

## “Study of awareness about early detection of cervical cancer by pap smear screening amongst women of Bhavnagar District”

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### Abstract

**Background:** Cervical cancer is one of the most common cancers in women worldwide. In India, cervical cancer is the most common woman-related cancer, followed by breast cancer. 80% of the new cervical cancer cases occur in developing countries, like India, which reports approximately one fourth of the world's cases of cervical cancer each year.

**Objective:** The primary objective is to find out the prevalence of awareness amongst women living in rural and urban areas, about the utility of Pap smear in early diagnosis of cervical cancer.

**Methodology:** This cross sectional study includes 200 women attending the OPD of Gynecology Department of Government Medical College, Bhavnagar, Gujarat from April 2015 to May 2016 of age group of 15 to 60 yrs. Among them 100 women were from rural area and 100 were from urban area. Written consent was taken from each participant, after explaining the aims and objectives of the study. Data was collected using a questionnaire including demographic characteristics, knowledge about cervical cancer and knowledge about Pap smear screening and completed by an interview with these participants.

**Result:** This study has shown that women in our region lack knowledge of cervical cancer and its prevention by early detection by Pap smear both in the rural as well as the urban areas. This study clearly conveys the message that the rural women's educational status need to be strengthened at all levels.

**Conclusion:** In conclusion, our results show that there was inadequate knowledge and practice among certain women groups, especially those above 30 years old, married at young age, and those with low education level. Some women also had a positive attitude, although they needed to have reassurances that could reduce the barriers. A well-organized cervical cancer screening programme providing the Pap-smear test through primary health care services is recommended: this should include raising awareness of women regarding risk factors, and overcoming barriers to having the test such as fear and embarrassment.

**Keywords:** Awareness, Cervical cancer, Pap smear.

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### Introduction

Most cervical cancer is caused by a virus called human papilloma virus (HPV). Human got HPV by having sexual contact with someone who is infected with HPV. There are many types of the HPV virus. Not all types of HPV cause cervical cancer. Some of them cause genital warts, but other types may not cause any symptoms.<sup>(1)</sup>

Most adults have been infected with HPV at some time. An infection may go away on its own. But sometimes it can cause genital warts or lead to cervical cancer. That's why it's important for women to have regular Pap tests. A Pap test can find changes in cervical cells before they turn into cancer. If you treat these cell changes, you may prevent cervical cancer.<sup>(2)</sup>

Cervical cancer, in women, is the second most common cancer worldwide, next only to breast cancer. In India, cervical cancer is the most common woman-related cancer, followed by breast cancer. Every year cervical cancer is diagnosed in about 500,000 women globally and is responsible for more than 280,000 deaths annually.<sup>(3)</sup> There is a wide variation in the incidence of cervical cancer across the globe. In the west, early detection through regular screening has aided to significantly control the prevalence of this

disease, thereby, lowering its incidence. In the last 50 years in the United States, the Pap smear tests have reduced the deaths related to cervical cancer by three-quarters. At one time cervical cancer was one of the most dreaded cancer and the leading causes of death in women in the United State but now it is the eighth most common cancer there. 80% of the new cervical cancer cases occur in developing countries, like India, which reports approximately one fourth of the world's cases of cervical cancer each year. This is not an incurable disease; it is rather a preventable one.<sup>(4)</sup> Early detection of pre-cancerous lesions by Pap smear screening and early initiation of treatment before they progress to invasive cancer, have been shown to significantly reduce mortality due to cervical cancer.

The Pap smear (Papanicolaou smear) is an effective, reliable and relatively inexpensive method of cervical cancer screening. Active participation of the target population is required for the success of the screening program. Therefore, it is important to know and analyze the reasons for non-willingness of women in participation in the screening programme. Various studies show wide variations in terms of participation, knowledge and attitudes of women towards cervical cancer screening by Pap smear. Not much has been

studied about the factors that prevent Indian women from taking up screening. Therefore, understanding the factors associated with the underutilization of Pap smear screening is important in order to increase overall cancer screening rates.<sup>(5,6)</sup> Therefore, a study was undertaken using face-to-face in-depth interviews, to investigate the attitudes, beliefs and knowledge about cervical cancer screening in Indian women. This report includes the findings of the attitude, knowledge, beliefs and awareness of cervical cancer and Pap smear of Indian women who live in the region of Lucknow, both in rural and urban areas.

### Materials and Methods

This cross sectional study was conducted at Government Medical College and Attached General Hospital, Bhavnagar, Gujarat From April 2015 to May 2016. It is done amongst women living in different rural and urban areas of Bhavnagar district.

Sample size: The sample size was 100 women (Urban) and 100 women (Rural).

Age Group: Women between 15-60 yr.

The household was selected with random table number method. In households with more than one female, the eldest one was selected for the study.

Data was collected using a questionnaire including demographic characteristics, knowledge about cervical cancer and knowledge about Pap smear screening and completed by an interview with the woman, after taking their written informed consent.

Data as per the questionnaire was collected, from both the rural and urban areas, to evaluate the prevalence of knowledge regarding cervical cancer and the utility of Pap smear for its early diagnosis. Then evaluation was done to understand the reasons of inhibitions and unawareness.

The questionnaire included questions about participant's demographic and fertility characteristics, 14 questions to estimate the knowledge and 10 statements related to the attitude towards screening of cervical cancer, after hearing about it. The knowledge questions were asked to those who already knew about Pap smear while the attitude statements were put up to all. Those who had never heard anything about Pap smears earlier, were first briefed about it by the researcher before bringing up the attitude questions. Knowledge questions had three options and to calculate a knowledge score, correct answers were given score 1 and incorrect or "unsure" answers were scored 0. Attitude statements had two options and were rated as 1 or 2. In order to get a Total Knowledge & Attitude Score, the scores were added and then taken on a 0 to 100 scale. Higher score reflects a higher knowledge or better attitudes about Pap smear. Total knowledge was assessed in three grades: scores 0-33.3 "weak", scores of 33.4- 66.6 "medium" and scores of 66.7 or higher "good". Attitude score of 0-50 was labeled "negative attitude" and 50 and above as "positive attitude".

This questionnaire was put up to 50 women in a rural area and 50 women in urban area, after taking their written consent. We also made them aware of its importance in early diagnosis of cervical cancer.

### Results

**Table 1: Demographic characteristic of the study Populations**

		Rural (n)(%)(n=100)	Urban (n)(%)(n=100)
Age (Yrs.)	≤20	12	32
	21-30	46	35
	>30	42	33
Marital status	Married	85	51
	Unmarried	15	49
Contraception	Withdrawal	29	-
	Hormonal methods	20	05
	Condom	30	56
	IUD (Copper T)	04	30
	Others	-	-
	Menopause	17	13
Gravid	0	11.33	14.4
	1-3	84.9	51.9
	≥3	3.77	33.7
Occupation	Housewife	73.3	53
	Working	20	42
	Student	6.66	25
Education	Illiterate	47.7	-
	Primary School	8	05
	High school	30	35
	College	13.3	60

**Table 2: Age wise distribution of participants**

Age group	Overall	Urban	Rural
<20 yr	22	35	09
20-30 yr	39	34	39
>30 Yr	39	31	52

Mean age of participants is 34.5 yr.(Table 2).

Majority of Respondents are Married.(Table 3).

**Table 3: Distribution of Respondents according to marital status**

Marital status	Overall	Urban	Rural
Married	70	49	21
Unmarried	30	51	79

**Table 4: Awareness about cervical cancer and its early screening**

		Rural (n)(%)(n=100)	Urban (n)(%)(n=100)
Heard about cervical cancer	Yes	19	58
	No	81	42
Knowledge of risk factors for cervical cancer (multiple options)		(out of 19 people who knew)	Out of 58 people who had heard)
	Sexually transmitted disease	4	31
	Smoking	6	20
	Multiple partners	8	40
	Early age of marriage	9	8
Heard about early screening by pap smear	No knowledge	6	7
	Yes	10	32
Source of on pap smear (multiple option)	No	90	68
		Out of 10 who had heard)	(Out of 32 who had heard)
	Relatives	2	8
	Friends	-	10
	Media	-	-
	Gynecologist	9	15
	Mass media	5	25
	Newspaper	-	20
	Internet	-	5
	Television	3	12
	Family physician	-	10
	Nurse	10	5
others	-	-	
Knowledge of cervical cancer vaccine	Yes	0	20
	No	100	80

**Table 5: Knowledge about Risk Factors of cervical cancer**

	Overall(%)	Urban(%)	Rural(%)
Knowledge about cervical cancer as well as Risk	31	15	48
Knowledge about cervical cancer	07	02	12
No Knowledge about cervical cancer	62	83	40

**Table 6: Knowledge about Pap smear For Early screening**

	Overall(%)	Urban(%)	Rural(%)
Knowledge about Pap smear For Early screening	71	30	08
No Knowledge about Pap smear For Early screening	79	70	92

**Table 7: Knowledge about Cervical cancer vaccine**

	Overall(%)	Urban(%)	Rural(%)
Knowledge about Cervical cancer vaccine	01	15	0
No Knowledge Cervical cancer vaccine	99	85	100

**Table 8: Frequency distribution of responses to knowledge statements among women who had heard about Pap smear R= out of 10 (rural) U= out of 32 (urban)**

	Yes		No	
	Rural (%)	Urban (%)	Rural (%)	Urban (%)
Was it painful to get a pap smear done	57	54	43	46
Was the procedure unpleasant or embarrassing	82	67	18	33
Was it difficult to take out time to get a pap smear done	26	37	74	63
Was it difficult to reach a pap smear clinic	56	48	44	52
Was business or prioritizing other things, a barrier to have a Pap smear	30	36	70	74
Do you think that pap smear was unnecessary without the presence of any signs or symptoms	62	56	38	44
Was pap smear screening an expensive affair	54	26	46	74
Are you afraid of a positive result after getting a pap smear done	66	37	33	63
Is it uneasy talking about cancer	28	43	72	57
Are you afraid of getting detected with earl signs of cancer	83	75	17	25

**Table 9: Knowledge of the respondents about Utility of Pap smear**

Knowledge of the respondents about Utility of pap smear	Overall(%)	Urban(%)	Rural(%)
Good	09	75	05
Medium	06	15	05
Poor	85	10	95

**Table 10: Frequency of agreement with each of attitude statements about Pap smear**

	Yes		No	
	Rural (%)	Urban (%)	Rural (%)	Urban (%)
Was it painful to get a pap smear done	57	54	43	46
Was the procedure unpleasant or embarrassing	82	67	18	33
Was it difficult to take out time to get a pap smear done	26	37	74	63
Was it difficult to reach a pap smear clinic	56	48	44	52
Was business or prioritizing other things, a barrier to have a Pap smear	30	36	70	74
Do you think that pap smear was unnecessary without the presence of any signs or symptoms	62	56	38	44
Was pap smear screening an expensive affair	54	26	46	74
Are you afraid of a positive result after getting a pap smear done	66	37	33	63
Is it uneasy talking about cancer	28	43	72	57
Are you afraid of getting detected with early signs of cancer	83	75	17	25

**Table 11: Attitude of Respondents towards Pap smear**

Attitude of Respondents	Overall(%)	Urban(%)	Rural(%)
Positive	60	70	54
Negative	40	30	46

## Discussion

Cervical cancer continues to be a major threat for women worldwide. Developed countries that have implemented early detection techniques like Pap-smear show a marked decrease in its incidence. In present study the knowledge about cervical cancer and its screening by Pap smear, attitudes and beliefs pertaining to its screening and the inhibitions for not undergoing cervical cancer screening were identified. The findings matched similar studies and reflected that knowledge, attitude and beliefs of women with respect to cervical cancer screening had a huge influence on the screening behavior.<sup>(7)</sup>

The study showed that women were barely aware of the need and benefits of screening. Most had not heard about Pap smear screening for early detection of cervical cancer and thought that they did not need it as they were not at risk for developing cervical cancer.

Programmes for organized screening of cervical cancer for opportunistic/spontaneous screening involve substantial costs to provide for the associated infrastructure, manpower, consumables, follow-up, and surveillance. In our view, many low-income developing countries, like India currently have neither the financial and manpower resources nor the capacity in their health services to organize and sustain a screening programme of any sort. Low-income developing countries should consider planned investments in order to improve the

capacity of their health services to diagnose and treat cervical cancer precursors and early invasive cancers, before considering even limited screening programmes.

Our study proves that majority of women's have no knowledge about cervical cancer and Pap smear in both rural and urban area. This study hence also emphasizes on the need of strengthening the educational status of our women at all levels. Similar findings were reported by other national and international studies where literacy, socioeconomic status and age served as major factors.<sup>(8)</sup>

The other important barrier was lack of knowledge about the centers where Pap smears were done. Majority of the participants were also ignorant about the cost part of it and thought it to be an expensive affair. Some of women's feel pain during taking Pap smear that is also one factor so that they does not undergo for Pap smear.

## Conclusion

In conclusion, our results show that there was inadequate knowledge and practice among certain women groups, especially those above 30 years old, married at young age, and those with low education level. Some women also had a positive attitude, although they needed to have reassurances that could reduce the barriers. A well-organized cervical cancer screening programme providing the Pap-smear test

through primary health care services is recommended: this should include raising awareness of women regarding risk factors, and overcoming barriers to having the test such as fear and embarrassment.

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