Valley International Journals
Open Access Journal

INTERNATIONAL JOURNAL OF MEDICAL SCIENCE AND CLINICAL INVENTIONS
Volume 2 issue 01 2015 page no. 624-632 ISSN: 2348-991X
Available Online At: http://valleyinternational.net/index.php/our-jou/ijmsci

Comparison Of Knowledge Attitude And Practices Regarding Cervical Cancer Screening And Hpv Vaccination, Between Employed And Unemployed Women: A Cross Sectional Study

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Abstract:

Background: *Cervical cancer is one of the leading causes of morbidity across the world and India. Even though well established methods of prevention and early detection of ca cervix are available, the utilization of these services is very poor, due to poor knowledge, attitude about these interventions. So understanding the knowledge, attitude and practices related to these vital interventions of various sections of the society is the need of the hour.*

Objective: *To assess and compare the knowledge, attitude and practices regarding cervical cancer screening and HPV vaccination between unemployed and employed women .*

Methodology: *Cross sectional study involving a group of randomly selected teachers, who represented the employed group and another group of unemployed women selected random sampling from OPD as representatives of unemployed women.*

Results: *A total of 113 unemployed women and 42 employed women. The proportion of women who were aware of the tests available for cervical cancer was 61.9% and41.6%, who were aware of vaccine was 47.6% and 31.9%) in employed and unemployed group respectively. The proportion of women who said that they recommend cervical cancer screening test (92.9% Vs 73.8%), said they will vaccinate their daughter (76.1% Vs 50%) was higher on unemployed women compared to employed women. The proportion of women who reported previous screening for cervical cancer was 7.1% in employed women and 14.2% in unemployed women.*

Conclusions: *The knowledge on cervical cancer, screening tests and HPV vaccination was poor in rural, unemployed women compared to employed women. But when appropriate knowledge and facilities are provided, the unemployed women are more likely to adopt theses interventions.*

INTRODUCTION:

Cervical cancer is the leading cause of cancer morbidity and mortality in women around the world. Worldwide cancer cervix affects about 16/100,000 women per year and kills about 9/100,000 per year globally. Developing countries

account for 85% of the estimated burden. [1-3] Cervical cancer is ranked as the most frequent cancer in women in India. India has a population of approximately 365.71 million women above 15 years of age, who are at risk of developing cervical cancer. The current estimates indicate approximately 132,000 new cases diagnosed and 74,000 deaths annually in India, accounting to nearly 1/3 rd of the global cervical cancer deaths.[1] There are a multitude of risk factors for cervical cancer. Virtually all cases of cervical cancer are attributable to persistent infection by certain strains of Human Papilloma Virus (HPV) especially HPV-16 and HPV-18. [2] Although cervical cancer can be detected at stages I or II with routine Papanicolaou tests, it is a slow growing disease in which women do not experience problematic symptoms until the later stages of manifestation when chances of survival are lower. [4] At any given time, about 6.6% of women in the general population are estimated to harbor cervical HPV infection. HPV serotypes 16 and 18 account for nearly 76.7% of cervical cancer in India. Warts have been reported in 2-25% of sexually transmitted disease clinic attendees in India; however, there is no data on the burden of anogenital warts in the general community. [5]

Methods of prevention, early detection and treatment are well established that include vaccination against HPV as primary prevention. Pap test for early identification and treatment of precancerous/cancerous lesion of uterine cervix include secondary prevention which can lead to better prognosis and survival. [6]

Despite the availability of cervical cancer screening in facilities in government hospitals and wide spread availability of HPV vaccination, the burden of cervical cancer presenting in very advanced stages of the disease is very high in India, due to poor utilization of these services. There are very few studies conducted in India, on knowledge, attitude and practices related to cervical cancer screening and HPV vaccination.[5-7] Considering the low utilization of both cervical cancer screening and HPV vaccination, it is vital to understand the KAP related aspects of various sections of Indian society for thorough

understanding of the reasons for poor utilization of services and institute appropriate health education interventions.

Hence this study was done with the objective to assess and compare the knowledge, attitude and practices regarding cervical cancer screening (Pap test) and HPV vaccination, between employed and unemployed women.

Objective:

To assess and compare the knowledge, attitude and practices regarding cervical cancer screening and HPV vaccination between unemployed and employed women

Methodology:

The study was a cross sectional study carried out in a tertiary care teaching hospital in Madurai, south India. A group of school teachers working in a randomly selected list of schools were taken as proxy for employed women. A randomly selected group of unemployed women attending OPD of the hospital were taken as the controls. Assuming the minimum proportion of any particular knowledge, attitude or practice as 50% and the minimum difference in proportion to be detected as 25%, with an alpha error of 0.05 and 80% power of study and the participant's ratio of 1:3, the required sample size was 148. So it was decided to include37 employed women and 111 unemployed women in the study. The study was approved by institutional human ethics committee of the institute, informed written consent was obtained from all the study participants after thoroughly explaining the objective of the study and ensuring the confidentiality of the data. Initially descriptive analysis of the study participants was done. The proportion of women giving the correct response to each component of the questionnaire was compared by cross tabulation. Odds ratio, was used as the parameter to assess the association between the employment status and each KAP component. Chi square test was used to assess the statistical significance and 95% CI were calculated for the odds ratio. IBM SPSS statistics, version 21 was used for statistical analysis.

RESULTS: A total of 113 unemployed women and 42 employed women were included in the final analysis after excluding poor responders.

Table1: Summary of the study participants

Category	Frequency	Percent
Unemployed women	113	72.9
Employed women	42	27.1
Total	155	100.0

The proportion of women who were aware of cervical cancer was very high (81%) in employed women, compared to unemployed women (57.5%). The number of women who were aware of the tests available for cervical cancer was 26(61.9%) in employed group and 47(41.6%) in unemployed group. The proportion of women aware of vaccine was also higher in employed group (47.6%), compared to unemployed group (31.9%).

Table 2: Descriptive analysis of knowledge, attitude and practice parameters

Parameter	**Employed Women (N=42)**	**Un employed women(N=113)**	**Total**
I. knowledge related parameters			
Knowledge on cervical cancer	34(81%)	65(57.5%)	81(52.3%)
Aware of tests For CC	26(61.9%)	47(41.6%)	91(58.7%)
Aware of Vaccine	20(47.6%)	36(31.9%)	56(36.1%)
II. Attitude related parameters			
Will you recommend CC Screening test	31(73.8%)	105(92.9%)	136(87.7%)
Will you Vaccinate your daughter	21(50%)	86(76.1%)	107(69.5%)
III. Practice related parameters			
Previous testing for CC	3(7.1%)	16(14.2%)	19(12.3%)
Previous treatment for Cervical precancerous lesion	0(0%)	8(7.1%)	8(5.2%)
Received CC Vaccine	3(7.1%)	5(4.4%)	8(5.2%)

Received all Three doses Of Vaccine	1(2.4%)	4(3.5%)	5(3.2%)

The proportion of women who said that they recommend cervical cancer screening test was higher on unemployed women (92.9%), compared to employed women (73.8%). The proportion of women who said they will vaccinate their daughter was also higher in unemployed group (76.1%), compared to employed group (50%).

The proportion in of women who received at least one dose of HPV vaccine was 7.1% employed women and 4.4% in unemployed women. The proportion of women who received all the three doses of vaccine was only 2.4% in employed women and 3.5% in unemployed women.

The proportion of women who reported previous screening for cervical cancer was 7.1% in employed women and 14.2% in unemployed women. Eight (7.1%) in the unemployed group reported previous treatment for cervical pre cancerous lesions and none of the women in the employed group has reported previous treatment for cervical pre cancerous lesion.

Table 3: Association between employment status and various components of KAP

Parameter	**OR**	**p-value**	**95% CI**	
			lower	**upper**
I. knowledge related parameters				
Knowledge on cervical cancer	3.13	0.008	1.33	7.38
Aware of tests For CC	2.28	0.02	1.10	4.71
Aware of Vaccine	1.94	0.06	0.94	4.0
II. Attitude related parameters				
Will you recommend CC Screening test	0.21	0.001	0.079	0.58
Will you Vaccinate your daughter	0.34	0.002	0.14	0.66
III. Practice related parameters				
Previous testing for CC	0.46	0.236	0.12	1.69
Received CC Vaccine	1.66	0.49	0.37	7.28

Received all Three doses Of Vaccine	0.66	0.71	0.072	6.12

CC=Cervical Cancer

The odds of awareness about cervical cancer were 3.13 times more in employed women, compared to un employed women (P value 0.008, 95% CI 1.33 to 7.38). The odds of awareness about tests of cervical cancer were 2.28 times higher in employed group (P value 0.02, 95% CI 1.10 to 4.71). Even though the odds of awareness vaccination were higher in employed women, these findings were statistically not significant.

The odds of recommending cervical cancer screening (OR 0.21, p value 0.001, 95% CI 0.07 to 0.58) and willingness to vaccinate their children (OR 0.34, p value 0.002, 95% CI 0.14 to 0.66) were lower in employed women compared unemployed women.

There were no statistically significant differences observed between the two study groups in any of the practice related parameters.

DISCUSSION:

Cervical cancer is one of the leading causes of the morbidity and mortality among women in India. Poor knowledge, attitude related to cervical cancer screening and HPV vaccine are leading to low utilization of these services and resulting in relatively higher proportion of women diagnosed with advanced stages of cancer.

In the current study, the proportion of women who were aware of cervical cancer was very high (81%) in employed women, compared to unemployed women (57.5%). The number of women who were aware of the tests available for cervical cancer was 26 (61.9%) in employed group and 47(41.6%) in unemployed group. The proportion of women aware of vaccine was also higher in employed group (47.6%), compared to unemployed group (31.9%).

Raychaudhuri, S et al, conducted a community-based cross-sectional study in north Bengal among 133 rural women and 88 women in an urban slum. Awareness about the cause, signs and symptoms, prevention of cervical cancer, PAP test and HPV vaccination was 3.6%, 6.3%, 3.6%, 9.5% and 14.5% respectively and reported

significant differences between rural and urban women. (5) Swapnajaswanth M et al have conducted a KAP study among health care professionals in a tertiary care teaching hospital in Bangalore. The authors reported that 78.9% doctors and only 13.3% of the nurses with very good knowledge about risk factors for cancer cervix and Pap test and 89.6% of the study subjects had favorable attitude towards Pap test and vaccination. (6)

A review of many studies conducted on the subject by Raychaudhuri, S et al has concluded that significant differences exist in terms of screening and HPV testing facilities among high income and low to middle income countries. In addition, acute lack of awareness and knowledge among the concerned population is particularly noted in rural areas of the low income countries. (8)

In the current study, higher proportion of unemployed women reported willingness to undergo screening (92.9% vs73.8%) and to vaccinate their daughters (76.1% Vs 50%) compared to employed women. This phenomenon indicates that rural, unemployed women are more likely to take up the services, once provided with the appropriate knowledge and the educated and employed people are having more negative concerns about these preventive interventions.

The gap between the awareness and practice remained very large in both, the study groups. In employed women only 7.1% had undergone pap smear test (against 61.9% who are aware of it) and in employed women this proportion was 14.2% (against 41.6 % who are aware of it). Swapnajaswanth M et al also reported that, In spite of good knowledge and attitudes towards cancer cervix , Pap test practice remained low among even health care professionals. The most common reasons for not undergoing Pap test was absence of disease symptoms. (6) Many other similar studies from the developing countries have reported similar gap in knowledge and practice. (9-12).

CONCLUSIONS:

1. The knowledge on cervical cancer, screening tests and HPV vaccination was poor in rural, unemployed women compared to employed women.

2. But after providing the appropriate knowledge, the proportion of women who were willing to undergo screening tests and to vaccinate their daughters was higher in unemployed women.
3. The proportions of women who have undergone previous cervical cancer screening were higher in rural unemployed women, probably attributable to availability of screening at all government PHCs.

RECOMMENDATIONS:

1. Further large scale KAP studies, targeting various population groups, with in depth analysis of various influencing factors are need of the hour
2. Knowledge generated in this manner should be used to develop effective health education interventions to increase the knowledge, change the attitude and in turn to increase the utilization of services.

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