

# Knowledge and understanding about cervical cancer, risk factors and prevention, among rural women in Anuradhapura, North Central Province of Sri Lanka: A questionnaire based survey.

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## Abstract:

This study was designed to assess the knowledge and understanding of cervical cancer, risk factors and prevention among women between 20 to 70 years in the Anuradhapura District (AD). A cross-sectional, questionnaire based survey was conducted during October 2011 - January 2012. Convenience sampling was applied.

A total of 700 women participated and analysis was done on 676 completed data sheets. Majority (89.6%) of the women were between 20-49 years. Majority (>88%) had secondary or higher education and correlation between education level and knowledge and understanding about cervical cancer was highly positive ( $r=0.9384$ ). Although majority of the women in this study sample had a high literacy rate, their awareness about cervical cancer risk factors and its prevention was poor. Almost 97% of the sample had heard about cervical cancer and 90% knew that it could be prevented. Nearly 86% of the sample was unaware about the risk factors for cervical cancer. Only 8% were aware of the correct risk factors. More than 50% were aware about the Well Women Clinics (WWC). Majority of women had mentioned television as their main source of information.

Cervical cancer is the second leading cause of cancer deaths among women in Sri Lanka. At the end of year 2007, the coverage of screening of the target age group was only 18% in Sri Lanka. Therefore, a greater effort to improve the awareness among women of reproductive age would result in their seeking preventive care for cervical cancer voluntarily.

**Key words:** Cancer of the cervix, Cervical cancer prevention, Psychosocial issue, Awareness about cancer

## Introduction

Cervical cancer is preventable if diagnosed early. Cancer cervix is the second commonest cancer among women worldwide. Worldwide cervical cancer amounts for about 500,000 new cases diagnosed per year, and 250,000 deaths occur worldwide annually of which 80% occur in developing countries<sup>1</sup>. In Sri Lanka the second most commonest cause of deaths due to cancer among women is cervical cancer, first being breast cancer. There were 881 documented deaths due to cervical cancer with a crude rate of 8.9 per 100,000 population in Sri Lanka in 2005<sup>2</sup>.

Cervix is easily accessible to histological or cytological investigations. Pre-cancer stage (cervical intra epithelial neoplasia -CIN) has a long latent period easily recognizable before development of cancer. Cervical cancer is curable if detected in an early stage as effective treatment is possible in CIN stage. "Screening" for cervical cancer consists

of examining asymptomatic women with the aim of diagnosing the disease at an early stage when a cure is possible. A cervical cancer screening programme was introduced in UK in 1988 and has resulted in reductions in cervical cancer incidence and mortality within a decade of introduction, causing an overall drop in mortality rates by 42% from 1987 to 1997 in UK<sup>3</sup>.

World Health Organisation (WHO) in 2002 has acknowledged that cervical cancer screening is the most effective approach for cervical cancer control at present in developing countries<sup>1</sup>. However, in many countries, including most middle-income developing countries, the existing programmes are failing to achieve a major impact on prevention of cervical cancer deaths<sup>1</sup>. To achieve an impact on reducing cervical cancer incidence a screening programme needs a high level of coverage of the target population. Women in the target population need to seek preventive care. For this they have to

be aware about screening for cervical cancer and its potential benefits.

Well Woman Clinic (WWC) services were established in 1996 in Sri Lanka, mainly to overcome the burden of cervical cancer<sup>4</sup>. Family Health Bureau is the central coordinating body of the programme while services are provided mainly by the Public Health staff island wide. A total of 70,986 attended the 482 functioning Well Woman's Clinics during 2006. At the end of year 2007, 611 WWCs' were functioning in the country<sup>4</sup>. There were 14 WWCs functioning in Anuradhapura district in 2005<sup>4</sup>. The percentage of women screened in the age groups 35 years -65 years was only 18% in 2007 in Sri Lanka<sup>4</sup>. High coverage of the target population is essential for a screening programme to make a major impact on cancer prevention. To improve coverage of the target population there should be strategies. One of the most important aspects is the awareness about cervical cancer, its prevention and the knowledge where to seek preventive care.

## Materials and Methods

A cross-sectional, self-administered, questionnaire-based survey was conducted during October 2011 - January 2012 in Anuradhapura district. Questionnaire was validated by a pilot study. Women between 20 years to 70 years were included. The questionnaire had three main components, knowledge and understanding about cervical cancer detection in early stage, where to seek cancer screening and risk factors for cervical cancer. For each of the above components the source of information was sought. The survey was conducted among university students, school teachers, unskilled labourers, non-academic staff of a university and

among community people of different social strata in Anuradhapura district. Therefore, convenience and snowball sampling techniques were applied. Oral consent was obtained. Ethical clearance was obtained from Ethics Review Committee, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka.

## Results

A total of 676 participants satisfactorily completed the questionnaire. Majority of women (88%) had secondary or higher education (Table 1). Correlation between education level and awareness about cancer was highly positive ( $r=0.9384$ ). Almost 97% of the study population had heard about cancer. Also 90% knew that the cancer can be prevented if diagnosed in the pre cancer stage (Table 2). Majority (89.6%) of the women were between 20-49 years. Knowledge and understanding about cancer varied with age and education. Women 60 years of age and older were least knowledgeable of cancer, risk factors and detection methods.

Almost 91% of the sample had heard about cervical cancer (CC) (Table 3). Only 65% of them knew that the early stage of the cervical cancer could be detected by attending a WWC (Table 3). Nearly 57% had heard about cervical cancer through TV programmes, 45% through newspapers, another 33% from the general public (Table 4).

Majority of women (85% ) were unaware about the risk factors for cervical cancer (Table 5). Of the 15% who believed that they knew the correct risk factors, only 8% had mentioned correct risk factors.

Table 1. Cross analysis of the age and the level of education of women who participated in the survey in Anuradhapura district.

Age group	None	Primary	Upto O/L	Upto A/L	Higher Education	Total	%
20-29	11	5	66	116	40	238	35.21
30-39	3	18	96	86	48	251	37.13
40-49	2	16	43	49	7	117	17.31
50-59	-	11	20	17	3	51	7.54
60-69	-	6	12	1	-	19	2.81
Total	16	56	237	269	98	676	
%	2.37	8.28	35.06	39.79	14.50		100.00

Table 2. Knowledge and understanding of cancer among women in Anuradhapura district

Education:	Heard of cancer				cancer can be prevented in early stage*		
	No	Yes	Total	Yes(%)	Yes	Yes(%)	
None	2	14	16	87.5	7	50	
Primary	12	44	56	78.5	28	63.6	
Upto O/L	3	234	237	98.7	214	91.4	
Upto A/L	4	265	269	98.5	253	95.4	
Higher education	0	98	98	100	92	93.8	
Total	21	655	676	96.8	594	90.6	

\*among who were aware of cancer

Table 3. Knowledge and understanding of cervical cancer (CC) and its prevention among women in Anuradhapura district

Education:	Heard of CC				CC can be prevented*		WWC to detect early stages		
	No	Yes	Total	Yes(%)	Yes	Yes(%)	No	Yes	Yes(%)
None	9	7	16	43.75	7	100.00	13	3	18.75
Primary	22	34	56	60.71	30	88.24	27	29	51.79
Upto O/L	21	216	237	91.14	214	99.07	71	166	70.04
Upto A/L	8	261	269	97.03	253	96.93	93	176	65.43
HE	1	97	98	98.98	92	94.85	32	66	67.35
Total	61	615	676	90.98	596	96.91	236	440	65.09

HE - Higher Education

\*-Among who were aware of cancer

Table 4: Sources of obtaining information about cervical cancer by women\* in Anuradhapura district

Education	News paper	TV programmes	Doctors	General Public	Others
None	3	1	1		
Primary	11	25	6	13	1
Upto O/L	80	128	64	70	33
Upto A/L	149	168	81	106	48
HE	63	66	26	35	20
Total	306	388	178	224	102
%	49.76	63.10	28.94	36.42	16.58

HE - Higher Education

\*Analysis of 615 participants

## Discussion

Incidence and mortality of invasive cancer have dramatically declined in Western Europe and North America since the introduction of cytologi-

-cal screening in the late 1960s. Cytological screening programmes have not been always successful in the developing countries including Sri Lanka. They failed to affect the incidence of mortality from the disease due to limited coverage,

**Table 5. Knowledge and understanding of risk factors for cervical cancer among women in Anuradhapura district**

Education	No	Yes	Total	Yes (%)
None	14	2	16	12.5
Primary	50	6	56	10.71
Upto O/L	207	30	237	12.65
Upto A/L	221	48	269	17.84
HE	85	13	98	13.26
Total	577	99	676	14.6

HE - Higher Education

poor quality Papanicolaou smears, lack of adequate follow up, unavailability of resources and unawareness among high risk women.

Family Health bureau report on cervical cytology screening states that, in 2006 almost three fourths (73.5%) of the women who attended the WWCs were subjected to cervical visualization. Of them, 91% had a Papanicolaou smear taken. However the results were reported only in 75% of the smears and this percentage has further decreased to 58% in 2007<sup>4</sup>. There are no published data on awareness among target population for cervical cancer screening and its prevention in Sri Lanka.

This study highlights the fact that knowledge and understanding about cervical cancer and the Well Women Clinics is closely associated with educational level of the woman. There was a highly positive correlation between the level of education and awareness about cervical cancer. The main sources of information were television and newspapers.

This questionnaire did not include how women's attitude or culture could affect their seeking for cancer screening. The aspects of attitudes and cultural beliefs too should be looked into for a cancer prevention programme to become successful. The attitudes and cultural beliefs may differ in oriental cultures like in Sri Lanka from western cultures.

The preventive programmes should essentially have a wider coverage of high risk populations seeking preventive care on their own. Therefore we should modify our strategies to be more sensitive towards different cultures, beliefs and attitudes in our local communities.

The aetiology of cervical cancer is strongly associated with Human Papilloma Virus (HPV) infection. Other risk factors include low socioeconomic class, multiple sexual partners and smoking. Of 99 women, who stated that they knew the causes for cervical cancer only 58 knew the correct causes for cervical cancer. It is interesting to note that only two women mentioned HPV as a risk factor for cervical cancer. Only 6% of the women mentioned multiple sexual partners as a risk factor. Majority of this study population was unaware that cervical cancer is caused by a HPV which is sexually transmitted. Coming to know that cervical cancer is sexually transmitted may itself become a social stigma to some. More than 92% of the respondents either didn't know the correct risk factors or have mentioned incorrect risk factors. There were 78 responses with incorrect risk factors mentioned, such as poor hygiene factors, induced abortions, drugs, family planning, injections, menstrual disorders, herpes, and obesity or inherited as causes for cervical cancer. Thus, it can be concluded that, on the whole, most women possessed either incorrect or inaccurate information. Since the sources of information were basically television or from the general public, the information is likely to be inaccurate or incomplete. Television programs by health professionals structured to appeal to the local populations of women, might prove to have a high impact.

This questionnaire did not include the awareness about HPV vaccination and attitude towards vaccination. There were few studies published regarding awareness of cervical cancer screening in under resourced countries. One study done in Nigeria, surveyed 195 female health workers and concluded that screening uptake was very poor due to a combination of inappropriate beliefs, misapprehension, and deficient knowledge<sup>5</sup>. Another study done among 401 Cameroonian healthcare workers concludes that creating awareness among healthcare workers on risk factors and current methods for cervical cancer screening, is a necessary step towards implementing effective prevention programs<sup>6</sup>. A study published in United Kingdom in 2003 among 1032 women attending WWC concludes that, in a relatively well educated sample, awareness and knowledge of HPV were poor and suggests that public education is urgently needed<sup>7</sup>.

Recently many have explored the potential for cervical cancer prevention in under resourced countries. These efforts have identified that

massive human and financial investments are needed to implement a cervical cancer screening and treatment programme effectively in under-resourced countries<sup>8</sup>. World Health Organization consultative report in 2002 on cervical cancer screening programme in a developing country recommends ensuring high levels of coverage of the target population, offering high quality, caring services, developing and monitoring good referral systems that ensure good patient follow-up and ensuring that the patients receive appropriate, acceptable and caring treatment in the context of informed consent<sup>1</sup>. This report further states that the target population will have to be educated about screening for cervical cancer, and the health professionals who serve them may need education and re-training. Sri Lanka thus should think seriously about introducing through the mass media, extensive awareness programs conducted by well trained health professionals.

Cervical cancer is the second leading cause of cancer deaths among women in Sri Lanka. At the end of 2007, a total of 611 WWCs were functioning in the country<sup>4</sup>. However, the target age group coverage had been only 18% island wide<sup>4</sup>. Majority of the sample (65%) was aware that WWCs provide cervical cancer preventive care. Although in this study sample majority of the women were of high literacy level and majority were aware of cervical cancer, their awareness about cervical cancer risk factors and its prevention was poor. Having heard about cervical cancer did not ensure accurate knowledge. Strategies for communicating accurate information about HPV transmission, prevention, detection and availability of screening for cervical cancer are needed. There should be greater effort to improve the awareness among women of reproductive age, in Anuradhapura district, so that they will seek preventive care for cervical cancer.

## Conclusion

Why should women continue to die when cervical cancer is curable if diagnosed early? It is imperative that Sri Lanka's cancer prevention programme should be more committed to take the message of this curable cancer to the target population. A target group that should be considered to be educated about cervical cancer prevention are the girls of secondary schools and at adolescent clinics. It is encouraging to note that many preventive programmes of communicable diseases and HIV had

been very successful in Sri Lanka. The need for political will, funding and commitment of health care professionals are needed to see that cervical cancer prevention is successful. A successful cancer prevention programme will reduce the cervical cancer deaths and disease incidence in the next decade in Anuradhapura and in Sri Lanka as a whole.

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