

## Awareness and Risk factors of Cervical Cancer among Rural Women of Himachal Pradesh, India

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### Abstract

*Introduction:* Cervical cancer is the cancer arising from cervix and is the most common gynecological cancer in women. It's the most common cause of cancer death in developing countries, whereas in developed countries it is markedly reduced as a result of massive screening and early identification. The present study aims at exploring the awareness and risk factors of cervical cancer among rural women in the reproductive age group.

*Methods:* A descriptive survey was conducted among hundred women of the age group 15 to 49 years in selected villages of district Sirmour, Himachal Pradesh, India, selected by one stage clustering of accessible villages. The data was collected by semi-structured interview.

*Result:* Among the 100 women who participated in the study only 34 had heard of the term cervical cancer and five had heard regarding the screening of cervical cancer. The level of awareness regarding cervical cancer and its prevention was good in three, average in 66 and poor in 31 women. The mean awareness score was 10.43+/- 4.13 (max score 24). The risk factors of cervical cancer common among the sample are, no screening (100), diet low in fruits and vegetables (52), overweight (40), history of more than two full term pregnancy (30), low income (19), pregnancy before 19 years (9), history of genital infection (9), sexual activity before 17 years (5), use of oral contraceptives for more than one year (4), poor genital hygiene (2), and smoking (1).

*Discussion:* The findings of the study reveal that the awareness of cervical cancer is inadequate in rural women and many known risk factors of cervical cancer prevalent among them. The findings of the study indicate the need for creating awareness regarding cervical cancer and promoting screening and health promotion activities among the women.

**Keywords:** Cervix; Cervical Cancer.

### Introduction

Cervical cancer is the most common gynecologic cancer in women and is the fourth most frequent cancer in women with an estimated 530,000 new cases in 2012 representing 7.9% of all female cancers.

Approximately 90% of the 270,000 deaths from cervical cancer in 2015 occurred in low- and middle-income countries [1]. India represents 26.4 per cent of all women dying of cervical cancer globally, with China, Bangladesh, Pakistan, Indonesia and Thailand showing high death incidence according to cervical cancer global crisis card released by the

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cervical cancer free coalition. According to National Cancer Registry Programme (NCRP) report in 2009 the number of cervical cancer cases were 101938 which has increased to 107690 in 2012 [2].

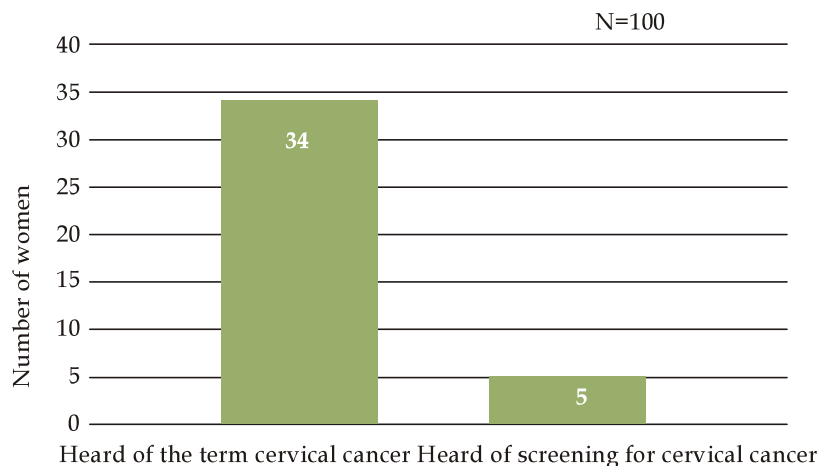
A study was conducted in the hilly areas of Himachal Pradesh on risk factors of cervical cancer includes 226 newly diagnosed cases. Multiple logistic regressions analysis identified seven risk factors significantly associated with the disease. Risk factors such as poor genital hygiene, age at birth of first child <19 years, early marriage, illiteracy, multiparity, and low socioeconomic status were highly prevalent in the study subjects and were found to be significantly associated with cancer cervix [3].

The high mortality rate from cervical cancer globally got reduced as a result of early diagnosis, effective screening and treatment programmes. WHO recommends a comprehensive approach to cervical cancer prevention and control that includes multi-disciplinary interventions across the life course. Community education, social mobilization, vaccination, screening, treatment and palliative care are needed to improve cervical cancer control who.

Creating awareness regarding cervical cancer and its prevention should be a priority intervention which facilitate early diagnosis and treatment. The present study aims to identify the awareness and prevalence of risk factors of cervical cancer among the women of reproductive age group in selected villages of Sirmour dist., Himachal Pradesh. Identifying the areas of knowledge deficit and the common risk factors which help to develop a need based intervention to create awareness.

## Methods

The study used an explorative survey design and data was collected from hundred women of



**Fig. 1:** Distribution of the sample based on information regarding cervical cancer

reproductive age group in selected villages of Sirmour dist., Himachal Pradesh during February-March 2017. One stage cluster sampling was used to select villages. All the women of reproductive age group who were present during data collection and willing to participate were included in the study. Women who underwent hysterectomy were excluded. The data was collected from women of three randomly selected villages to obtain the required sample size. A semi-structured interview schedule developed by the investigators was used to collect background information, awareness and risk factors of cervical cancer. Weighing machine and scale was used to measure weight and height. Reliability and validity of the tools were established prior to data collection. Data collection for the main study was conducted after a pilot study on a sample of 10 selected from another village.

After obtaining administrative permission data was collected by door to door survey. Participants were informed about the purpose of the study and written consent was obtained from each participant. The anonymity and confidentiality of the participant's information was maintained throughout. Data were collected on risk factors of cervical cancer via semi - structured interview schedule and structured interview method were used to collect data regarding awareness of cervical cancer. Height measurement was done via height scale and weight measurement via weighing machine. After completing the data collection procedure, the health education was given to all participants on prevention of cervical cancer.

## Results

### Background information

The participants were of the age group 15 to 49 years and the mean age was 32+/-9.61years. Seventy-

three percentage of them had education less than secondary and five of them had no formal education. About 73% of them were homemakers and 20 of them students. Monthly family income was less Rs.15000/month for 79% of them and 80% of them were married.

*Awareness regarding cervical cancer*

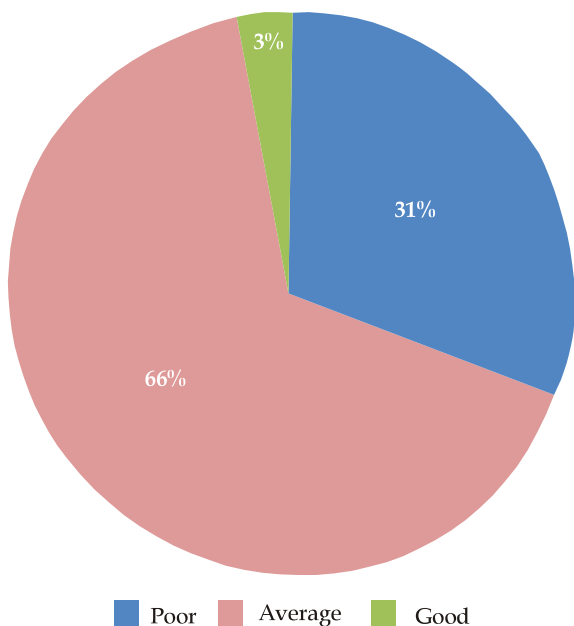
Among the 100 women who participated in the study only 34 heard of the term cervical cancer and

five had heard of screening for cervical cancer (Fig. 1). Among the 34 women who heard of cervical cancer the source of information was health workers in 24 and mass media in 10 women.

The level of awareness was good only in three women. It was average in 66% and poor in 33% of women (Fig 2). The mean awareness score was 10.43±4.13 (Max score 24). The awareness score was less than 55% in all the domains and it was less than 50% in general aspects, screening and prevention (Table 1).

**Table 1:** Mean standard deviation and mean percentage of awareness on cervical cancer N=100

Categories	Maximum Score	Lowest Score	Highest Score	M±SD	Mean score percentage
General	2	0	2	0.61±0.69	30.5
Risk factors	5	0	5	2.68±1.34	53.6
Symptoms	4	0	5	2.10±1.21	52.5
Screening	4	0	4	1.45±1.15	36.2
Prevention	9	0	4	3.61±1.84	40.1
Total score	24	0	23	10.43±4.13	43.45



**Fig. 2:** Distribution of sample based on level of awareness regarding cervical cancer

*Association between awareness and selected socio-demographic variables*

No association was observed between cervical cancer and selected variables like age, monthly income, education, occupation and marital status.

*Risk factors of cervical cancer*

The prevalence of known risk factors of cervical cancer was explored using a structured questionnaire and bio-physiological measurement (Table 3).

The mean BMI is 24.3 with standard deviation 4.67. The mean About 40% of the women were overweight and the diet was low in fruits (52%) and vegetables (20%). None of them were screened for cervical cancer. Among the nine women with history of genital infection, three gave the history more than two infections per year. Only one women gave history of smoking, but 29 of them are exposed to smoking passively. Though none of them gave family history of cancer, there was history of breast (5%) and lung cancer in the family (3%).

**Discussion**

Awareness is one of the most important component of prevention of any condition. Most of the studies conducted on awareness regarding cervical cancer conducted in India and other developing countries shows that the awareness is inadequate [4,5]. The findings of the present study also shows inadequate awareness regarding cervical cancer in majority of the women. The knowledge is inadequate in all the aspects of cervical cancer and only 34% had heard of the term cervical cancer and

**Table 2 :** Distribution of sample based on awareness of specific aspects of cervical cancer

N=100

S. No.	Item	%
1.	HPV infection can transmitted to one person to another through sexual contact	73
2.	Smoking can increase the risk of cervical cancer	70
3.	Screening should be started at age of 21 years	66
4.	Cervical cancer is treatable disease	64
5.	Sexual activity with multiple sexual partners were at higher risk for developing cervical cancer	62
6.	The most common symptom of cervical cancer is post-coital bleeding	56
7.	HPV virus is responsible for cervical cancer	55
8.	Consumption of pork increase the risk of cervical cancer	52
9.	The main sign of cervical cancer that lead women to consult the doctor is blood stained or offensive discharge	51
10.	HPV vaccine can be used to prevent cervical cancer	48
11.	The 15-45 age group is more risk of cervical cancer	46
12.	Cancer is uncontrollable growth of cells	40
13.	Garlic in food used to prevent the cervical cancer	38
14.	HPV vaccine administered at age of 11-12 years	36
15.	Vitamin C and E prevent the cervical cancer	36
16.	Genital infection is risk factor of cervical cancer	35
17.	HPV testing is a method of screening for cervical cancer	34
18.	Broccoli can reduce the risk for cervical cancer	32
19.	Advance stage cancer can affect the urinary system	30
20.	Consumption of orange reduce the occurrence of cervical cancer	29
21.	Screening of cervical cancerrepeated after 3 years	28
22.	Avoidance of smoking prevent the cervical cancer	27
23.	Cervical cancer is abnormal cells on the cervix	21
24.	Pap smear screening used to confirm the cervical cancer	17

**Table 3:** Distribution of the sample based on risk factors of cervical cancer

S. No.	Risk Factors	%
1	Not screened for cervical cancer	100
2	Diet low in fruits	52
	Diet low in vegetables	20
3	Overweight	40
4	History of multiple full term pregnancy more than two	30
5	Low income	19
6	Pregnancy before 19 years	9
7	History of genital infection	9
	History of recurrent infection	5
8	Sexual activity before 17 years of age	5
9	History of oral contraceptive pills more than one year	4
10	Poor genital hygiene	2
11	Smoker	1
12	Family history of cervical cancer	Nil

only 5% heard of screening regarding cervical cancer. Less than 40% of the women responded correctly to items related to prevention of cervical cancer. None of them had undergone any screening for cervical cancer. The risk factors of cervical cancer found to be prevalent in the sample were diet low in fruits and vegetables (52%), overweight (40%) and history of multiple full term pregnancy more than two (30%). Risk factors like genital infections, sexual activity before 17 years, use of oral contraceptives, poor genital hygiene and exposure to smoking was also found among the sample.

The findings of the study disclose the need for creating awareness regarding cervical cancer and

its prevention among the women of hilly areas. Most of the women are homemakers (73%) and as only 10% of them got information through mass media. So they are less likely to be benefited by mass campaign through medias. This highlight the need for community based awareness programmes to reach the women in their villages. As many of the risk factors are also common, the intervention focusing on strategies to modify the risky behaviors like improving dietary habit, weight management, reproductive life planning, hygiene, prevention of smoking is also required. The present study throws lights into the need of rural Indian women living in hilly areas related to the prevention of cervical cancer.

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