

# **Knowledge, Attitude, and Practice regarding Pap Smear Test among Women in Ward no. 14, Dharan.**

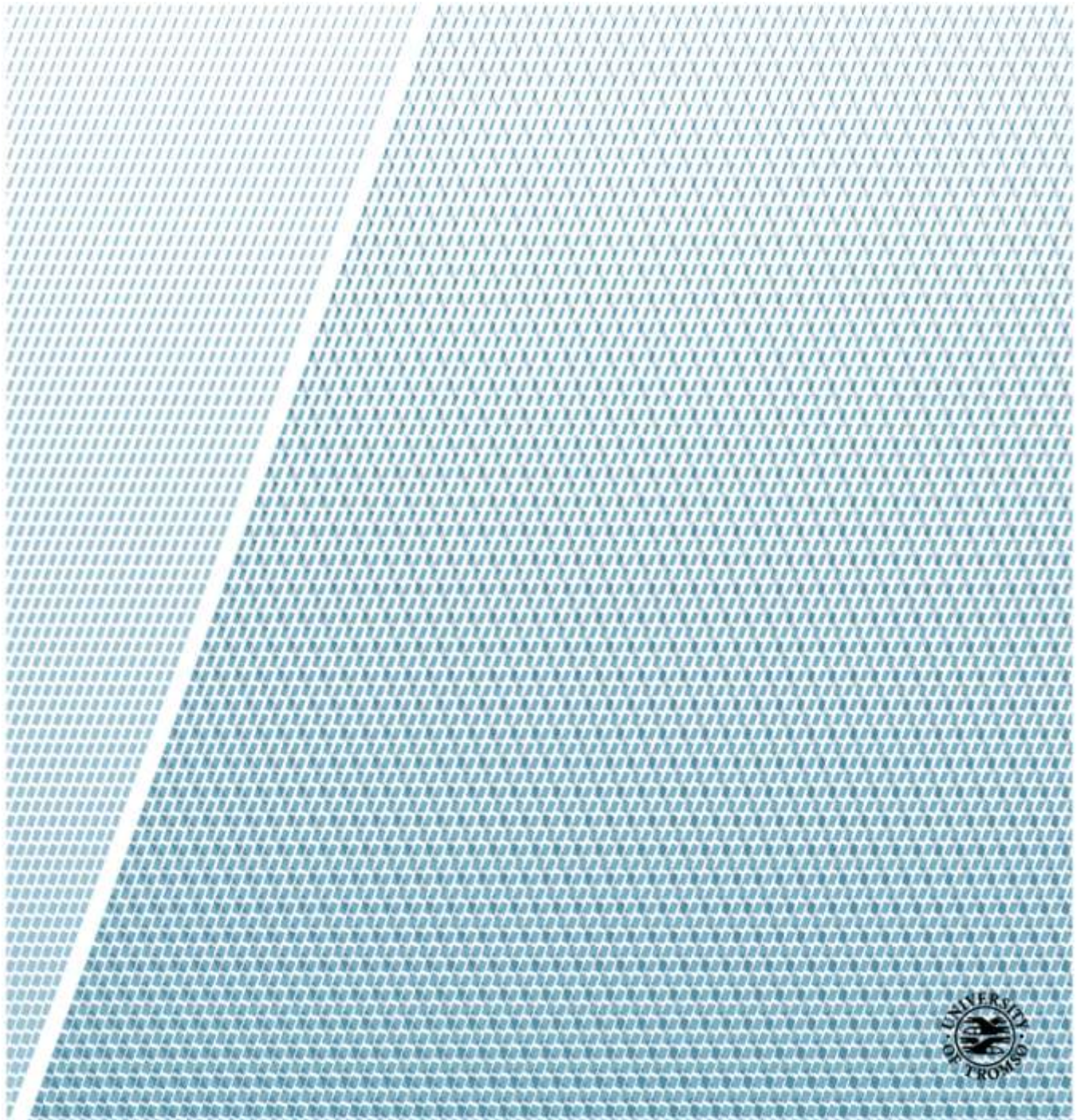
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**Priyanka Shrestha**



## **DEDICATION**

This thesis is dedicated to my late father Mr. KUMAR PRASHAD SHRESTHA, who passed away when I needed him the most. I know his blessings are always with me no matter where I go.



## ABSTRACT

**Aims:** To assess the knowledge, attitude, and practice regarding Pap smear test among women in ward no. 14, Dharan.

**Methods:** A cross-sectional study was carried out in ward no-14 Dharan, Nepal. A total of 100 respondents were selected using probability systematic random sampling technique. Interview schedule with structured and semi-structured questionnaire was used to assess the knowledge, attitude, and practice regarding Pap smear test. The association between independent and dependent variables was assessed using binary logistic regression model and the risk was reported as odds ratio (OR) with 95% confidence interval (CI).

**Results:** The median age of the respondents was 34.83 years. Almost half (49%) of the respondents were housewife. About 45% of the respondents had education up to secondary level and 11% of the respondents were uneducated. About 41% of the respondents got information from television whereas only 30% got information from health personnel.

Even though 90% of the respondents had heard about cervical cancer only 53% had heard about Pap smear test. Among 100 women 47% had adequate knowledge, 38% had adequate attitude, and only 13% had adequate practice regarding Pap smear test. Higher education had significant relation with adequate knowledge, attitude, and practice regarding Pap smear test.

**Conclusion:** Knowledge, attitude, and practice regarding Pap smear test was observed low among women. Education had a crucial role on these. Awareness campaigns regarding Pap smear test are needed which helps to improve knowledge and in turn improves attitude and practice of tests and it is important in reducing cervical cancer to combat prevailing and future cervical cancer burden in Nepal.

**Key words:** Cervical cancer, Pap smear test, Knowledge, Attitude, Practice





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## LIST OF ABBREVIATIONS

BPKMCH	B.P. Koirala Memorial Cancer Hospital
CC	Cervical Cancer
CI	Confidence Interval
EUORGIN	European Research Organization on Genital Infection and Neoplasia
GDP	Gross Domestic Product
HDI	Human Development Index
HPV	Human Papilloma Virus
HPVDNA	Human Papilloma Virus Deoxyribonucleic
HSIL	High- grade Squamous Intraepithelial Lesion
IARC	International Agency for Research on Cancer
LSIL	Low-grade Squamous Intraepithelial Lesion
NCRP	National Cancer Registry Program
NHRC	Nepal Health Research Council
NNCTR	Nepal Network for Cancer Treatment and Research
OR	Odds Ratio
PAP	Papanicolaou
SPSS	Statistical Package for the Social Sciences
VIA	Visual Inspection with Acetic Acid
VILI	Visual Inspection with Lugol's Iodine
WHO	World Health Organization



# CHAPTER 1: INTRODUCTION

## 1.1 Background of the study

Worldwide, Cervical cancer (CC) (cancer of cervix and uterus) comprises approximately 12% of all cancers in women. It is the second most common cancer in women worldwide, but even more common in developing countries (1). According to World health organization (WHO) projections 2005, there were over 500,000 new cases of CC, of which over 90% were in developing countries. It is estimated that over 1 million women worldwide currently have CC, most of who have not been diagnosed, or have no access to treatment that could cure them or prolong their life. In 2005, almost 260,000 women died of the disease, nearly 95% of them in developing countries, making CC one of the greatest threats to women's lives (2).

The disproportionate burden of CC is highest in countries where effective screening, diagnosis, and treatment is limited or absent. In several Western countries, where screening programs that have been linked to effective treatment have long been established, CC rates have decreased by as much as 65% (3). Global cancer report, 2003 has stated that the global cancer rate could increase 50% by the year 2020 (4). This statement is further highlighted by Peter Boyle, the director of the International Agency for Research on Cancer (IARC) in European Research Organization on Genital Infection and Neoplasia (EUORGIN) 2004 conference, by saying "If nothing is done to prevent CC, there will be one million women developing the disease annually by 2050 and also the poorest part of the world will be worst affected" (5).

Primary prevention, early detection through increased awareness and organized screening program, diagnosis and treatment, and palliative care for advanced disease are four components of CC control (2). Several tests such as Visual inspection with acetic acid (VIA), Visual inspection with Lugol's iodine (VILI), Human Papilloma virus deoxyribonucleic (HPV

DNA) test, and Papanicolaou (PAP) smear test can be used in screening for CC. But to date, Pap smear test is the only test that has been used in large population for more than 50 years and it has shown tremendous effect in reducing incidence and mortality from CC. According to IARC estimate, among well-screened women aged 30-64 years, Pap smear screening prevented 80% of CCs (6).

## **1.2 CC and Pap smear test**

CC develops when the cells of the cervix grow out of control unlike the normal cells. The normal cells divide and grow in an organized fashion whereas the malignant cell continues to divide until they form a growth or tumor. In some cases, the cancer cells become invasive spreading to the other tissues and organs nearby. Most of the CCs develop slowly in the lining of the cervix as precancerous lesions if not detected earlier or treated properly, leads to CC. But in some cases, these precancerous lesions may not be malignant and may disappear without treatment.

CC is the only gynecological cancer that can be prevented. The precancerous lesions can be detected through screening, so this is the easiest cancer to prevent. CC screening is essential because it is asymptomatic and presents itself when a woman has late symptoms such as vaginal bleeding and abnormal discharge (7).

The Pap smear test is one of the CC screening tests which looks for precancerous, cell changes on the cervix that might become CC if they are not treated appropriately. It is a procedure in which cells and mucus are collected from the cervix and smeared onto the slide or a bottle of liquid and transported to the laboratory for cytological examination (8). According to American cancer society, Pap smear test should be started at the age of 21 regardless of sexual initiation or other risk factors. According to the updated guidelines, women ages 21 through 29 should be screened with a Pap smear test every 3 years. Women



ages 30 through 65 can then be screened every 5 years with Pap smear test and Human Papilloma Virus (HPV) co-testing or every 3 years with a Pap smear test alone. The best time to have cervical screening is between 10 and 20 days after the first day of last menstrual period (9).

A study conducted in the Nordic countries showed 93% sensitivity of Pap smear test in the age group 25-64 years at an interval of one year and 73% after 3 years and specificity of approximately 98%. The same study also concluded that the sensitivity at 3 years was 91% for squamous cell carcinoma and 58% for adeno and adenosquamous carcinoma (10).

A hospital based study conducted in one in a teaching hospital in Kathmandu also showed a significant correlation of Pap smear test result with result of histology. The study has shown 76% sensitivity and 83.3% specificity for diagnosis of benign grade, 60% sensitivity and 93.9% specificity for Low grade squamous intraepithelial lesion (LSIL), 100% sensitivity and 89.5% specificity for High grade squamous intraepithelial lesion (HSIL), and 100% sensitivity and specificity for carcinoma (11).

The recorded decrease in the incidence and mortality rate of CC (70%-80%) in the western countries is largely due to widespread screening. The Pap smear test used for the detection of the precancerous lesions in the cervix is the most cost effective cancer screening test (12).

### **1.3 Global Trend**

About 5,29,800 new cases were estimated worldwide and of which more than 85% occurred in developing countries. This disproportionate burden of disease in developing countries is due to lack of screening (13).

With an estimated 2, 75, 100 death, CC was the fourth leading cause of death in women worldwide in 2008. Developing countries has the occurrence of nearly 90% of CC deaths,

53,000 in Africa, 31,700 in Latin America, and 1,59,800 in Asia. India accounted for 26% (72,800) of CC deaths (13).

In the United States, an estimated 12,360 cases of invasive cancer are expected to be diagnosed in 2014. There has been a large decline in incidence rate in the past several decades which has now begun to taper off mostly among younger women from 2006-2010, and the death rates and rates of new cases were stable among women younger than 50. Rates of new cases are decreasing by 3.1% per year and death rates by 1.2% per year in women 50 and older (14).

In Europe incidence of CC was 58,348 with the mortality of 24,378 in 2012 (15). In Africa high incidence of CC is reported with the rates exceeding 50 per 100,000 population and age-standardized mortality exceeding 40 per 100,000 populations. In between 1981- 1990, Nairobi hospital data records showed that CC accounted for 70% - 80% of all the genital tract cancers and 8% - 20% of all the cancers. In Africa, CC is a major health problem where an estimated 53,000 women die of this disease each year (16).

## **1.4 CC in Nepal**

### **1.3.1 Country profile**

Nepal is a small landlocked country with a multicultural, geographical richness, and diversity bordering China in the north and India on the south. Administratively, the country is divided into 75 districts, 58 municipalities, and 3, 915 Village Development Committees. The factors such as poverty, political instability, deprivation, and discrimination are core underlying causes of poor development.

The total area of Nepal is 1,47,181 square kilometers, with India to the east, south, and west and China to the north. It occupies the area from 26° 22' to 30° 27' north latitude and 80° 4'

to 88° 12' east longitude. The elevations range from 90 meters to 8,848 meters (17). The population of Nepal was 26.6 million in 2011 with an increase of 3.5 million in last 10 years. In the last 40 years, the population has doubled with the growth rate of 1.4 % (2011). The population density was 181 per square kilometers (2011).

The percentage of population in urban areas was 19 % (2010). The crude birth rate (per 1000 population) was 25.4 (2008), under 5 mortality rate (per 1000 live births) was 51 (2008), life expectancy at birth was 67.5 years (2010), adult literacy rate was 57.9 (2008), Gross Domestic Product (GDP) per capita was \$1,300 (2011 est.), Total health expenditure was 5.5% of GDP (2010), and Human Development Index (HDI) was 0.458 (2011) and ranked 157 in the world (18, 19).

### **1.3.2 Magnitude of CC in Nepal**

According to WHO (20), China and India had 1,31,500 and 1,25,952 new cases of CC per year respectively. Based on these two neighbor countries incidence data and based on similar socio-cultural pattern between Nepal and India, we can predict that Nepal must have an alarming incidence rate for CC. National Cancer Registry Program (NCRP) of Nepal, which collects hospital based data from seven major hospitals and it is the only aggregate data on cancer in the country that show CC is among the top 10 cancers and number one among women. According to the most recent report available from NCRP 2005, CC accounts for 21.4% of all cancers in women, appearing most frequently in women aged 35–64. CC is the second most common cancer after lung cancer including both men and women (21).

No estimates of cancer deaths by CC can be exactly quoted due to lack of the nationwide population based data and documentation of all the cases. At a minimum, it is estimated that there are about 10,020 new cases of invasive CC and about 26,000 – 45,000 precancerous lesions (21).

A population based study including 5000 women aged 30-59, carried out in 2003 in collaboration between B.P. Koirala Memorial Cancer Hospital (BPKMCH) and IARC, found 2.5% prevalence for precancerous lesions and 0.12% for invasive cancer (22).

According to the study conducted by reviewing the inpatient and outpatient records of patients at BPKMCH from 1999 to 2008 in which out of 11,469 cases diagnosed as cancer, 3372 cases (29%) were cervical carcinoma. Total number of cases showed a rising pattern over the ten year period (23). The maximum frequency of the cases was found in the age group 40-49 years with a median age of 45 years. Chitwan had the maximum number of cases (7.35%) followed by Rupandehi (6.40%) and Nawalparasi (5.41%).

### **1.3.3 CC screening and Pap smear test in Nepal**

Nepal's CC incidence rate is very high, so there should be a high priority to develop effective screening programs. However, in case of Nepal, there is lack of screening and the main reason for that is a low percentage of costs covered by the government, in addition to lack of necessary resources (7). According to WHO data, only 4.7% of women had cost coverage for CC screening in urban areas and 2.0% in rural areas with an average of 2.4% in the country. However, there are no reported data on the percentage of women actually screened (7).

Though CC screening is available in some areas of Nepal, screening is mostly conducted when women come to the hospital for other medical problems and sometimes only when women present with symptoms. Despite the evidence that universal coverage is important, women in Nepal are not routinely screened before symptoms appear (24).

In Nepal, a person's practice is reported to be curative rather than preventive. The individuals present to the hospital only when the symptoms are noticeable and painful (25). The screening rate is very low in Nepal (7), which is only 2.4% of all women between the age group 18-69.

This low rate is mainly due to lack of national standards and restricted government support in addition to lack of awareness.

At present, only selective facilities and programs in Nepal are providing the services for CC screening, but most of the services available mostly in hospital settings are opportunistic (when women seek medical care for other reasons). Among the 5 developmental regions of Nepal, CC screening is not available in Far- western and Midwestern regions. The most facilities are available in the Central region and few in Eastern and Western region (25). BPKMCH reported to have screened 5,000 women in 2008. Other screening efforts in Nepal are shown by Nepal Network Cancer Treatment Research (NNCTR) which screens the most number of women and has provided its services through donations.

#### **1.4 Statement of problem:**

Today, the most promising approach to mortality reduction due to CC is early diagnosis and treatment. As the treatment is both costly in terms of money and life, early detection and prompt action are the only possible solution to the problem. For early detection of CC, Pap smear test is recommended. Different studies have been carried out related to early detection of CC and these studies have revealed that early detection is the main reason for decreased mortality of CC. So, awareness regarding early detection of CC through Pap smear test is very essential for women.

#### **1.5 Significance of the study:**

Nepal is a country carrying a huge burden of CC and unfortunately, there is no any cancer screening program at a national level. The level of awareness of the potential beneficiaries regarding CC directly affects the success and benefit of screening program at a national level as a public health program. Even though screening facilities are available in some hospitals, it is underutilized due to a number of factors like lack of education, different cultural barriers,

lack of availability in all health centers, affordability of screening, wrong belief about the screening, and most commonly lack of knowledge regarding availability and benefit of the screening.

As there are only few studies carried out in Nepal to assess the knowledge, attitude, and practice regarding the Pap smear test, so this study is conducted with the aim to gather information regarding the knowledge, attitude, and practice regarding Pap smear test among women in Nepal.

Furthermore, this study may be helpful to the health care planners to organize awareness program related to CC and its screening and finally reducing the burden of CC among Nepalese women.

## **1.6 Objectives of the study:**

### **1.6.1 General objectives:**

- The general objective is to assess the knowledge, attitude, and practice regarding Pap smear test among women in ward no. 14, Dharan.

### **1.6.2 Specific objectives:**

- To assess the women's knowledge regarding Pap smear test in ward no. 14, Dharan.
- To identify the women's attitude towards Pap smear test in ward no. 14, Dharan.
- To assess the practice of Pap smear test in ward no. 14, Dharan.

## **1.7 Variables of the study:**

### **1.7.1 Independent variables**

- Socio-demographic data such as age, caste, marital status, occupation, family structure, and educational status
- Source of information about cervical cancer

- Knowledge regarding cervical cancer

### **1.7.2 Dependent variables**

- Knowledge regarding Pap smear test
- Attitude regarding Pap smear test
- Practice regarding Pap smear test

### **1.8 Study Hypothesis:**

Do the independent variables influence the knowledge, attitude, and practice of Pap smear test among women in ward no. 14, Dharan, Nepal?





## CHAPTER 2: RESEARCH METHODOLOGY

### 2.1 Research Design:

A cross-sectional study design.

### 2.2 Settings of the study:



**Figure 1: Dharan in the map of Nepal**

The study was conducted in ward no. 14 (Bijayapur) of Dharan Municipality, Nepal. Dharan is situated in the Sunsari district of the Eastern development region of Nepal. The total area of Dharan is 21.12 square kilometers. The total population of Dharan is 95,332 among them are 47,121 males and 48,211 females. The population growth rate is 4.43% with population density 922.15 per square kilometers (26). Bijayapur has the total population of 3246 with the area of 246.25 hectares.

### 2.3 Population and sampling:

The population of the study was all women of age group 15-60 of ward no. 14, Dharan, Nepal. A total of 100 women were selected for the interview using the formula:

$$n = \frac{(Z\alpha)^2 PQ}{D^2} \quad (27)$$

Where, n= required sample size

Z $\alpha$ = Z derivative corresponding to desired reliability level= 95%= 1.96

P= Estimation proportion in population = 74.6% (28)

Q= (1-P) = 25.4%

D= maximum tolerable error = 10% of P= 0.074

Therefore n= 93.97

So, the required sample size of the study was 100.

Probability systematic random sampling technique was carried out in this study. The total female population of the age group 15-60 years of ward no. 14 was 1343 (N). There were approximately 700 houses in ward no. 14. The desired sample size was 100 women (n). Hence, by dividing N by n, the sampling interval width (k) was obtained.

$$K = N/n = 1342/100 = 13.42 = 13$$

In other words, every 13th women was selected for participation. Assuming that there will be at least 1 women of age group 15-60 in each house. Every 13<sup>th</sup> house was randomly selected for data collection.

## **2.4 Data collection procedure:**

Face to face interview schedule with structured and semi-structured questionnaires was conducted to assess the knowledge, attitude, and practice regarding Pap smear test as per the objectives of the study. The questionnaire includes:

- demographic data of the respondents
- knowledge regarding CC
- knowledge regarding Pap smear test
- attitude towards Pap smear test
- practice of Pap smear test

## 2.5 Operational Definition:

**Table 1: Operational definitions of independent and dependent variables and their measurements**

<b>Variables</b>	<b>Description</b>	<b>Measurement</b>
<b>Age</b>	Exact month and year of respondents were asked and classified into two groups for analysis.	1= <35 2= ≥35
<b>Caste</b>	The caste of the respondents was coded as Bhramin, Chhetri, Newar, and others (Rai, Tamang and Magar). Further recoding was done for logistic regression into two groups, higher caste (Bhramin and Chhetri) and indigenous group (Newar, Rai, Tamang and Magar).	1=Higher class 2=Indigenous group
<b>Marital status</b>	Marital status was coded into 2 groups as married and unmarried.	1= Married 2= Unmarried
<b>Occupation</b>	Occupation was categorized as housewife, student, service, and others in the questionnaire and further coded into 3 groups as housewife, student, and service or others.	1= Housewife 2= Student 3= Service or Others.
<b>Type of family</b>	Type of family was coded as joint and nuclear family.	1= Joint 2= Nuclear
<b>Educational Level</b>	Those not attending school were coded uneducated, those who have attended to class 5 were coded as primary level, those upto 10 were coded secondary, those upto class 12 were coded higher secondary and above higher secondary were coded university level. Further recoding was done into 3 groups, uneducated and primary in first group, secondary in second and above secondary in third group.	1= Primary 2= Secondary 3=Higher Secondary 4= University 5=Uneducated <u>Recoded</u> 1=Uneducated or primary 2= Secondary 3=Above Secondary
<b>Family history of Cervical cancer</b>	Those who had family history were coded 'Yes' and those who did not were coded 'No'.	1=Yes 2= No
<b>Knowledge of Cervical cancer</b>	Knowledge of cervical cancer was coded as adequate and inadequate. Adequate= Respondent who have heard about cervical cancer, who knows that it is not a communicable disease, and who knows that cervical cancer is preventable. Inadequate= Respondent who have not heard about cervical cancer or who did not knew that it is non-communicable and preventable.	1= Adequate 2= Inadequate
<b>Knowledge of Pap smear test</b>	Knowledge of Pap smear test was coded as adequate and inadequate. Adequate= Women who have heard about Pap and knew the reason for doing Pap. Inadequate= Women who have not heard about Pap or did not knew the reason for doing Pap.	1= Inadequate 2= Adequate
<b>Attitude of Pap smear test</b>	Attitude of Pap smear test was coded as adequate and inadequate. Adequate= Women who knew Pap is for early detection of cervical cancer and who have thought of doing Pap. Inadequate= Women who did not know Pap is for early detection and prevention of Cervical cancer or who have not thought of doing Pap.	1= Inadequate 2= Adequate
<b>Practice of Pap smear test</b>	Practice of Pap smear test was coded as adequate and inadequate. Adequate= Women who have done Pap smear test at least once or more. Inadequate= Women who have never done Pap smear test.	1= Inadequate 2= Adequate

## **2.6 Data Analysis Procedure:**

The information collected from the respondents were sorted, coded, and entered in datasheet created in the Statistical Package for the Social Sciences (SPSS), version 21. The double data entry system was used to minimize errors in data entry. Descriptive analysis was done for all the variables. Pie chart, tables, and histogram were used to describe the results of the analysis. The strength of the association between knowledge, attitude, and practice of Pap smear test, and independent variables were assessed using binary logistic regression model and were reported as odds ratio with 95% confidence interval. Univariate and multivariate (mutually adjusted) logistic regression were performed between all the dependent and independent variables. Goodness of fit was tested using the Hosmer-Lemeshow test which was non-significant (for multivariate analysis). All the tests were two-sided and the criterion for statistical significance was  $p < 0.05$ .

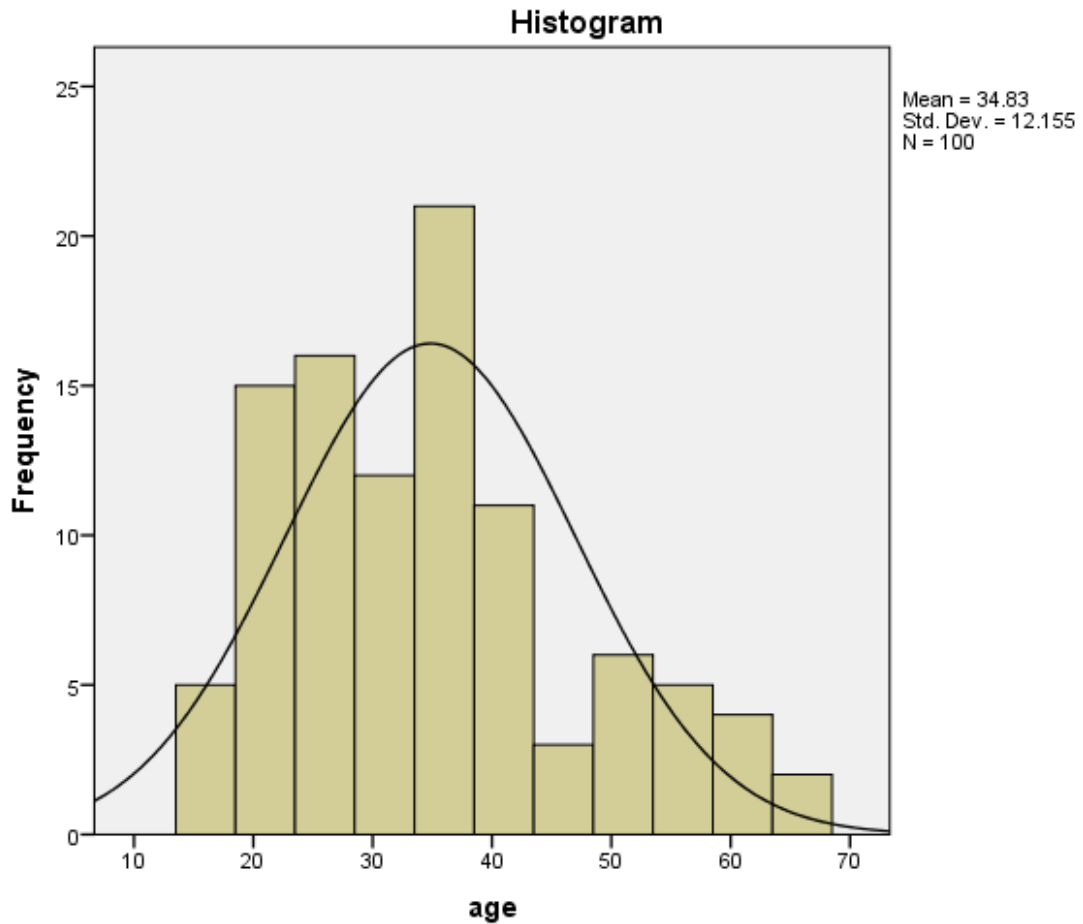
## **2.7 Ethical Consideration**

- Ethical approval was taken from Nepal Health Research Council.
- Informed consent was obtained from the respondents.
- Privacy and confidentiality was maintained by not disclosing the name of the respondents.



## CHAPTER 3: DATA ANALYSIS AND INTERPRETATION

### 3.1 Background information of respondents



**Figure 2: Distribution of respondents according to their age**

The histogram in Figure 2 shows the age distribution of the respondents. The age of the respondents were somewhat normally distributed. The median age of the respondents was 34.83.

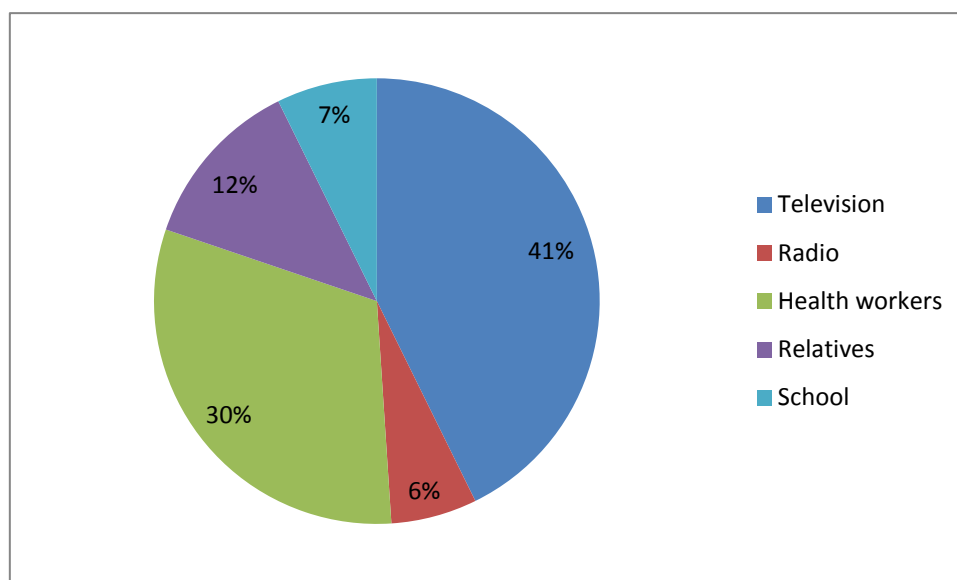
**Table 2: Distribution of respondents according to the socio-demographic data**

<b>Variables</b>	<b>Frequency</b>
<b><u>Ethnicity:</u></b>	
Brahmin	24
Newar	42
Chhetri	15
Rai	6
Magar	8
Tamang	5
<b><u>Religion:</u></b>	
Hindu	89
Christian	9
Buddhist	2
<b><u>Marital status:</u></b>	
Married	65
Unmarried	35
<b><u>Occupation:</u></b>	
Housewife	49
Student	14
Service	35
Others(shopkeeper, daily wages)	2
<b><u>Type of family:</u></b>	
Joint	49
Nuclear	51
<b><u>Educational level:</u></b>	
Uneducated	11
Primary	18
Secondary	42
Higher Secondary	21
University	8
<b><u>Family history of cervical cancer:</u></b>	
Yes	2
No	97



The frequencies of the socio-demographic information of the respondents are shown in Table 2. The data shows that most of the respondents were Newar (42%) followed by Brahmin (24%). Most of the women followed Hinduism (89%) and only few followed another religion. About 65% of the respondents were married. Almost half of the respondents (49%) were housewife and only 14% were student. Nearly half of the respondents (45%) had education up to secondary level where as 11% were uneducated and only 8% had attended university level. Almost all of the respondents (97%) had no family history of CC.

### 3.2 Knowledge about cervical cancer among respondents



**Figure 3: Distribution of respondents according to the source of information about cervical cancer**

The percentages of different sources of information about CC among the respondents are shown in Figure 3. Among 96 respondents, majority of these respondents (41%) got information about CC from television, 30% from health workers, 12% from relatives and only 6% and 7% of the respondents got information from radio and school respectively.

**Table 3: Distribution of respondents according to knowledge regarding cervical cancer**

<b>Variables</b>	<b>Frequency</b>
<b>Heard about cervical cancer</b>	
Yes	96
No	4
<b>Leading cause of death</b>	
Yes	64
No	26
Don't know	10
<b>Communicable disease</b>	
Yes	3
No	85
Don't know	12
<b>Family history increases the risk of cervical cancer</b>	
Yes	34
No	42
Don't know	24
<b>Personal history increase the risk of cervical cancer</b>	
Yes	62
No	8
Don't know	30
<b>Infection of HPV increase the risk of cervical cancer</b>	
Yes	39
No	8
Don't know	53
<b>Abnormal discharge from vagina is symptom of cervical cancer</b>	
Yes	55
No	15
Don't know	30
<b>Bleeding from vagina is symptom of cervical cancer</b>	
Yes	61
No	4
Don't know	35
<b>Is preventable</b>	
Yes	74
No	10
Don't know	16

Table 3 shows the knowledge of women regarding CC. The majority of the respondents (90%) had heard about CC and 64% knew that CC is the leading cause of death. 85% of the respondents knew that it is not a communicable disease. Regarding the risk factor, 82% knew personal history as a risk whereas only 34% knew the family history as a risk factor for CC. Out of 100, only 39% knew that infection of HPV causes CC whereas more than half (53%) did not know about HPV. Out of total respondents, 55% knew that abnormal discharge from the vagina as a symptom of CC whereas 61% knew bleeding from vagina as a symptom of CC. Majority of the respondents (74%) of the respondents knew that CC is preventable.

**Table 4: Proportion of correct answers to questions related to knowledge regarding cervical cancer**

<b>Knowledge regarding cervical cancer</b>	<b>Frequency</b>
No correct answers	2
Having 1 correct answer	5
Having 2 correct answers	6
Having 3 correct answers	8
Having 4 correct answers	13
Having 5 correct answers	12
Having 6 correct answers	13
Having 7 correct answers	9
Having 8 correct answers	12
Having all 9 correct answers	20

Regarding the knowledge of CC (Table 4), majority of the respondents (20%) gave all 9 correct answers whereas only 2% had no any correct answer, 5% gave 1, 6% gave 2, 8% gave 3, 13% gave 4, 12% gave 5, 13% gave 6, 9% gave at least 7 and 12% gave at least 8 correct answers. Regarding the knowledge of CC, 68% had adequate knowledge of CC.

### **3.3 Respondents' knowledge regarding Pap smear test**

Table 5 shows the knowledge of respondents regarding Pap smear test. Out of 100 respondents, 53% had heard about Pap smear test and knew the reason for doing Pap smear test, but only 16% knew the correct age to start Pap smear test. Only 21% knew that Pap

smear test should be done in every 3 years whereas 34% knew that Pap smear test should be done 10-20 days after the menstrual period.

**Table 5: Distribution of respondents according to knowledge regarding Pap smear test**

<b>Variables</b>	<b>Frequency</b>
<b>Heard about Pap smear test</b>	
Yes	53
No	47
<b>Reason for doing Pap smear test</b>	
Early detection of cervical cancer	53
Cause of cervical cancer	6
Treatment of cervical cancer	0
Don't know	41
<b>Pap smear test to be started</b>	
Before any sexual relationship	16
After 1 year of sexual relationship	2
After 2 years of sexual relationship	11
Don't know	71
<b>Interval of Pap smear test (years)</b>	
1 year	12
2 years	1
3 years	21
Don't know	66
<b>Best time for Pap smear test</b>	
During menstruation	1
10-20 days after menstruation	34
After menstruation	3
Don't know	62

Table 6 shows the knowledge of respondents regarding Pap smear test. Out of 100 respondents (12%) gave all 5 correct answers, whereas the majority (41%) had no any correct answer, 7% gave at least 1, 15% gave at least 2, 20% gave at least 3 and 5% gave at least 4 correct answers.

**Table 6: Proportion of correct answers related to knowledge regarding Pap smear test**

<b>Knowledge regarding Pap smear test</b>	<b>Frequency</b>
No correct answers	41
Having 1 correct answer	7
Having 2 correct answer	15
Having 3 correct answer	20
Having 4 correct answer	5
Having all 5 correct answer	12

Table 7 summarizes the results of univariate and multivariate analysis of the association between the independent variables and adequate knowledge regarding Pap smear test. In both univariate and multivariate analysis occupation, higher educational level and adequate knowledge of CC had statistically significant relation with adequate knowledge of Pap smear test.

Among respondents who were students had 13.7 fold more adequate knowledge of Pap smear test compared to that of housewives. Those respondents who had education above secondary level had 5.63 times more adequate knowledge about Pap smear test compared to that of uneducated or primary level respondents. The respondents who had adequate knowledge of CC had 6.1 times more adequate knowledge of Pap smear test compared to those who had inadequate knowledge of CC.

Regarding the Knowledge of Pap smear test, 47% of women had adequate knowledge of Pap smear test.

**Table 7: Odds ratio with 95% Confidence Interval for the association between independent variables and adequate knowledge regarding Pap smear test**

Variables	Knowledge of Pap		Univariate		Multivariate*	
	Adequate (n)	Inadequate (n)	OR (95%CI)	P value	OR (95%CI)	P value
<b><u>Age</u></b>						
< 35	27	24	1.63(0.73-3.60)	0.226	0.47(0.12-1.76)	0.266
≥35(ref)	20	29	1.00		1.00	
<b><u>Caste</u></b>						
Higher caste	16	23	0.67(0.29-1.51)	0.336	0.86(0.26-2.82)	0.808
Indigenous group(ref)	31	30	1.00		1.00	
<b><u>Marital status</u></b>						
Married	30	35	1.10(0.48-2.50)	0.817	2.15(0.43-10.63)	0.346
Unmarried (ref)	17	18	1.00		1.00	
<b><u>Occupation</u></b>						
Housewife (ref)	18	31	1.00		1.00	
Student	9	5	3.10(0.89-10.69)	0.073	13.77(1.29-146.1)	<b>0.030</b>
Service, others	20	17	2.02(0.85-4.83)	0.111	3.33(0.79-13.97)	0.100
<b><u>Family type</u></b>						
Joint	19	30	1.92(0.86-4.26)	0.108	0.51(0.16-1.58)	0.245
Nuclear (ref)	28	23	1.00		1.00	
<b><u>Educational level</u></b>						
Uneducated and Primary(ref)	7	22	1.00		1.00	
Secondary	15	27	1.74(0.60-5.03)	0.302	0.61(0.13-2.79)	0.524
Above Secondary	25	4	19.64(5.06-76.19)	<b>&lt;0.001</b>	5.63(1.04-30.47)	<b>0.045</b>
<b><u>Source of information</u></b>						
Media(ref)	21	26	1.00		1.00	
Health personnel	19	11	2.1(0.83-5.47)	0.113	2.71(0.69-10.65)	0.152
Relatives and School	7	12	0.72(0.24-2.15)	0.560	1.20(0.29-4.87)	0.793
<b><u>Knowledge of cervical cancer</u></b>						
Adequate	43	25	0.08(0.02-0.26)	<b>&lt;0.001</b>	6.19(1.52-25.23)	<b>0.011</b>
Inadequate (ref)	4	28	1.00		1.00	

Higher caste= Bhramin and Chhetri. Indigenous group= Newar, Rai, Magar, Tamang

Above secondary level = Higher Secondary and University level. Media= Radio and Television, source of information (n)= 96, \*Mutally adjusted, OR= Odds Ratio, CI= Confidence Interval,

### 3.4 Respondents' attitude regarding Pap smear test

**Table 8: Distribution of respondents according to attitude regarding Pap smear test**

<b>Variables</b>	<b>Frequency</b>
<b>Cervical cancer is a major health problem</b>	
Yes	87
No	7
Don't know	6
<b>Pap smear test is good for early detection</b>	
Yes	69
No	1
Don't know	30
<b>Do you think Pap smear test is painful</b>	
Yes	15
No	41
Don't know	44
<b>Pap smear is against our religion</b>	
Yes	7
No	93
<b>Thought of doing Pap smear test</b>	
Yes	41
No	59
<b>Pap smear test can prevent from cervical cancer</b>	
Yes	62
No	4
Don't know	34

Table 8 shows respondents' attitude towards Pap smear test. The majority (87%) stated that CC is a major health problem. The majority of the respondents (69%) knew that Pap smear test is good for early detection of CC and 62% of the respondents knew Pap smear test can prevent CC. About 41% thought that Pap smear test is not painful, but 44% of them did not know that it is painful or not. The majority (59%) had no thoughts of doing Pap smear test, even though the majority (93%) stated that Pap smear test is not against our religion.

**Table 9: Proportion of correct answers related to attitude regarding Pap smear test**

<b>Attitude regarding Pap smear test</b>	<b>Frequency</b>
Having 1 correct answer	6
Having 2 correct answer	19
Having 3 correct answer	12
Having 4 correct answer	24
Having 5 correct answer	17
Having all 6 correct answer	22

Regarding attitude of Pap smear test (table 9), 22% gave all 6 correct answers whereas 6% gave only 1 correct answer, 19% gave at least 2, 12% gave at least 3, 24% gave at least 4 and 17% gave at least 5 correct answers.

Table 10 summarizes the result of the univariate and multivariate analysis of the association between the independent variables and adequate attitude regarding Pap smear test. In univariate analysis, higher level of education, adequate knowledge of CC, and adequate knowledge of Pap smear test had an association with adequate attitude regarding Pap smear test. In multivariate analysis, higher educational level and adequate knowledge of Pap smear test was associated with adequate attitude of Pap smear test.

Among respondents who had education above secondary level had 10 times more adequate attitude of Pap smear test compared to that of uneducated or primary level respondents. Similarly, the respondents who had adequate knowledge of Pap smear test had 3.7 folds more adequate attitude of Pap smear test compared to those who had inadequate attitude of Pap smear test.

Regarding the attitude of Pap smear test, only 38% of women had adequate attitude of Pap smear test.



**Table 10: Odds ratio with 95% Confidence Interval for association between independent variables and adequate attitude regarding Pap smear**

Variables	Attitude of Pap		Univariate		Multivariate*	
	Adequate (n)	Inadequate (n)	OR (95%CI)	P value	OR (95%CI)	P value
<b>Age</b>						
< 35	20	31	1.11(0.49-2.49)	0.798	0.75(0.18-3.06)	0.690
≥35(ref)	18	31	1.00		1.00	
<b>Caste</b>						
Higher caste	15	24	1.03(0.45-2.36)	0.939	1.51(0.40-5.65)	0.541
Indigeneous group(ref)	23	38	1.00		1.00	
<b>Marital status</b>						
Married	24	41	0.87(0.37-2.04)	0.762	0.81(0.14-4.63)	0.816
Unmarried (ref)	14	21	1.00		1.00	
<b>Occupation</b>						
Housewife (ref)	16	33	1.00		1.00	
Student	5	9	1.14(0.33-3.98)	0.830	2.00(0.16-24.05)	0.583
Service, others	17	20	1.75(0.72-4.22)	0.211	3.37(0.71-15.91)	0.124
<b>Family type</b>						
Joint	18	31	0.90(0.40-2.02)	0.798	1.30(0.36-4.61)	0.680
Nuclear (ref)	20	31	1.00		1.00	
<b>Educational level</b>						
Uneducated and Primary(ref)	8	21	1.00		1.00	
Secondary	6	36	0.43(0.13-1.43)	0.172	0.37(0.06-2.10)	0.266
Above Secondary	24	5	12.6(3.56-44.48)	<b>&lt;0.001</b>	10.00(1.56-64.1)	<b>0.015</b>
<b>Source of information</b>						
Media(ref)	17	30	1.00		1.00	
Health personnel	16	14	2.01(0.79-5.12)	0.140	1.20(0.27-5.25)	0.805
Relatives and School	3	16	6.33(0.08-1.30)	0.113	0.43(0.07-2.44)	0.344
<b>Knowledge of cervical cancer</b>						
Adequate	32	36	0.26(0.09-0.78)	<b>0.009</b>	1.05(0.20-5.57)	0.949
Inadequate (ref)	6	26	1.00		1.00	
<b>Knowledge of Pap smear</b>						
Adequate	29	18	7.87(3.11-19.91)	<b>&lt;0.001</b>	3.78(1.029-13.94)	<b>0.045</b>
Inadequate(ref)	9	44	1.00		1.00	

Higher caste= Bhramin and Chhetri, Indigenious group= Newar, Rai, Magar, Tamang

Above secondary level = Higher Secondary and University level

Media= Radio and Television, source of information (n)= 96

\*Mutally adjusted, OR= Odds Ratio, CI= Confidence Interval

### 3.5 Practice regarding Pap smear test among respondents

**Table 11: Distribution of Respondents according to practice regarding Pap smear test**

<b>Variables</b>	<b>Frequency</b>
<b>Asked your physician to suggest Pap smear test for you</b>	
Yes	16
No	84
<b>Done Pap smear test</b>	
Yes	13
No	87
<b>Doing Pap smear test timely as recommended</b>	
Yes	11
No	89
<b>Recommend other women to do Pap smear test</b>	
Yes	68
No	32

Table 11 shows distribution of respondents according to practice regarding Pap smear test. Majority (84%) has not asked their physician to suggest Pap smear test for them. Only 13% has done Pap smear test, but only 11% has done it timely. Majority (68%) recommend it to other women despite they have not practiced it.

**Table 12: Proportion of correct answers related to practice regarding Pap smear test**

<b>Practice regarding Pap smear test</b>	<b>Frequency</b>
No correct answers	31
Having 1 correct answer	50
Having 2 correct answer	7
Having 3 correct answer	0
Having 4 correct answer	11

Regarding practice of Pap smear test (table 12), 31% had no correct answer, 50% had at least 1, 7% had at least 2 and only 11% had all 4 answers correct.

**Table 13: Odds ratio with 95% Confidence Interval for association between independent variables and adequate Practice regarding Pap smear**

Variables	Knowledge of Pap		Univariate		Multivariate*	
	Adequate (n)	Inadequate (n)	OR ( 95% CI)	P value	OR (95%CI)	P value
<b><u>Age</u></b>						
< 35	6	45	0.80(0.24-2.57)	0.708	0.21(0.02-1.56)	0.127
≥35(ref)	7	42	1.00		1.00	
<b><u>Caste</u></b>						
Higher caste	4	35	1.51(0.43-5.30)	0.516	1.20(0.17-8.17)	0.850
Indigenous group(ref)	9	52	1.00		1.00	
<b><u>Marital status</u></b>						
Married	11	54	0.29(0.06-1.42)	0.130	7.07(0.33-151.77)	0.211
Unmarried (ref)	2	33	1.00		1.00	
<b><u>Occupation</u></b>						
Housewife (ref)	7	42	1.00		1.00	
Student	1	13	0.46(0.05-4.10)	0.488	2.06(0.03-131.79)	0.733
Service, others	5	32	0.93(0.27-3.22)	0.919	1.04(0.15-6.82)	0.967
<b><u>Family type</u></b>						
Joint	4	45	0.41(0.11-1.44)	0.168	0.23(0.03-1.68)	0.149
Nuclear(ref)	9	42	1.00		1.00	
<b><u>Educational level</u></b>						
Uneducated and Primary(ref)	1	28	1.00		1.00	
Secondary	1	41	0.68(0.04-11.37)	0.790	0.34(0.007-16.45)	0.588
Above secondary	11	18	17.11(2.03-144.1)	<b>0.009</b>	6.42(0.190-217.4)	0.301
<b><u>Source of information</u></b>						
Media(ref)	3	44	1.00		1.00	
Health personnel	8	22	5.33(1.28-22.11)	<b>0.021</b>	13.80(1.49-127.4)	<b>0.021</b>
Relatives, School	2	17	1.72(0.26-11.24)	0.568	9.95(0.58-168.74)	0.112
<b><u>Knowledge of cervical cancer</u></b>						
Adequate	12	56	6.64(0.82-53.52)	<b>0.075</b>	1.46(0.04-54.03)	0.835
Inadequate (ref)	1	31	1.00		1.00	
<b><u>Knowledge of Pap smear test</u></b>						
Adequate	12	35	17.82(2.21-143.3)	<b>0.007</b>	13.36(0.55-321.6)	0.110
Inadequate(ref)	1	52	1.00		1.00	
<b><u>Attitude of Pap smear test</u></b>						
Adequate	9	29	4.50(1.27-15.85)	<b>0.019</b>	0.50(0.05-4.40)	0.537
Inadequate (ref)	4	58	1.00		1.00	

Higher caste= Bhramin and Chhetri, Indigenous group= Newar, Rai, Magar, Tamang

Above secondary level = Higher Secondary and University level

Media= Radio and Television, source of information (n)= 96

\*Mutually adjusted, OR= Odds Ratio, CI= Confidence Interval

Table 13 summarizes the results of univariate and multivariate analysis of the association between the independent variables and adequate practice of Pap smear test. It also summarizes the association between adequate knowledge, adequate attitude, and adequate practice of Pap smear test

In univariate analysis, higher educational level, adequate knowledge of CC, adequate knowledge of Pap smear test, and adequate attitude of Pap smear test had statistically significant relationship with the adequate practice of Pap smear test whereas in multivariate analysis, only health personnel as a source of information showed a significant relation with adequate practice of Pap smear test.

Respondents who got information from health personnel had 13.8 folds more adequate practice of Pap smear test compared to those who got information from Media. In univariate analysis, respondents who had adequate knowledge of CC, adequate knowledge of Pap smear test, and adequate attitude of Pap smear test had 6.64, 17.8 and 4.5 times respectively more adequate practice of Pap smear test compared to the inadequate group.

Regarding the practice of Pap smear test, only 13% of the women had adequate practice of Pap smear test.

## CHAPTER 4: DISCUSSION

In this study, knowledge, attitude, and practice regarding Pap smear test were identified, which are the major factors that determine the success of any screening program. Among 100 respondents, 47% had adequate knowledge, 38% had adequate attitude, and only 13% had adequate practice regarding Pap smear test. Education had a significant relation with adequate knowledge, attitude, and practice regarding Pap smear test.

In this study, 90% of the respondents had heard about CC and 53% had heard about Pap smear test. The percentage was higher in a similar study conducted in Chitwan, Nepal (29). The reason behind this may be that the one and only cancer hospital of Nepal is situated in Chitwan, so people living there may have more opportunity of cancer awareness program.

In this study, most of the respondents who had heard about CC got information from television (41%) and health workers (30%). This is similar to the study done in Tanzania where media followed by health workers was the source of information (30). Another study showed friends and relatives followed by health professionals as the source of information (28). However, the finding from this study was different from the study done in Kuwait where gynecologist was the major source of information related to CC (31). In this study, health care professionals act as a lower source of information. This result shows a need for increasing the information provided to the public, especially, by health professionals who provide detail and correct information to the people hence increasing the awareness level.

In this study, 39% of the respondents knew that infection of HPV causes CC which is higher than in the study done in Tanzania where only 4.3% mentioned HPV as an important factor in the causation of CC (30). Similarly, only 7.9% were aware of the link between HPV and CC in a study done in Ghana(32). Though the percentage is higher in this study compared to other

similar studies, yet it is low and directly affects prevention as it is difficult for these women to go for vaccination if they don't know the link between HPV and CC.

In this study, only 47% of the respondents were classified as having adequate knowledge of Pap smear test. These data are similar to those found in the study done in Argentina and Brazil (33, 34). The percentage of adequate knowledge regarding Pap smear test was high in a study done in North Eastern India which was 88.8% (35). The reason behind this difference is due to the characteristics of the study population. The study done in India was carried out among nurses who have higher level of education and qualification compared to those included in this study. Adequate knowledge of CC had direct relationship with adequate knowledge of Pap smear test.

The findings in this study showed that 53% of the respondents knew that Pap smear test is done for early detection of CC which is similar to the findings of the similar study done in Chitwan (Nepal) and in Ghana (29, 32). Furthermore, in this study, only 21% of the respondents knew that Pap smear should be done in every 3 year interval. Similar findings were seen in the study done in Chitwan, Nepal (29). Even though the knowledge level about interval of Pap smear test was higher in this study compared to study done in Ghana (32), still lots of women need to be educated regarding Pap smear test and the intervals for doing the test.

This study also looked at the respondents' attitude towards Pap smear test. Only 38% of the total respondents were classified as having adequate attitude towards Pap smear test. This finding was different from the study done in Brazil where only 28% was classified as having adequate attitude (34) whereas a study done in India showed 91.5% respondents having adequate attitude. Adequate knowledge of Pap smear test had a direct relationship with adequate attitude of Pap smear test.

The practice of Pap smear test was also determined in this study. Only 13% of the total respondents had adequate practice of Pap smear test. The study done in Ethiopia and Nigeria has reported lower uptake of Pap smear test (36, 37). Similar practice level was found in the study done in Ruvuma, Tanzania (30). Utilization of Pap smear test on the other hand, was better in women in Qatar, Kuwait, and Fiji (31, 38, 39). In contrast, in developed countries such as London, the practice of Pap smear test was much higher (40). The uptake of Pap smear test was slightly higher (21%) in a similar study conducted in Chitwan, Nepal (29). This difference is partially explained by the area of study. Since, the only cancer hospital of Nepal is situated in Chitwan, so it is obvious that more community awareness and screening program had been conducted in that area.

In univariate logistic regression model, even though the adequate knowledge of CC, adequate knowledge of Pap smear test, and adequate attitude of Pap smear test was significantly associated with adequate practice of Pap smear test, it was found to be insignificant in multivariate analysis. This difference could be due to the low sample size.

This study showed a direct relationship between higher educational level and adequate knowledge and attitude of Pap smear test, but no association of higher education with practice of Pap smear test. These findings were similar to the study done in Argentina (33). Health personnel as the source of information showed a significant relation with adequate practice of Pap smear test which also emphasizes the important role of health personnel in increasing the awareness regarding CC and Pap smear test and finally decreasing the CC burden.

One of the interesting findings in this study is that though only 13% of the respondents have reported of doing Pap smear test, but 68% of the total respondents would like to recommend a Pap smear test to other women. This difference shows that though women are aware about the importance of Pap smear test, they are neglecting and not practicing the test.

Another important finding was that out of those respondents who have adequate practice of Pap smear test, some of those don't have adequate knowledge of CC or Pap smear test. This could be due to the opportunistic behavior of the women. They may have gone for a Pap smear test as it is a requirement in some of the clinics; some just had the test because it is required regardless of the fact that they are not even sure of why the test is being conducted. And some go for the test because it was free of cost in some screening program conducted by health care centers.

### **Strengths and Limitations:**

The first limitation involves the generalizability of the study. There are many women with different socio-demographic characteristics living in Nepal. This study was carried out in a small group of women residing in Dharan-14, so the result could not be generalized with overall population of Nepal. Another limiting factor in generalizability was introduced by the sample size. The sample size in this study was low due to technical and economical restrictions, thereby limiting the generalizability of the study. The questions related to barriers for not practicing Pap smear test were not included in the study due to which the study was not able to generate many important findings.

Some of the identified strengths of the study were that this was the first study of its kind conducted in Dharan-14, so its result could help the health care planners in that area. This study not only generates data to meet the aims and objectives of this study, but also would potentially highlight other areas for further research.



## CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

### **Conclusion:**

Among 100 women interviewed, only 29% had education above secondary level. Though 42% women had adequate knowledge of Pap smear test, only 38% had adequate attitude of Pap smear test, and practice of Pap smear test was even much lower i.e. only 13%. Findings of this study showed that higher education had significant relation with adequate knowledge and attitude of Pap smear test. Health personnel as the source of information of cervical cancer had significant role on adequate practice of Pap smear test.

### **Recommendations:**

- The findings showed that only 30% of the respondents got information from health personnel, so more awareness program regarding CC and Pap smear test can be conducted by the health personnel in community level which insures dissemination of correct information.
- Women should be encouraged to take responsibility for their own health and be active participants in the screening program.
- Efforts to reduce CC mortality should focus on reaching out to the women all over the country and provide health education, counseling as well as community based interventions.
- Opportunistic screening can increase screening rates. Health care providers should recommend for CC screening when women come for other gynecological examination or while seeking reproductive healthcare and disseminate information that focus on educating women.
- Mobile health camps and outreach clinics should be accommodated to remote areas to make CC screening available in those areas.

- The government should work on national level by increasing health care budget and putting priority on CC prevention and screening.
- Finally, a larger scale nationwide study is recommended to cover all the women. Coverage of a large sample would be acceptable for generalization. Experimental study to find out effects of teaching about Pap smear test could also be studied.

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## **APPENDICES**



## APPENDIX I: ENGLISH AND NEPALI VERSION QUESTIONNAIRES

नमस्कार मेरो नाम प्रियंका श्रेष्ठ हो र म पब्लिक हेल्थमा मास्टर्स गर्दैछु । म महिलाहरुमा Pap Smear Test सम्बन्धि ज्ञान, धारणा र अभ्यास बारेमा धरान-१४ मा अनुसन्धान गर्दैछु । तपाईंको सहभागिताको लागि म कृतज्ञ हुनेछु । यो अनुसन्धानलाई करिब १० देखि २० मिनेट मात्र लाग्नेछ ।

यो अनुसन्धानमा भाग लिने नलिने तपाईंले निर्णय लिन सक्नुहुनेछ । तपाईंको सोचाई अमूल्य छ । तपाईंले दिनुभएको जानकारी गोप्य राखिनेछ र अनुसन्धानको लागि मात्र प्रयोग गरिनेछ ।

केही प्रश्न छ भने तपाईंले सोध्न सक्नुहुनेछ ।

अन्तरवार्ता तपाईंले विचमा पनि छोड्न सक्नुहुनेछ ।

के म अन्तरवार्ता शुरु गर्न सक्छु ?

.....

हस्ताक्षर

## अनुसन्धान प्रश्नावली

### खण्ड (क)

#### व्यक्तिगत विवरण

१. उमेर :-

२. जातजाति

क) ब्राहमण                      ख) नेवार                      ग) क्षेत्री                      घ) अन्य

३. धर्म

क) हिन्दू                      ख) क्रिश्चियन                      ग) बौद्ध                      घ) अन्य

४. विवाह

क) विवाहित                      ख) अविवाहित

५. पेशा

क) गृहिणी                      ख) कृषि                      ग) नोकरी                      घ) अन्य

६. परिवारको प्रकार

क) संयुक्त                      ख) एकल

७. शैक्षिक योग्यता

क) निरक्षर                      ख) साक्षर

८. परिवारमा कसैलाई पाठेघरको क्यान्सर भएको

क) थियो                      ख) थिएन

### खण्ड (ख)

#### पाठेघरको क्यान्सर सम्बन्धी ज्ञान

१. के तपाईंले पाठेघरको क्यान्सरको बारेमा सुन्नुभएको छ ?

क) छ                      ख) छैन

२. छ भने कुन श्रोतबाट थाहा पाउनुभएको हो ?

क) रेडिया                      ख) टि.भी.                      ग) स्वास्थ्यकर्मी                      घ) अन्य

३. के पाठेघरको क्यान्सर सरुवा रोग हो ?

क) हो                      ख) होइन                      ग) थाहा छैन

४. के पाठेघरको क्यान्सर मृत्युको प्रमुख कारण हो ?

क) हो                      ख) होइन                      ग) थाहा छैन

५. के परिवारमा कसैलाई पाठेघरको क्यान्सर भएमा त्यो महिलालाई पाठेघरको क्यान्सर लाग्ने संभावना बढी हुन्छ ?
- क) हुन्छ                      ख) हुदैन                      ग) थाहा छैन
६. के पहिले नै पाठेघरको क्यान्सर भएर निको भइसकेको महिलालाई फेरी पाठेघरको क्यान्सर हुने सम्भावना बढि हुन्छ ?
- क) हुन्छ                      ख) हुदैन                      ग) थाहा छैन
७. के एच.पि.भी. भाइरसको संक्रमणले पाठेघरको क्यान्सर हुने सम्भावना बढि हुन्छ ?
- क) हुन्छ                      ख) हुदैन                      ग) थाहा छैन
८. के पाठेघरको मुखबाट धेरै मात्रामा सेतो पानी बग्नु पाठेघरको क्यान्सरको लक्षण हो ?
- क) हो                      ख) होइन                      ग) थाहा छैन
९. के पाठेघरको मुखबाट रगत बग्नु पाठेघरको क्यान्सरको लक्षण हो ?
- क) हो                      ख) होइन                      ग) थाहा छैन
१०. के पाठेघरको क्यान्सरको रोकथाम गर्न सकिन्छ ?
- क) सकिन्छ                      ख) सकिदैन                      ग) थाहा छैन

**खण्ड (ग)**

**Pap Smear test सम्बन्धी ज्ञान**

१. के तपाईंले Pap Smear Test को बारेमा सुन्नु भएको छ ?

- क) छ                      ख) छैन

यदि छ भने,

२. Pap Smear Test गर्नुको प्रमुख उद्देश्य के हो ?

- क) पाठेघरको क्यान्सर शुरुको अवस्थामा पत्ता लगाउन  
 ख) पाठेघरको क्यान्सरको कारण पत्ता लगाउन  
 ग) पाठेघरको क्यान्सरको उपचार गर्न  
 घ) थाहा छैन

३. Pap Smear Test कहिलेबाट शुरु गर्नुपर्छ

- क) शारीरिक सम्बन्ध शुरु हुनुभन्दा अगाडी  
 ख) शारीरिक सम्बन्ध शुरु भएको १ वर्ष अगाडी  
 ग) शारीरिक सम्बन्ध शुरु भएको २ वर्ष अगाडी  
 घ) थाहा छैन

४. Pap Smear Test कति कति समयको फरकमा गर्नुपर्छ ?

- क) १ वर्ष                      ख) २ वर्ष                      ग) ३ वर्ष                      घ) थाहा छैन

५. Pap Smear Test गर्ने उपयुक्त समय कहिले हो ?

- क) महिनावारी भएको बेलामा  
ख) महिनावारी भएको १०-२० दिन भित्रमा  
ग) महिनावारी हुनुभन्दा अगाडी  
घ) थाहा छैन

**खण्ड (घ)**

**Pap Smear Test सम्बन्धी धारणा**

१. के तपाईंलाई पाठेघरको क्यान्सर एउटा ठूलो समस्या हो जस्तो लाग्छ ?

- क) लाग्छ                      ख) लाग्दैन                      ग) थाहा छैन

२. के Pap Smear Test पाठेघरको क्यान्सर शुरुको अवस्थामा पत्ता लगाउन उपयुक्त हुन्छ?

- क) हुन्छ                      ख) हुदैन                      ग) थाहा छैन

३. तपाईंले कहिले Pap Smear Test गर्नेबारे सोच्नुभएको छ ?

- क) छ                      ख) छैन

४. के तपाईंलाई Pap Smear Test गर्दा दुखाई हुन्छ जस्तो लाग्छ ?

- क) लाग्छ                      ख) लाग्दैन                      ग) थाहा छैन

५. के तपाईंलाई Pap Smear Test गर्नु हाम्रो धर्म विरुद्ध हो जस्तो लाग्छ ?

- क) लाग्छ                      ख) लाग्दैन                      ग) थाहा छैन

६. के तपाईंलाई Pap Smear Test गर्दा पाठेघरको क्यान्सरबाट बच्न सकिन्छ जस्तो लाग्छ?

- क) लाग्छ                      ख) लाग्दैन                      ग) थाहा छैन

**खण्ड (ङ)**

**Pap Smear Test सम्बन्धी अभ्यास**

१. के तपाईंले कहिल्यै आफ्नो डाक्टरहरूलाई आफूलाई Pap Smear Test गर्न सल्लाह दिन लगाउनु भएको छ?

- क) छ                      ख) छैन

२. के तपाईले कहिल्यै Pap Smear Test गर्नु भएको छ?

क) छ

ख) छैन

३. छ भने, के तपाईले डाक्टरको सल्लाह अनुसार समय समयमा Pap Smear Test गर्नुभएको छ ?

क) छ

ख) छैन

४. के तपाई अरु महिलाहरुलाई पनि Pap Smear Test गर्ने सल्लाह दिनुहुन्छ ?

क) दिन्छु

ख) दिदिन

(English translation)

**INFORMED CONSENT**

Hello. My name is Priyanka Shrestha and I am doing my Master's in Public health. I am conducting a survey about knowledge, attitude, and practice regarding Pap smear test in ward no-14, Dharan. I will appreciate your participation in this survey. The information you provide will help to know the knowledge, attitude, and practice regarding Pap smear test. The survey usually takes between 10 and 20 minutes to complete.

Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, I hope that you will participate in this survey since your views are important.

You will not have to financially support this survey.

At this time, do you want to ask me anything about the survey? You may leave the interview in between if you want to.

May I begin the interview now?

.....

Signature

**Questionnaire:**

**Part 1: Socio-demographic data**

1. Age.....

2. Caste

- a. Brahmin
- b. Chhetri
- c. Newar
- d. Others

3. Religion

- a. Hindu
- b. Christian
- c. Buddhist
- d. Others

4. Marital status

- a. Married
- b. Unmarried
- c. Divorced
- d. Widow

5. Occupation

- a. Housewife
- b. Agriculture
- c. Service
- d. Others

6. Family structure

- a. Joint family
- b. Nuclear family

7. Educational status

- a. Literate
- b. Illiterate

If literate, which level.....

8. Do you have family history of cancer?

- a. Yes
- b. No





### **Part 3: Knowledge regarding PAP Smear test**

1. Have you heard about Pap smear test?
  - a. Yes
  - b. No
  - c. Don't know
2. What is the reason for doing Pap smear test?
  - a. For early detection of cervical cancer
  - b. For treatment of cervical cancer
  - c. Don't know
3. When should Pap smear test be started?
  - a. Before any sexual relationship
  - b. After 1 year of sexual relationship
  - c. After 2 years of sexual relationship
  - d. Don't know
4. In how many years interval Pap smear test should be done?
  - a. 1 year
  - b. 2 years
  - c. 3 years
  - d. don't know
5. When is the best time for Pap smear test
  - a. During menstruation period
  - b. Immediately after menstrual period
  - c. 10-20 days after first day of last menstrual period
  - d. Don't know

### **Part 4: Attitude regarding Pap smear test**

1. Do you think cervical cancer is a major health problem?
  - a. Yes
  - b. No
  - c. Don't know
2. Do you think Pap smear test is good for early detection of cervical cancer?
  - a. Yes
  - b. No
  - c. Don't know
3. Have you ever thought of going for Pap smear test?
  - a. Yes
  - b. No
  - c. Don't know

4. Do you think Pap smear test is painful?

a. Yes

b. No

c. Don't know

5. Do you think doing Pap smear test is against our religion?

a. Yes

b. No

c. Don't know

6. Do you think Pap smear test can prevent from cervical cancer?

a. Yes

b. No

c. Don't know

**Part 5: practice regarding Pap smear test**

1. Have you asked your physician to suggest you Pap smear test?

a. Yes

b. No

2. Have you gone for Pap smear test?

a. Yes

b. No

3. If yes, are you doing Pap smear test timely as recommended?

a. Yes

b. No

4. Do you recommend other women to do Pap smear test?

a. Yes

b. No

# APPENDIX II: LETTER FROM DEPARTMENT OF COMMUNITY MEDICINE



Faculty of health sciences  
Your reference: -  
Our reference: -  
Date: 05.12.2018  
Exempt from public disclosure: off. §  
18,1 ff. fol. § 18,1 nr. 1

## Confirmation

To whom it may concern: Priyanka Shrestha (b. 06/07 1987) is an active full time student at the Master's degree programme in Public Health at the Department of community medicine / Faculty of health sciences / UiT The arctic university of Norway. Under the supervision of professor Jon Øyvind Odland she has been granted funding up to 10.000NOK for data collection in Nepal for her master's thesis work. Her master's thesis project has been approved by the MPH-programme.

Topic of master's thesis:

"Knowledge, Attitude and Practice regarding PAP smear test among women in ward no-14, Dharan"

Sincerely,

For Gisle Lorentzen  
Higher executive officer

tor.g.lorentzen@uit.no  
+47 77 64 69 24



UNIVERSITY OF TROMSØ  
Faculty of Health Sciences  
Department of Community Medicine  
N-9037 TROMSØ





**APPENDIX III: ETHICAL APPROVAL LETTER FROM NEPAL HEALTH  
RESEARCH COUNCIL**



**Nepal Health Research Council**  
Estd. 1991

Ref. No. : 883

29 January 2014

**Ms. Priyanka Shrestha**  
Principal Investigator  
University of Tromsø  
Norway

Ref: **Approval of Research Proposal entitled Knowledge, attitude and practice regarding PAP smear test among women in ward no 14, Dharan**

**Dear Ms. Shrestha,**

It is my pleasure to inform you that the above-mentioned proposal submitted on 10 December 2013 (**Reg. no. 195/2013** please use this Reg. No. during further correspondence) has been approved by NHRC Ethical Review Board on 26 January 2014 (2070-10-12).

As per NHRC rules and regulations, the investigator has to strictly follow the protocol stipulated in the proposal. Any change in objective(s), problem statement, research question or hypothesis, methodology, implementation procedure, data management and budget that may be necessary in course of the implementation of the research proposal can only be made so and implemented after prior approval from this council. Thus, it is compulsory to submit the detail of such changes intended or desired with justification prior to actual change in the protocol.


If the researcher requires transfer of the bio samples to other countries, the investigator should apply to the NHRC for the permission.

Further, the researchers are directed to strictly abide by the National Ethical Guidelines published by NHRC during the implementation of their research proposal and submit progress report and full or summary report upon completion.

As per your research proposal, the total research amount is NRs 1,65,000.00 and accordingly the processing fee amounts to NRs 9,810.00. It is acknowledged that the above-mentioned processing fee has been received at NHRC.

If you have any questions, please contact the research section of NHRC.

Thanking you,


  
.....  
**Dr. Guna Raj Lohani**  
Executive Chief




APPENDIX IV: PERMISSION LETTER FOR FIELD WORK (WARD NO. 14,

DHARAN)

"शिक्षा, स्वास्थ्य, पर्यटन तथा व्यापारिक पूर्वाधार, बहुसांस्कृतिक, आवासीय समृद्ध अहट"



## धरान नगरपालिका



१४ नं. वडा समितिको कार्यालय

धरान नगरपालिका

पत्र संख्या :-  
चलानी नं. :- २३/०६०१०६१

मिति :- २०७०/०८/३०  
फोन नं. :-


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प्रति प्रियंका श्रेष्ठ  
धरान - १४

विषय: अनुसन्धान शिक्षाको लागि अनुमति प्रदान गरीएको सम्बन्धमा

उपरोक्त सम्बन्धमा (अनुसन्धान) को प्रोत्साहन गर्ने स्थिति अन्तर्गत न. न.स. धरान - १४ निवासी सुश्री प्रियंका श्रेष्ठ जी. धरान - १४ मा नि. वि. वि. उपर अनुसन्धान शिक्षाको लागि अनुमति प्रदान गरीएको छ ।

अनुसन्धान विषय -  
"धरान - १४ का महिलाहरूमा PAP smear test सम्बन्धि ज्ञान धारण रक्षा अभियान"

  
२०७०/०८/३०  
वडा सचिव  
१४ नं. वडा समितिको कार्यालय