstruation, and ecological regions**

Condition when prefer to use sanitary napkins (Multiple Response)	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Going out			96.5	98.9	95.8	96.9	98.3	96.0	96.8
Walking			86.0	57.9	54.2	55.4	64.1	58.6	60.5
During sickness			12.3	34.7	32.8	33.4	29.9	30.0	29.9
Functions/events			19.3	34.7	24.5	27.9	34.2	22.5	26.5
Working			28.1	16.8	20.3	19.2	17.1	22.5	20.6
Sleeping			3.5	6.3	9.4	8.4	6.8	7.9	7.6
Rainy season			5.3	6.3	5.2	5.6	5.1	5.7	5.5
Other±			-	-	1.0	0.7	-	0.9	0.6
<b>Total</b>	<b>NA</b>	<b>NA</b>	<b>57</b>	<b>95</b>	<b>192</b>	<b>287</b>	<b>117</b>	<b>125</b>	<b>344</b>

± Other includes: less blood flow; before marriage.

\*\* Mountain disaggregated data are not shown because of small numbers in mountain.

Those respondents (n=344) who reported having used both sanitary napkins and cloth pads were also asked when they preferred to use cloth over the sanitary napkins. Over 3-in-5 respondents mentioned that they were likely to use cloth when they were at home (68%) and when they did not have enough money to buy sanitary napkins (61%, 83% in mountains), followed by when there was no one available to get pads (31%); when pads was not available in the shops (30%), when sleeping (23%) and when bleeding is not heavy (20%) (Table 7.32).

**Table 7.32 Percent distribution of unmarried and currently married women aged 15-49 years who had ever used both the sanitary napkins and cloths by condition when they would prefer to use cloth napkins during menstruation and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Situation when prefer to use <u>cloth</u> (Multiple Response)</b>									
While at home	54.5	65.7	61.4	68.4	70.3	69.7	65.8	69.6	68.3
When not enough money	77.3	85.7	82.5	63.2	53.6	56.8	65.8	58.6	61.0
No one to get the pad	50.0	40.0	43.9	28.4	28.6	28.6	32.5	30.4	31.1
Pad is not available in the shop	45.5	40.0	42.1	27.4	27.1	27.2	30.8	29.1	29.7
While sleeping	18.2	14.3	15.8	20.0	27.1	24.7	19.7	25.1	23.3
When slight bleeding	9.1	5.7	7.0	23.2	22.4	22.6	20.5	19.8	20.1
When I am out	9.1	11.4	10.5	7.4	8.3	8.0	7.7	8.8	8.4
Other±	-	-	-	-	2.1	1.4	-	1.8	1.2
<b>Total</b>	<b>22</b>	<b>35</b>	<b>57</b>	<b>95</b>	<b>192</b>	<b>287</b>	<b>117</b>	<b>227</b>	<b>344</b>

± Other includes: when there is not time to bring the pad; more blood flow; after marriage.

Among those who use both sanitary napkin and cloths, 96 % reported to prefer to use sanitary napkin while going out and 68 % reported to prefer to use cloth when at home. Similarly 7 % reported to prefer to use sanitary napkin while sleeping as against 23 percent who said they prefer to use cloth while sleeping. The women also prefer to use sanitary napkin while they are working, when they are sick and when they are attending any function or events.

Eighty seven of the 431 women who had ever used sanitary napkins said they ONLY used sanitary napkins and never cloths. The main reasons they gave for this were: comfort (69%) followed by no need to clean it (68%) and easy to use or handle (58%). Approximately two-fifths of these women also reported that they use sanitary napkins only because they absorbed the discharge better, were more hygienic and they could go anywhere wearing them (Table 7.33). Another 23% mentioned they feel cleaner.

**Table 7.33 Percent distribution of unmarried and currently married women aged 15-49 years who had used only sanitary napkins by reasons for using sanitary napkins rather than cloths during menstruation**

Reasons for using sanitary napkins only, rather than cloths (Multiple Response)	Unmarried	Married	Total
No need to clean it	58.1	73.2	67.8
Easy to use/handle	64.5	53.6	57.5
Comfort	83.9	60.7	69.0
Absorbs better	45.2	37.5	40.2
Can go anywhere	41.9	37.5	39.1
More hygienic	41.9	37.5	39.1
I feel cleaner	16.1	26.8	23.0
People can see your cloths drying	3.2	5.4	4.6
Fear of health problem	-	5.4	3.4
I feel modern	3.2	1.8	2.3
Lack of access to water	-	1.8	1.1
<b>Total</b>	<b>31</b>	<b>56</b>	<b>87</b>

A great majority (88%) of the women (n=1070) who used only cloths during menstrual periods said they used only cloth because: they've used cloths since their first period, followed by 76% (93% in mountains) who stated cloth to be economical or no cost. A quarter of these respondents (33% in mountains) said they used cloth because of comfort and another one-fifth (11% in mountains) said they didn't know about other things to do (Table 7.34).

**Table 7.34 Percent distribution of unmarried and currently married women aged 15-49 years who had used only cloth napkins to absorb menstrual flow by reasons for preferring the use of cloth rather than sanitary napkins during menstruation and ecological regions**

Description	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
<b>Reasons for using cloths only instead of sanitary pads</b>									
Using from the beginning	83.3	84.7	84.4	84.1	89.4	88.4	84.0	88.3	87.5
It does not cost money/ economical	91.7	92.9	92.6	65.9	73.0	71.5	71.7	77.5	76.4
Comfort	43.8	30.6	33.2	20.1	21.6	21.3	25.5	23.7	24.0
Lack of knowledge how to use other products	12.5	11.2	11.5	28.7	22.2	23.5	25.0	19.7	20.7
Absorbs better	12.5	14.3	13.9	7.9	7.3	7.4	9.0	8.9	8.9
Feel cleaner	12.5	5.1	6.6	7.9	8.3	8.2	9.0	7.6	7.9
Sanitary pads not available	18.8	9.7	11.5	11.0	5.9	6.9	12.7	6.8	7.9
Too embarrassed to buy napkins	2.1	1.5	1.6	2.4	2.3	2.3	2.4	2.1	2.1
Better for the environment	-	5.1	4.1	-	1.1	0.8	-	2.0	1.6
Family/beliefs does not allow to use pads	-	-	-	0.6	0.3	0.4	0.5	0.2	0.3
Fear of health problem	-	0.5	0.4	-	0.3	0.2	-	0.3	0.3
Can be reused	-	-	-	0.6	0.3	0.4	0.5	0.2	0.3
Other§	-	-	-	0.6	1.2	1.1	0.5	0.9	0.8
Do not know	-	-	-	-	0.2	0.1	-	0.1	0.1
<b>Total</b>	<b>48</b>	<b>196</b>	<b>244</b>	<b>164</b>	<b>662</b>	<b>826</b>	<b>212</b>	<b>858</b>	<b>1070</b>

§ Other includes: it is common to use cloth; no money when needed.

Table 7.35 compares the reasons for using sanitary napkin reported by those who use only sanitary napkin versus reason for using cloths by those who only use cloth to absolve menstruation flow. The responses are ranked according to the proportion of response where highest proportion is ranked 1 and lowest proportion is ranked 11/12.

**Table 7.35 Reasons (in order of preference) quoted by women aged 15-49 years for preferring the use of sanitary napkin to cloth and sanitary napkins to manage their menstruation**

Rank	Reasons for using only sanitary napkins	Reasons for using only cloth
1	No need to clean it	Using from the beginning
2	Easy to use/handle	It does not cost money/ economical
3	Comfort	Comfort
4	Absorbs better	Lack of knowledge how to use other products
5	Can go anywhere	Absorbs better
6	More hygienic	Feel cleaner
7	I feel cleaner	Sanitary pads not available
8	People can see your cloths drying	Too embarrassed to buy napkins
9	Fear of health problem	Better for the environment
10	I feel modern	Family/beliefs does not allow to use pads
11	Lack of access to water	Fear of health problem
12		Can be reused

### 7.3.1.4 Reasons for never using sanitary napkins

There were 1070 women who had never used sanitary napkins during menstruation. When asked their reasons for never using the napkins, the main responses were: lack of knowledge about it (57%), not customary to use such napkins (54%) and unavailability nearby (31%). Only 12% mentioned cost and 9% mentioned difficulty disposing of them. The proportion of respondents who did not use because of lack of knowledge was notably higher in mountain (69%) than in hills (54%) while those mentioning uncustomary was higher in hills (59%) than in mountains (37%). By marital status, more married women than the unmarried ones said they never used napkins because of ignorance of its existence (Table 7.36).

**Table 7.36 Percent distribution of unmarried and currently married women aged 15-49 years who had used only cloth napkins to absorb menstrual flow by reasons for never using sanitary napkins during menstruation and ecological regions**

Reasons for never using sanitary napkins (Multiple Response)	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Do not know about it	52.1	73.0	68.9	45.7	55.6	53.6	47.2	59.6	57.1
Not customary	60.4	31.6	37.3	60.4	59.2	59.4	60.4	52.9	54.4
Not available nearby	62.5	31.6	37.7	38.4	26.6	28.9	43.9	27.7	30.9
Expensive	18.8	10.7	12.3	17.7	10.9	12.2	17.9	10.8	12.2
Problem of disposing	12.5	11.7	11.9	12.2	7.6	8.5	12.3	8.5	9.3
Embarrassing to get it from shop	-	1.0	0.8	1.8	1.8	1.8	1.4	1.6	1.6
Other±	2.1	0.5	0.5	1.8	2.7	2.5	1.9	2.2	2.1
<b>Total</b>	<b>48</b>	<b>196</b>	<b>244</b>	<b>164</b>	<b>662</b>	<b>826</b>	<b>212</b>	<b>858</b>	<b>1070</b>

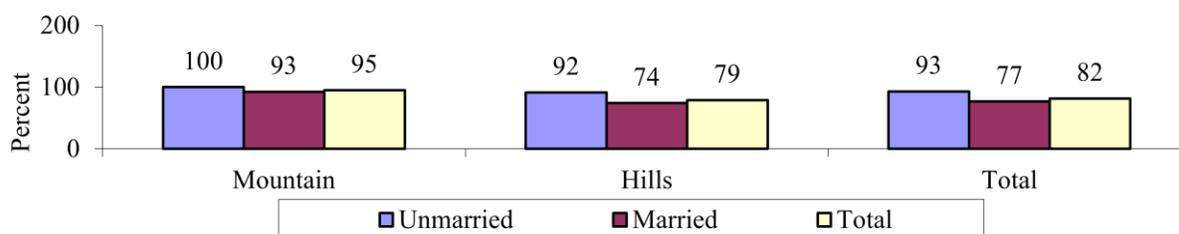
± Other includes: does not seem good; more blood flow; fear of falling down; no need; did not like to use; cause itching.

### 7.3.2 Future use intention and willingness to pay

Respondents (n=887)<sup>10</sup> who reported having heard about the sanitary napkins were asked if they would use or continue to use sanitary napkins in the future. Over 4-in-5 respondents - with a significantly higher proportion (p<.001) of unmarried (93%) than married ones (77%) - expressed their intention to use napkins in the future. Similarly, significantly more women in mountains (95%) than in the hills (79%) expressed their future intention to use sanitary napkins (p<.001), (Figure 7.3).

<sup>10</sup> Women not using any thing (10) and not menstruating or menopausal (28) are excluded in this analysis.

**Figure 7.2 Percentage of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle by their intention to use them in the future and ecological regions**



Number of cases:

Marital status	Mountain	hills	Total
Never married/single	51	211	262
Currently married	93	532	625
Total	144	743	887

Women (n=725) who said they intended to use sanitary napkins in the future were further asked if they would be willing to buy one pack of 8 sanitary napkins (type was not specified) at a price of Rs 40. All respondents in the mountains and nearly all (99%) in the hills said yes.

**Table 7.37 Percent distribution of unmarried and currently married women aged 15-49 years who are aware of sanitary napkins and are in menstruation cycle and intend to use sanitary napkins in future by maximum price they would be willing to pay for a packet of 8 sanitary napkins and ecological regions**

Description	Mountain			Hills			Both		
	Unma rried	Marri ed	Total	Unma rried	Marri ed	Total	Unma rried	Marri ed	Total
<b>Would you buy one pack of 8 sanitary napkins at a price of RS 40?</b>									
Yes	100.0	100.0	100.0	99.0	98.7	98.8	99.2	99.0	99.0
No	-	-	-	0.5	0.5	0.5	0.4	0.4	0.4
Do not know	-	-	-	0.5	0.8	0.7	0.4	0.6	0.4
<b>Total</b>	<b>51</b>	<b>86</b>	<b>137</b>	<b>193</b>	<b>395</b>	<b>588</b>	<b>244</b>	<b>481</b>	<b>725</b>
<b>The maximum price that they would be willing to pay for one pack of 8 sanitary napkins (in NRs)</b>									
< 45	0.0	1.2	0.7	3.6	1.3	2.0	2.9	1.2	1.8
45	11.8	12.8	12.4	11.9	9.9	10.5	11.9	10.4	10.9
46-50	49.0	44.2	46.0	40.9	42.8	42.2	42.6	43.0	42.9
51-60	23.5	20.9	21.9	23.3	23.5	23.5	23.4	23.1	23.2
61-70	3.9	5.8	5.1	2.6	3.5	3.2	2.9	4.0	3.6
71-80	7.8	9.3	8.8	8.8	6.1	7.0	8.6	6.7	7.3
81 +	3.9	5.8	5.1	4.1	5.6	5.1	4.1	5.6	5.1
DK	0.0	0.0	0.0	4.7	7.3	6.5	3.7	6.0	5.2
Mean	56.9	57.7	57.4	56.7	57.7	57.3	56.7	57.7	57.4
Median	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
SD	15.2	14.3	14.6	15.2	16.0	15.8	15.2	15.7	15.5
Range	45-130	42-100	42-130	20-150	20-150	20-150	20-150	20-150	20-150
Do not know	-	-	-	4.7	7.3	6.5	3.7	6.0	5.2
Total	51	86	137	193	395	588	244	481	725
<b>What would you do if the price of one pack of 8 sanitary napkin will be higher than the maximum price you are willing to pay?</b>									
Continue to buy	98.0	98.8	98.5	89.6	89.9	89.8	91.4	91.5	91.4
Look for other cheaper brand	2.0	1.2	1.5	6.2	5.8	6.0	5.3	5.0	5.1
Not buy (any brand of) the product	-	-	-	2.1	1.8	1.9	1.6	1.5	1.5
Do not know	-	-	-	2.1	2.5	2.4	1.6	2.1	1.9
Total	51	86	137	193	395	588	244	481	725

Respondents were then asked the maximum price they would be willing to pay for one pack of 8 sanitary napkins. On average, the women were willing to pay the maximum amount of Rs 57 for one packet of 8 sanitary napkins. The results are presented in Table 7.37. More than half of the respondents said they would pay Rs 45-50 followed by about two-fifths who said more than 50 rupees. Only a small proportion (<2%) of the respondents indicated that they would only buy if the price was less than Rs 45.

To the question "what would you do if the price of one pack of 8 sanitary napkins will be higher than the maximum price you are willing to pay?" 90% of the respondents, with a higher percentage in mountain (98%), reported that they would continue to buy the napkins. Only a small proportion of respondents said that they would look for another product (5%) or not buy any brand (2%) if the price was higher (Table 7.37).

#### 7.4 Attitudes towards the use of napkins and cloth

60% did not answer or did not remember any beliefs (taboos) they'd heard regarding menstrual cloths. The belief most mentioned was that the cloth pads should not be seen by men (31%, 48% in mountains). Other beliefs, mentioned by 6% or less, were that animals or insects should not climb on it (6%, 12% in mountains) and that birds should not fly over the cloths (2%), (Table 7.38).

**Table 7.38 Percent distribution of unmarried and currently married women aged 15-49 years who have started mensuration by beliefs regarding menstrual cloths and ecological regions**

Description	Mountain			Hills			Both		
	Unm arried	Mar ried	Total	Unm arried	Mar ried	Total	Unm arried	Mar ried	Total
<b>Beliefs about menstrual cloths that were heard</b>									
Men should not see it	48.8	48.2	48.3	22.9	26.2	25.5	28.5	31.0	30.5
Animals/insects should not climb on it	10.0	12.1	11.7	5.2	3.6	3.9	6.3	5.4	5.6
Birds should not fly over the cloth	-	2.0	1.6	1.7	2.6	2.4	1.4	2.4	2.2
Other±				2.1	1.6	1.7	1.6	1.2	1.3
Do not know/ not remember	41.3	37.7	38.4	68.1	66.1	66.5	62.2	59.9	60.4
<b>Total</b>	<b>80</b>	<b>305</b>	<b>385</b>	<b>288</b>	<b>1095</b>	<b>1383</b>	<b>368</b>	<b>1400</b>	<b>1768</b>

± Other includes: other may harms to the body; should not dry indiscriminately; evil spirit will affect; Shall not be shown to anybody; shall not dry showing to other; menses will be disrupted if seen by witch; disruption in menses if the cloth is seen by others.

In order to get a sense of the respondents' attitudes towards sanitary napkins those who were aware of napkins were read specific kinds of activities to determine whether the women thought it would be easier to do them while wearing the sanitary napkins. No was scored -1 and yes was scored +1. Five of the seven activities had positive values ranging from +0.4 to +0.6 indicating that more respondents agreed they would be easier to do with sanitary napkins. The score for sleeping in the same bed with husband or family member was +.155, indicating a minor overall agreement. The score for "playing sports" was very close to 0, indicating that as many people said yes as said no (Table 7.39).

**Table 7.39 Percent distribution of unmarried and currently married women aged 15-49 years aware of sanitary napkins by mean scores as whether they thought it would be easier to do certain activities if wearing sanitary napkins and ecological regions**

Attitudinal statements	Mountain			Hills			Both		
	Unmarried	Married	Total	Unmarried	Married	Total	Unmarried	Married	Total
Sleeping in the same bed with husband or family member	-0.157	0.088	0.007	0.190	0.184	0.185	0.122	0.169	0.155
Visiting the neighbors	0.784	0.716	0.739	0.649	0.552	0.579	0.676	0.578	0.606
Staying outside the house	0.824	0.775	0.791	0.540	0.503	0.513	0.595	0.546	0.560
Walking	0.745	0.716	0.726	0.621	0.552	0.571	0.645	0.578	0.597
Working	0.784	0.696	0.726	0.502	0.477	0.484	0.557	0.512	0.525
Going to school/college	0.392	0.128	0.216	0.474	0.356	0.389	0.458	0.320	0.360
Playing sports	-0.235	-0.265	-0.255	0.033	0.009	0.016	-0.019	-0.034	-0.030
<b>Total</b>	<b>51</b>	<b>102</b>	<b>153</b>	<b>211</b>	<b>545</b>	<b>756</b>	<b>262</b>	<b>647</b>	<b>909</b>

(+1 =Yes and -1 = No)

A series of 15 statements on menstruation, sanitary napkins and cloth pads were read out to the respondents to solicit their agreement or disagreement on them. To determine the status of attitude a numerical value was assigned to each level of response such as +1 for agreement, 0 for neutral/do not know, and -1 for disagreement. The results are presented in Table 7.40.

In general, the respondents' attitude towards menstruation and sanitary napkins was found to be favorable, except that most believe that they are expensive.

With regard to the statements on menstruation, the average value for four positive indices ranged from +0.6 to +0.8, which are as follows:

- I expect extra consideration from my friends and family when I am menstruating (+0.82)
- I cannot expect as much of myself during menstruation compared to the rest of the month (+0.70)
- Avoiding certain activities during menstruation is often very wise (+0.56)
- Menstruation should not affect your daily life (+0.62).

The values for I feel as fit during menstruation as I do during any other time of the month was -0.7, indicating most people believe that they don't feel as fit. The average score of -0.1 for it is better to stay home when menstruating, so people do not know indicates that slightly more disagreed that it was better to stay at home than agreed.

For the statements about sanitary napkins, more people agreed than disagreed (+0.5) that they are expensive. For the other four statements positive towards sanitary napkins (namely *sanitary napkins are better for your health than cloths, using sanitary napkins allows you to do more things during menstruation, sanitary napkins are expensive and I would use sanitary napkins if made available nearby*) the average values ranged from +0.3 to +0.5, indicating overall higher agreement than disagreement with these statements.

Similarly, the value for two negative statements, namely *never married women should not wear sanitary napkins* and *it is embarrassing to have to go buy sanitary napkins* was -0.52 and -0.42 respectively, indicating that on average more people disagreed with these statements..

Regarding the use of cloth pads, people generally agreed that washing and drying cloths takes a lot of effort (+0.5) as well as strongly agreeing that using cloth is still the best option (+0.8).

**Table 7.40 Per cent distribution of unmarried and currently married women aged 15-49 years who have started mensuration by opinion regarding various statements with respect to menstruation and sanitary napkins and ecological regions**

Attitudinal statements	Mountain			Hills			Both		
	Unma rried	Marr ied	Total	Unma rried	Marr ied	Total	Unma rried	Marr ied	Total
<b>On menstruation</b>									
I expect extra consideration from my friends and family when I am menstruating	0.825	0.892	0.878	0.826	0.802	0.807	0.826	0.821	0.822
I cannot expect as much of myself during menstruation compared to the rest of the month	0.563	0.554	0.556	0.726	0.742	0.738	0.690	0.701	0.699
Menstruation should not affect your daily life	0.600	0.689	0.670	0.729	0.574	0.606	0.701	0.599	0.620
Avoiding certain activities during menstruation is often very wise	0.438	0.554	0.530	0.476	0.586	0.563	0.467	0.579	0.556
I feel as fit during menstruation as I do during any other time of the month	-	-	-	-	-	-	-	-	-
It is better to stay home when menstruating, so people do not know	0.288	0.121	0.156	0.229	0.019	0.063	0.242	0.041	0.083
<b>On sanitary napkins</b>									
Sanitary napkins are better for your health than cloths	0.600	0.351	0.403	0.635	0.437	0.479	0.628	0.419	0.462
Using sanitary napkins allows you to do more things during menstruation	0.463	0.289	0.325	0.545	0.343	0.385	0.527	0.331	0.372
I would use sanitary napkins if made available near by	0.788	0.495	0.556	0.642	0.296	0.368	0.674	0.339	0.409
Sanitary napkins are less likely to leak than cloths	0.600	0.449	0.481	0.528	0.325	0.367	0.544	0.352	0.392
Sanitary napkins are expensive	0.625	0.436	0.475	0.590	0.427	0.461	0.598	0.429	0.464
It is embarrassing to have to go buy sanitary napkins	0.563	0.298	0.353	0.587	0.400	0.439	0.582	0.378	0.420
Never married women should not wear sanitary napkins	0.663	0.393	0.449	0.708	0.498	0.542	0.698	0.475	0.522
<b>On cloth pad</b>									
Washing and drying cloths takes a lot of effort	0.538	0.515	0.520	0.576	0.512	0.526	0.568	0.513	0.524
Using cloth is still the best option	0.788	0.898	0.875	0.743	0.781	0.773	0.753	0.806	0.795
<b>Total</b>	<b>80</b>	<b>305</b>	<b>385</b>	<b>288</b>	<b>1095</b>	<b>1383</b>	<b>368</b>	<b>1400</b>	<b>1768</b>

## 7.5 Summary of Findings: Menstrual Hygiene and Use of Napkins

### 7.5.1 Menstruation demographics, behaviors and beliefs

Among the 1400 married women and 368 unmarried women who had had periods, 14.5 years was the mean and 14 was the median age for first menstruation, as was the mode (35% of respondents). A substantial proportion (18%) of the women reported that their first menstruation occurred at age 16 or over.

The majority (58%) of the respondents in both the mountains and hills told their mothers when they first started menstruating. Some told their sisters or other female relatives, and school friends for unmarried women and twelve percent said they told no one when they first started. Similarly, 56% learned about menstruation from their mothers and some others from sister or other female relatives, with unmarried saying school friends rather than other female relatives.

On average, the women reported their periods last 4.2 days, with 82% saying between 2 and 4 days and 14% saying 6-7 days. The median duration of periods was 4 days.

The most frequent response (63%) mentioned about benefits of periods were to confirm that the woman is not currently pregnant, followed by being able to avoid sexual intercourse (34% - these

first two were higher among married women), not having to work (26%), and being taken care of (16%). Another 16% (22% of unmarried women) said there were no benefits to having their period.

The two highest responses mentioned for negative things about periods were physical - stomach pain (61%) and tiredness (54%). Just over one-third said they were embarrassed that others would know they had their period, and 28% said each: someone might see/having to deal with pads and that blood might show. Women in the mountains were more likely than those in the hills to mention all of the above five reasons. Other significant mentions were related to social isolation, such as hard to go out (22%), not able to do things they normally do (21%) and restrictions to visit temples (19%). 15% mentioned the possibility of getting blood on the bed and 13% the need to sleep somewhere else. Only 7% did not mention anything negative.

Overall, 2-in-3 women reported wearing panties all the time (96% among unmarried) with 16% saying they wore panties only during menstruation and 14% (19% in mountains) saying they never wore panties.

55% of all women (72% in mountains) who had menstruated said that using old cloths was the best way to absorb menstrual flow. 26% (only 17% in the mountains) said sanitary pads was the best way (this answer was higher among unmarried women than married from both regions - 31%-44% vs. 13%-24%), 9% said new cloth pieces were the best way to absorb menstrual flow and 6% said they did not know.

Further analysis shows that 84% of those who used both sanitary napkins and cloths during menstruation thought that sanitary napkins are better absorbing menstrual flow. As expected almost all (97.7 %) who use only napkins think napkins are best and almost all who use only cloths (90.7%) believe that cloths are best..

## **7.5.2 Awareness of sanitary napkins**

### **7.5.2.1 Awareness of product and exposure to messages in the last 6 months**

Overall, half (51%) of the women reported having heard of sanitary napkins. This was significantly higher among unmarried and those residing in hills than among married and mountain women, respectively ( $p < .001$ ).

Among those aware of sanitary napkins, nearly three-fifths (58%, 68% among unmarried women, 52% in the mountains) reported having heard or seen some message or information from any source on napkins in the last 6 months. The main sources of information were friends or relatives (68%, 83% in mountains) followed by radio (37%, 26% in mountains), television (36%, 11% in mountains) and neighbors (23%).

The most frequently heard or seen a message mentioned was that the napkins (pads) were for using during menses (36%, 16% in mountains), followed by “*it is perfect*” (29%, 63% in mountains) and “*have happy period*” (20%, 36% in mountains). Other messages mentioned by more than 10% of the women were: *always Safety, always wealthy* (12%, 30% in mountains) and *Ab bakt hai bdalne ka* i.e. now is the time to change thinking (11%, 1% in mountains).

The slogan “have happy period” is associated with Whisper brand, “always Safety, always wealthy” is associated with Safety brand and “Ab bakt hai bdalne ka” is associated with Stayfree brand.

### **7.5.2.2 Brand awareness, opinions and source of supply**

Overall, 51% of those respondents aware of sanitary napkins (61% of unmarried and 57% in mountains) were able to spontaneously recall at least one brand name of sanitary napkins. After probing, the percentage of women reporting at least one brand increased to 64% (73% among unmarried and in mountains). The most frequently cited brand names were *Safety* (30% spontaneously and 44% after probing), *Stayfree* (24% spontaneously and 29% after probing) and *Whisper* (18% spontaneously and 23% after probing), followed by Feme at 9% total awareness. Safety and Whisper had higher brand awareness, both unaided and aided, in the mountains, whereas Stayfree was the same in hills and mountains (aided plus unaided) and Feme was mentioned more often in the hills.

Overall, 29% (n=267) of the respondents aware of napkins were able to mention two or more brands of sanitary napkins. These women were further asked about their opinion regarding the best brand. *Safety* received the most votes (36%) followed by *Stayfree* (30%) and *Whisper* (22%).

When asked why they considered each of the specific brands best, the top reasons given by 80% or more for each brand were “easy to use” and “more absorbent”.

Overall, more than 95% of the respondents aware of sanitary napkins mentioned at least one source of supply, with pharmacies being the source mentioned most (87%), followed by shops (44%, only 7% in mountains), private hospitals/clinics (24%, 55% in mountains), government hospitals (12%) and health posts (11%)

### **7.5.3 Sanitary napkins usage**

#### **7.5.3.1 What use for menstruation**

Over three-fifths (62%, 67% in mountains) of menstruating respondents reported to currently use cloth only, 5% mentioned disposable sanitary napkins only and approximately one-fifth of the women reported to use both (i.e., sanitary napkin as well as cloth).

A total of 40% of unmarried respondents used sanitary napkins compared to 21% of married ones, and 26% of those in the hills used napkins (alone or in combination with cloths) compared to 20% in mountains. A notable proportion (13%, only 2% among unmarried women) of the respondents said they did not use anything.

Overall, 23% of the women who had heard of sanitary napkins used them in the last year and nearly one fourth had ever used sanitary napkins. 93% of those reporting ever having used sanitary napkins did so in the last year. Unmarried (40.2%) women were significantly more likely to have ever used sanitary napkins than their married counterparts (21.0%  $p < .001$ ), as well as in the last year (39 % versus 16.0 %). Among who used cloth, 97% of at some point said they used cloth napkins in the last one year. 83% said they were made from old cloth (93% in mountains), 10% said cotton cloths, and 7% said sari.

Women in hills were significantly more likely to use both sanitary pad and cloths than in the mountains. Among non-users, increased age is found to be positively associated with non-use of anything to absorb menstrual flow. Among sanitary napkin users, women with increasing age are likely to decrease the use of sanitary napkin.

Increased education leading to increase use of sanitary pad and decrease use of cloth is clearly evident in the analysis. No difference in the use of sanitary napkin is observed by religion, caste-ethnicity and migration status of the women. Hill Janajati and hill Dalit were more likely to use cloth than Brahmins/Chhetri and Newar. Similarly, migrants were significantly more likely to use

cloth than non-migrants. Increased number of types of media leading to increased use of sanitary napkins and decrease use in cloth to absorb menstrual flow was also found in the study. Use of sanitary napkin increased with the increase in the quintile groups from poor to reach while this pattern was reverse in the case of use of cloth napkin.

#### **7.5.4 Source of supply, types, brands and price of napkins used**

Approximately, three-fifths of the women who used sanitary napkins last obtained them from pharmacies, followed by another one-third who acquired them from general shops. Married women were more likely to acquire them from pharmacies than their unmarried counterparts, who were more likely to acquire them from shops. 94% said that they themselves acquired the napkins, with 18% saying other female family members and 13% saying husband acquired napkins for them.

When read four different types of napkins and asked what type they used each period, the most frequently (74%) mentioned type was *extra absorbent* followed by *regular* (22%) and *ultra thin* (9%). Among the mountain respondents, *regular* was mentioned more than *extra absorbent*.

The most frequently mentioned brand used last time was *Safety* (47%, 56% in mountains), followed by *Stay free* (21%) and *Whisper* (11%). A small proportion (7%) of the women also reported using *Feme*. About 13% of the women could not recall the brand of napkin they used.

The average price paid the last time for one package of sanitary napkins was Rs 47 for *Safety* and Rs 52 for *Stayfree*. On average, there were about eight pads in one package of both the *Safety* and *Stayfree*.

#### **7.5.5 Quantity of napkins used, how long used and infections when using**

On average each woman reported using 5 pads per period, or just over one pad per day – given 4 days as the mean length of a period. Among cloth users, on average 3.6 cloths were reported to be used during one period, with 53% (70% in mountains) saying they used three or fewer cloths (which may be washed and reused) during one menstrual period.

On average, those who ever used cloth said that one cloth lasted for about 5 periods – with mountain and unmarried cloth users saying a shorter time (3.9 periods for mountain women and 4.5 periods for unmarried women).

Women in the mountains were more than twice as likely to use 8+ pads per period as women in the hills. In contrast, among cloth users women in hills are three times more likely to use 6+ cloths than those in the mountains. The overall analysis, however, leads to the conclusion that women who are using cloths needs less number of pieces of cloths to absorb their menstrual flow compared to the number of pad required for pad users.

All women using sanitary napkin reported that they use panty to keep sanitary napkin in place as against 95% of cloth users reporting to use panty for this purpose. The remaining among cloth users said that they use cloth belt around the waist or tuck it to the in skirt Pins.

On average, both sanitary napkin users as well as cloth users said they changed sanitary napkins twice a day during a heavy day. However, those who change sanitary napkin at least two times during heavy flow is significantly lower (73%) compared to those who change cloth napkin at least two times a day during heavy flow (85%). The average number of hours the same pad use among sanitary napkin users is 7.4 as against 6.2 hours among cloth users using the same cloth ( $p < .001$ ).

A proportion (6%) of napkin users reporting using the same napkin for more than one day before changing is almost two times greater than (3.5%) cloth users.

- Among sanitary napkin users, on average, the women said they used one sanitary napkin for seven and half hours, with 29% saying 5 to 6 hours and 22% saying for 7-8 hours. About one-third of users reported using the same napkin for more than eight hours, 12% reporting they used one napkin for 12 hours or more. By region, women in mountains reported using sanitary napkins for an average of 2 hours less than those of hills and unmarried use them for slightly less time than married ones.
- Among cloth users, on average, women reported using the same cloth for 6.2 hours before changing. The most frequently reported (32%) duration of using the same cloth napkin was 5-6 hours followed by 7-8 hours (28%), and 24% reported using one napkin less than 5 hours; (4% reported using one napkin for more than 12 hours.

Nearly one-tenth of the respondents reported experiencing infections or rashes from the use of cloth pads, more than twice as high a percentage as that of sanitary napkin users (under 5%).

Most of those who had infections said it was 1 to 2 times. The median infections or rashes experienced by cloth users is 3.0 with the standard deviation of 1.8 compared to the 2.5 median infections or rashes experienced by the sanitary napkin users with the standard deviation of 2.5.

### **7.5.6 Disposal and storage of sanitary napkins**

All the respondents said they disposed of the sanitary napkins when they changed to the next one, with just over half of the respondents (38% in mountains) throwing the used napkins in the bush, followed by 17% who bury them, 13% who put them with domestic trash, 7% in the toilet and 3% in the stream. Among cloth users, 94% of those who used cloth napkins in the last year said that they washed the cloth napkins with water and soap.

Nearly half said that they washed the cloth napkins at the public tap followed by nearly one-fifth in river (18%) and inside the toilet at their house (17%), and 10% at the tap in their house. Almost all (96%) of the respondents said that they usually dried the washed napkins in the sun.

- The comparative analysis shows that irrespective of the napkin users or cloth users, majority practice to throw the used napkin or cloth in the bush with higher proportion among napkin users adopting this practice than cloth users. Among sanitary napkin users 58 % reported to wrapping it in a plastic before disposing it followed by 29 % reporting to dispose them without wrapping into anything. Among cloth users who reported to not re-use the cloth, 26 % reported to wrap in a plastic and very high proportion compared to sanitary users (29.2 %), 60 % of the cloth users reported to dispose the sanitary cloth without using anything to wrap them.
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Overall, nearly 40% of the respondents reported keeping sanitary napkins with other clothes, followed by about 31% who mentioned keeping them in plastic bags. About 15% said they usually keep them in a cupboard, and 15% mentioned somewhere else including roof, bathroom, bed, etc.

Among cloth users, users, 61% said that they keep the cloth napkin with other clothes followed by another one-fifth reported keeping them in a plastic bag/plastic (higher among unmarried women and those in hills than their counterparts), and 10% insert it in the roof.

Cloths users are more likely to store the cloth napkins with their other cloths (61%) than women who reported to store sanitary napkins along with other cloths (40 %). In contrast, use of plastic bag to store sanitary napkins among napkins users is almost twice (31%) larger than using plastic bag to store cloth among cloth users for absorbing menstrual flow (19 %).

### **7.5.7 Attitudes toward sanitary napkins**

Over 4-in-5 napkin users (only and those who also use cloths) in both regions mentioned at least three positive things about using sanitary napkins, with the three most frequently cited being: comfort (75%), better absorption (61%), and not soiling clothes (50%). Other aspects mentioned by 20% or more included: No need to clean it (35%), Easy to use/handle (29%), No itching (26%), and More hygienic (20%).

Nearly 3-in-10 sanitary napkin users mentioned at least three negative things about using sanitary napkins, with three most frequently cited negative aspects being: cost (78%), unavailability (49%) and having to throw/bury/burn them (46%).

Almost all (97%) the unmarried and married women who use both cloth and sanitary napkins said that they would prefer to use napkins while going out followed by about three-fifths who said that they would prefer to sanitary napkins while walking. A sizeable proportion of the respondents also reported preferring to use napkins during sickness (30%), functions or events (27%) and while working (21%).

Among those women who only use sanitary napkins the main reasons given for this were: comfort (69%), followed by no need to clean it (68%) and easy to use or handle (58%). Approximately two-fifths of the women reported that they use only sanitary napkins because they absorbed better, were more hygienic and they could go anywhere wearing them. Another 23% mentioned they feel cleaner when wearing napkins.

All those who were aware of sanitary napkins were read specific kinds of activities and asked whether they thought it would be easier to do them while wearing the sanitary napkins. Responses for six of the seven (sleeping in same bed with husband or family member, visiting the neighbors, staying outside the house, walking, working, and going to school/college) were more likely to be yes than no. Respondents were evenly divided about “playing sports”.

#### **7.5.7.1 Reasons for never using sanitary napkins**

The main reasons given for never using sanitary napkins (by the 1070 women who had never used them) were: lack of knowledge about it (57%, 69% in mountains, 47% among unmarried), not customary to use such napkins (54%, 37% in mountains, 60% among unmarried) and unavailability nearby (31%, 38% mountains and 44% unmarried). Only 12% mentioned cost and 9% mentioned difficulty disposing of them.

#### **7.5.7.2 Reasons for using only cloth**

The reasons given for only using cloth (by the 1070 women who had never used them) were (in order the first one reported by majority and the last one by few respondents): using from the beginning, It does not cost money/ economical, comfort, lack of knowledge how to use other products, absorbs better, feel cleaner, sanitary pads not available, too embarrassed to buy napkins,

better for the environment, family/beliefs does not allow to use pads, fear of health problem and can be reused,

### **7.5.8 Future use intention and willingness to pay for sanitary napkins**

82% of respondents aware of sanitary napkins (93% of unmarried and 95% in the mountains) said yes, when asked if they intend to use napkins in the future.

Nearly all (99%+) who said they intended to (continue to) use sanitary napkins in the future said they would be willing to buy one pack of 8 regular sanitary napkins at a price of Rs 40. On average, the women gave their maximum price as Rs 57 for one packet of 8 sanitary napkins (type unspecified), with more than half of saying that they would pay Rs 45-50 followed by about two-fifths who said more than 50 rupees. Only a small proportion (<2%) of the respondents indicated that they would only buy if the price was less than Rs 45.

### **7.5.9 Use of cloths: including quantity used, how long use a cloth and infections when using**

#### **7.5.9.1 Attitudes towards cloth napkins**

The great majority (71%) of the women who currently use cloth mentioned that cloths do not cost money or were economical to use, followed by another half saying both it was usual practice to use cloths and that cloths keep clothes from getting soiled. About 30% said cloths provided comfort and better absorption. Other positive things about cloth mentioned by more than 10% were no itching (12%) and no discharge (10%). More than 3-in-5 respondents mentioned three or more positive aspects of cloth pads.

The negative aspects of using cloths as reported by a vast majority (83%) of users was the nuisance of cleaning (such as washing and drying) followed by possibility of others seeing their cloths during washing and drying (68%). 28% of respondents stated that cloths were not hygienic, 23% that it might drop if not well-fastened, 18% said it was hard to go out/do things when wearing cloths, 12% that they were hard to use, 9% mentioned cloths absorb less and 7% said less comfort.

Over 3-in-5 of the respondents (n=344) who reported using both sanitary napkins and cloth pads said that they preferred to use cloth when they were at home (68%) and when they did not have enough money to buy sanitary napkins (61%, 83% in mountains), followed by when there was no one available to get pads (31%), pads were not available in the shops (30%), when sleeping (23%) and when bleeding is slight (20%).

A great majority (88%) of women who use only cloths said the sole use of cloths was because they've used cloths since their first period, followed by 76% (93% in mountains) who stated they were economical or no cost. A quarter of respondents (33% in mountains) said they only used cloth because of comfort and another one-fifth (11% in mountains) said they didn't know about other things to do.

### **7.5.10 Attitudes towards menstruation and the use of napkins and cloth**

60% did not answer or did not remember any beliefs (taboos) they'd heard regarding menstrual cloths. The belief most mentioned was that the cloth pads should not be seen by men (31%, 48% in mountains). Other beliefs, mentioned by 6% or less, were that animals or insects should not climb on cloths (6%, 12% in mountains) and that birds should not fly over the cloths (2%).

A series of 15 statements on menstruation, sanitary napkins cloth pads were read to all respondents (who have menstruated) to solicit their agreement or disagreement on them.

Overall, women don't feel as well, don't expect as much from themselves and expect extra consideration from others during menstruation. However, most also agreed that menstruation should not affect your daily life and slightly more than half disagreed that women should stay at home when menstruating.

In general, the respondents' attitudes towards sanitary napkins were favorable, except that most agreed with the statement that they are expensive. The positive attitudes included higher agreement than disagreement with the following statements: *sanitary napkins are better for your health than cloths*, *using sanitary napkins allows you to do more things during menstruation*, and *I would use sanitary napkins if made available nearby*.

Regarding the use of cloth pads, people generally agreed that washing and drying cloths takes a lot of effort as well as strongly agreeing that using cloths is still the best option.

## **7.6 Conclusions**

### **7.6.1 Potential market for product and environmental concern**

There appears to be a market for a socially-marketed napkin brand in remote areas, as there is low current usage.

- Low current usage of sanitary napkins in these areas.
- There was a very high stated intention to (continue to) use sanitary napkins in the future among unmarried aware of napkins 93%; lower for married 77%.
- 98% of these intenders said they would pay Rs 40 and 93% said they would pay Rs 45 or more when asked their maximum price. This is in the range of the average price (Rs 47) recalled for Safety, the market leader in these areas.

However, disposal of a high volume of sanitary napkins could present an ecological issue, with over 1/3 of current users in these areas saying they throw them in the bush.

### **7.6.2 Menstruation overview**

The majority of respondents started menstruating by age 14, with over 80% by age 16. The periods, on average, last for 4 days. Periods are not generally appreciated by women

- The main negatives of periods – physical symptoms: stomach pain and tiredness, followed by possible embarrassment of others knowing and (perceived) need for social isolation.
- Some feel they can't do things they normally do.
- 17% said there was nothing positive about periods.

However, there are some benefits perceived to having one's period:

- Knowing she's not pregnant and avoiding sex - mostly among married women
- Not having to work and being taken care of - higher among unmarried women

Mothers are the key information provider about menstruation as well as the main confidante when it first arrives. Sisters were next most mentioned. The third highest mention for married women was another female relative and for unmarried women was a school friend.

### 7.6.3 Awareness and Use of Sanitary Napkins

The current sanitary napkin market in these areas is fairly small, with low awareness, brand awareness, and limited places to acquire them

- Only half were aware of sanitary napkins – higher (two-thirds) among unmarried (younger, more educated); lower in mountains (40%)
  - The main source of information about sanitary napkins in last 6 months was friends and/or relatives (68%)
  - Brand recall is low, even when respondents were read brand names. Safety and Stayfree were top recalled brands and considered the best
  - Pharmacies and shops were the main place mentioned to acquire sanitary napkins as well as the main sources of supply the sanitary napkins used last time
- The main competition for a new product is cloth napkins.
  - Over half (62%) of respondents currently use cloth only.
  - 25% (40% among unmarried, but only 20% among mountain respondents) use sanitary napkins (20% use both cloth and napkins and 5% only use napkins)

Understanding current usage can help direct marketing strategy.

- Extra absorbent pads are used by 75% of users. 22% use regular.
- Users use average of 5 pads per period, with 38% using 6 or more. 14 % use 8-9 and 1 % use 10 or more per period. .
- Pads are changed every 7.4 hours on average, but more frequently for those users in mountains (5.7 hours) and for unmarried women (6.9 hours).
- Safety was the brand most used last time with a mean price of Rs 47 paid last time for 8 pads per pack, followed by Stayfree with mean price paid last time Rs 52 for 8/pack.

### 7.6.4 Attitudes toward sanitary napkins

There are distinct comparative advantages of sanitary napkins, even among cloth users. In the table below, the items in red are those that are different for each product.

In summary, the comparative advantages for napkins over cloths include:

- Comfort
- Functionality: better absorption/ less likely to leak
- Ease of use/ no need to clean
- More hygienic/feel cleaner/healthier
- Good for going out and being active (doing things that you normally do, but not during the period).

The comparative disadvantages for napkins compared to cloth include:

- COST, even among users (though the benefits outweigh this negative since they do use them)
- Unavailability

- Don't know about them/used to using cloths/cloth are best

**Table 7.41 Comparative advantages of sanitary napkins and cloths as cited by women aged 15-49 years**

Measure	Sanitary napkins	Cloths
Positive aspects Among users	Comfort Better Absorption Don't soil clothes No need to clean Easy to use No itching More hygienic Can go anywhere	Economical What have been doing/habit Don't soil clothes Comfort Better Absorption
Negative aspects Among users	Expensive Not available Have to throw out	Need to clean People can see when cleaning Not hygienic Can drop /slip Hard to go out/do things
When use, among those who use both methods	Going out Walking Functions Sickness Working (ACTIVE/NORMAL)	At home Not enough money When pad not available When no one to get pad While sleeping Slight bleeding (WHEN CAN BE BY SELF/NAPKIN NOT AFFORDABLE/AVAILABLE)
Reason using instead of other, among those who only use this method	No need to clean Comfort Easy to use/handle Absorbs better Can go anywhere More hygienic I feel cleaner	Economical What have been doing Lack of knowledge of other Comfort
What easier to do with sanitary napkins, those aware of napkins	Visiting neighbors Staying outside of house Walking Working Going to school/college	N/A
Overall attitudes, among total sample	Better for health than cloths Can do more things Less likely to leak than cloths Expensive Would use if available nearby	Washing/drying takes a lot of effort Cloth is still the best option

## 7.7 Recommendations

### 7.7.1 Objective

To expand the sanitary napkin markets in these areas by introducing and making widely available a socially-marketed product, at a competitive price.

4. It's important to focus on expanding the market, rather than focusing on brand predominance, since the market is not large and established in these more remote areas.
5. The product should be mainly positioned against cloth.
6. However, it's important that the product have a benefit that other brands do not
7. It will also be crucial to have sufficient promotional support to reach people with low media access in order to break into the market.

### **7.7.2 Target groups and objectives by target**

- Younger, unmarried, more literate women
  - Current napkin users who also use cloth: switch completely to napkins
  - 12-13 year-olds who have not started menstruating: start with napkins, stay with napkins
  - Women about to be married or just married who use cloths: now is a good time to switch; associate new status (marriage) with using new product (napkins)
- Married women, older, less literate
  - Those who currently use both napkins and cloth: use napkins more often
  - Married women who don't use napkins: try it and see how you like it
- Mothers and mothers-in-law of young unmarried, affianced, or recently married women: it's best for your daughter/daughter-in-law (and for you!)
- NOTE: It's important to focus on either the younger unmarried market or older married market when developing the sanitary napkin product and initial marketing strategy. Trying to reach both at the beginning, using a compromise/hybrid product, positioning and communication strategy, may lead to reaching neither. The younger, unmarried market may be smaller, but those in this market will be easier to reach and more likely to use this new product.

### **7.7.3 Suggested Initial Product offer**

- Start with one size, the super absorbent – this size covers 75% of current market, probably because those who use both cloths and napkins use cloths for light days. A “lighter days” line extension could be introduced in the future, if a need is determined.
- Brand name:
  - A Nepali brand name would make the product more accessible and different from others
  - If it's decided NOT to have a “regular” item in the future, the brand name could refer to “super” or “max”.
- 8 napkins per pack seem sufficient for most people's periods and familiar to users.
- Price the social marketing product somewhat below Safety brand to have lowest price point re major brands in geographic area
- The product needs to be equal or better in quality (absorbency and ease of use) than Safety.
- Produce the product to degrade easily biologically and provide suggestions as to how to dispose.

### **7.7.4 How to promote/generate sales – outlets and activities**

- Introduce first in hills where it's easier/cheaper to get distribution, there is higher radio and TV coverage, and more population in hills than in the mountains. Also current sanitary napkin usage is higher than in mountains. Then expand to mountains after product is established in hills; the product's reputation and word of mouth will help expansion, after it has been established.

- Sales Outlets
  - Put more emphasis on shops, since more shops exist than pharmacies.
  - Developing new Non Traditional Outlets will be crucial to distribution, especially in the mountains. Focus on options such as women’s groups, schools, hair salons, and other places young women congregate.

### **7.7.5 What to promote/positioning**

- Focus on comparative advantages to cloth, such as the following features/benefits:
  - Comfort
  - No worry: better absorption/ less likely to leak
  - Simple: Ease of use/ no need to clean (especially when you’re tired and in pain)
  - Feel better: More hygienic/feel cleaner/healthier
  - Freedom: Good for going out and being active (with napkins you can do things that you normally do, but don’t do/feel like doing during your period)
- Develop a brand name that communicates a key emotional benefit
- Some specific ideas to consider for overall position and brand name
  - Feeling of being special during period. A great majority of women do not feel as fit during menstruation, say they can’t expect as much of themselves and do expect extra consideration during that time. Consider brand name and positioning related to pampering/relaxing/special?
  - Secret: No one will know when you have your period, since you can do whatever you want to and no one will know.
  - Confidence: using this brand napkin can increase your confidence. Can help you have a more normal life during your period. Brand name and creative can be based on “Confidence/be confident/ confidential” (again, secret). This option is somewhat of a combination of the above two.
  - Trusted friend: creative campaign about telling friends and female family members, sharing the new brand with friends/family. The product is a trusted friend, so your friends should trust you and it also. This also ties in with the fact that the highest mention of awareness of messages in last six months is from family and friends. The brand name should reflect this element of trusted friend. In addition, the overall strategy could be to expand product trial and usage by word of mouth as a main promotional channel.
  - Mother and daughter together: Involve mother and daughter in creative elements, sharing confidences, with moms caring/concerned about the best for their daughter’s future. Based on fact that moms are main introducers of menstruation and most women tell their moms when they first get their period.
  - Methods: Demonstrations of absorbency (with water – how much do they hold compared to cloth) especially for non napkin users. Motivate cloth users to try it and see why it’s better.

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