

Original Research Article

Knowledge attitude and practices about cervical cancer among urban women working in BPO in Chennai, India

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ABSTRACT

Background: Worldwide cervix cancer ranks fourth place among all the cancer affecting women and commonest cause of death due to cancer among women in developing countries. Business process outsourcing sector in India is a relatively new industry with each growth there is also various negative health issue emerge among people working in those sectors some risk factors associated with ca cervix. Aim of the study was to knowledge, attitudes and practices (KAP) toward cervical cancer, HPV vaccination and screening practice among urban women working in BPO in Chennai.

Methods: A cross sectional study was conducted among urban women working in a BPO in Chennai, Tamil Nadu. A face-to-face interview was conducted using a structured questionnaire by the team leader who was train to interview before starting the study.

Results: Among 155 female study participants only 46% of the respondents knew about cervix. Among the study participants who knew about cervix and cervical cancer, internet (26%) and TV/Radio (26%) were the most common source of information. Only 4% of respondent heard of Pap smear and none of them had undergone it. Similarly, only 3.73% of the respondents knew about vaccines that are available for Cancer Cervix.

Conclusions: The findings of study will help us in planning focused health measures about CA cervix and its prevention strategies. Health awareness will play a vital role in reducing risks of casualties caused by diseases like cancer Cervix.

Keywords: Business process outsourcing sector, Cancer cervix, Pap smear

INTRODUCTION

The cervix is the lower, narrow end of the uterus. Cervical Cancer (Cervical CA) is a malignant neoplasia which develops slowly over the time. Before cervix turn into a malignant condition, the cells of the cervix has go through changes known as dysplasia, where the cells that are not normal start to appear in the cervical tissue. Later, this cancer cells start to grow and spread more deeply into the cervix and to its surrounding areas.¹ Globally 90% of all types of cervical cancer is caused by infection with human papillomavirus (HPV) types 16 and 18, Other risk

factors include early age of sexual intercourse, multiple sexual partners, increasing parity, prolonged use of oral contraceptive pills, tobacco consumption, and sexually transmitted diseases.²

Statistical figures suggest that about 527,624 new cases of cervical CA cases are added every year and to that, India has contributes about 122,844 cervical CA cases each year.⁵ Cervical CA is the second most common cause of cancer mortality among Indian women and nearly one-third of deaths due to ca cervix every year are reported to be from India.³

High mortality rate have been observed in cervical CA patients because nearly 80% of cervical cancer were diagnosed in the advanced stages.⁴ Despite of the well known fact that Cervical cancer is a preventable cancer because of its long pre invasive period and with simple cost effective screening which helps in early diagnosis and treatment in pre invasive stage itself and further the pre invasive stage itself can be prevented by early vaccination in early adolescent period before getting expose to risk factors.⁵⁻⁸

Business Process Outsourcing (BPO) sector in India is a relatively new industry and one of the fastest growing sectors driving employment and growth in modern India with each growth there is also various negative issue emerge to state few like lack of menstrual hygiene like not changing their pads for longer duration due to continuous work which in turn lead to reproductive tract infection and causing ca cervix, in a study by Mathiyalagen et al reported Statistically significant association between morbidity related to reproductive tract and poor menstrual hygiene practices.⁹

Poor eating habits, along with other factors like skipping meals, overeating, and excessive drinking of coffee drug use and risky sexual behavior were apparent among them, which are also some of the risk factor associated with ca cervix, hence this study is planned to asses there awareness level among urban women working in BPO's in Chennai, because Chennai is one of the hub for blooming BPOs.¹⁰

The results of this study may provide inputs toward designing suitable information, education, and communication strategies for working women's in urban area.

Objective of the study:

To assess the level of knowledge, attitude, and practice related to cervical cancer and its screening among women of reproductive working in a BPO in Chennai.

METHODS

A cross-sectional study was conducted among female employed in a BPO situated in Chennai. Female employee with in reproductive age group and area working for minimum of 2 year in the BPO was set as inclusion criteria and those not willing to participate in the study were the exclusion criteria. A BPO in Chennai was selected by simple random sampling. After obtaining their consent a validated questionnaire was given to day shift and night shift employee in there respective timing to be filled during their free time.

Total of 155 employee were included in the study based on the sample size calculated from previous study (p), p as 6.75% and fixing error as 5%, using the formula as $4pq/(d)^2$, minimum sample size required was 100, we

collected data from 155 respondents.¹¹ Data was entered in Microsoft Excel sheet and analyzed by using Statistical software Package for Social Science (SPSS)version 21.0. Each question was analyzed individually. The results were shown in proportions and percentage.

RESULTS

The entire respondents were women. More than half of the study population (58.71%) belongs to the age group of 18-25 years and were Hindu (76.77%). Among the study population, 25.81% were married and 72.26% were unmarried and majority of them were Graduates or Post graduates (90.32%).

Most of the respondents were living in Nuclear families (53.11%) followed by joint families (27.74%). Reflecting upon the majority of unmarried respondents, 84.52% had no children and to its contract only 1.94% of the answerers had more than two children.

Table 1: Socio-demographic details of the participants (n=155).

Variables	Percentage	
Age (in years)	18-25	58.71
	26-35	39.35
	36-45	1.94
Religion	Hindu	76.77
	Muslim	2.58
	Christian	20.00
	Others	0.65
Type of family	Nuclear	53.55
	Joint family	27.74
	Three generation	1.94
	Others	16.77
Education	High School	4.52
	Post high school diploma	2.58
	Graduate or post graduate	90.32
	Profession or honours	2.58
Marital status	Married	25.81
	Married but separated	1.94
	Divorced	0.00
	Widow	0.00
	Unmarried	72.26
No. of children	Less than 2	13.55
	More than 2	1.94
	None	84.52

Among the respondents, 54% of them did not even know about cervix and ultimately were unaware of cervical cancer as well. Among those who knew about cervical cancer, only 9.75% of the respondent strongly agreed that cervical CA was a dreadly disease, 5.55% of the respondent strongly agreed that cervical CA is caused by the virus, 8.33% of the respondent strongly agreed that cervical CA had precancerous period and those who strongly agreed about pre cancerous stage only 2.77% of

them knew it takes about 10 years to develop cervical CA from pre-cancerous lesion takes and 8.33% knew that pre cancerous lesion occur in early reproductive age group. Among the respondent who knew about cervical CA, 34.66% of the respondent knew that Sexual contact before 18 years of age as one of the risk factor, 52.7% knew that poor genital hygiene also causes cervical CA, 38.8% of the respondent knew having multiple sex partners can cause cervical CA.

About the common symptoms of cervical CA 80.54% knew that it can present as post-menopausal bleeding and 73.5% were aware that post coital bleeding is one of the symptoms of cervical CA.

Among those who knew about cervical CA also knew about different treatment available for treating cervical CA.

Statistical association was found between the awareness about cervical CA and to the age and educational status of the respondent .Out of the people who knew about cervix and cervical cancer, internet and TV/Radio were the most common media of information for them and books and school/college were barely 6% (Figure 1).

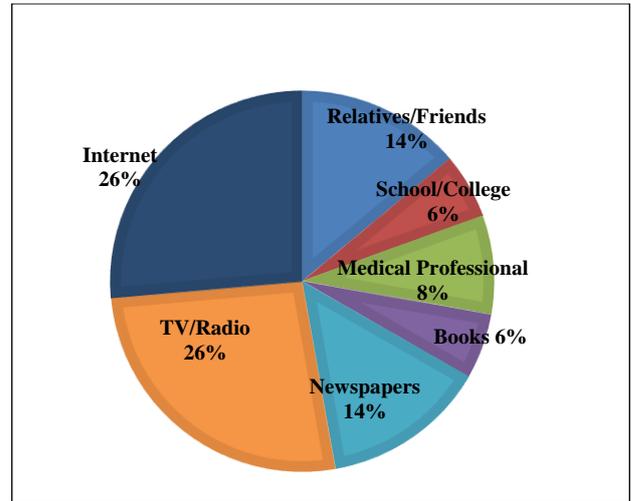


Figure 1: Proportion of the respondents' sources of information about cervical cancer.

The most common products used for sanitation during periods were sanitary napkins with gel and sanitary napkins with cotton (Figure 2) the menstrual hygiene was found to be satisfactory among the study population as it is also one of the predisposing factors for cervical CA.

Table 2: Association between the socio-demographic details and awareness about cervix and cervical cancer (combined) (n=155, α=0.05).

Variable		Awareness about cervix and cervical cancer		χ^2 value	P value
		Not aware	Aware		
Age (in years)	18-25	57	34	7.3867	0.02849
	26-35	25	36		
	36-45	1	2		
Religion	Hindu	65	54	6.0732	0.1081
	Muslim	4	0		
	Christian	13	18		
	Others	1	0		
Type of family	Nuclear	46	37	3.3505	0.3407
	Joint family	18	25		
	Three generation	3			
	Others	16	10		
Education	High School	2	5	6.7247	0.03465
	Post high school diploma	1	3		
	Graduate or post graduate	78	62		
	Profession or honors	2	2		
Marital status	Married	17	23	4.8786	0.08722
	Married but seperated	0	3		
	Divorced	0	0		
	Widow	0	0		
	Unmarried	66	46		
No. of children	Less than 2	9	12	5.7484	0.1245
	More than 2	0	3		
	None	74	57		

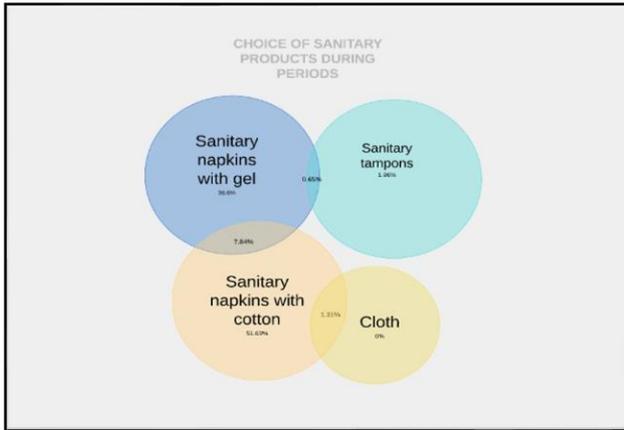


Figure 2: Proportion of choices of sanitary products for menstruation.

It was found that all the socio-demographic details of the respondents, i.e., age, religion, type of family, education, marital status, and number of children were associated with their knowledge about cervix and cervical cancer (Table 2). Statistical significant association ($p > 0.05$) was found between the age and educational status of the respondent to that of their knowledge about cervix and cervical cancer (Table 2).

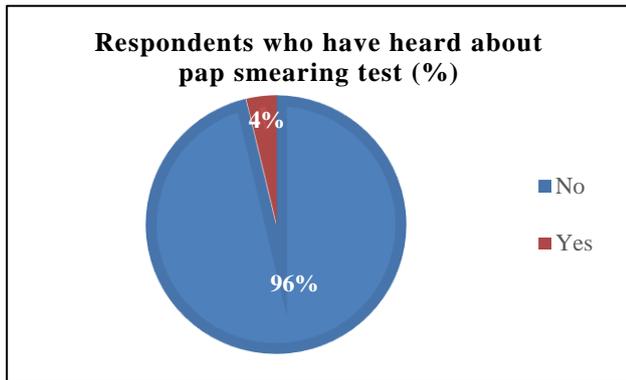


Figure 3: Proportion of respondents who have heard about Pap smearing.

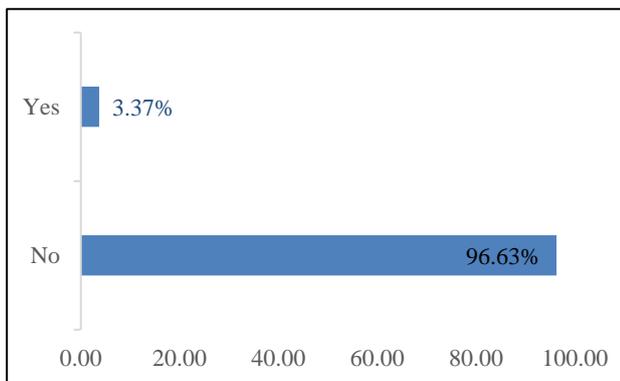


Figure 4: Proportion of respondents who have heard about vaccines for Cervical Cancer.

Only 4% of the respondents knew about Pap Smearing test (Figure 3) and none of them had actually had undergone the same. Similarly, only 3.73% of the respondents knew about vaccines that are available for Cervical Cancer (Figure 4).

DISCUSSION

In this study, about 50% of the respondents did not know about cervix itself and there by dint know about cervical CA which is similar to the study done in developing country by Yifru T et al the similarity in both studies may be because in both studies were done in devolving country and in contrast, the study done by Chande HM et al reported that more than three-quarters of study population knew about cervical cancer, this may be because difference in population in which the study was done.^{12,13} In our study statistical association is found between the awareness of cervical CA and to the educational qualification and age of the respondent which is in contrast to the study done by Mwaka AD et al in Northern Uganda this difference may be because of the cultural belief ,myths and cultural practice in that geographical region.¹⁴ Another alarming observation is that majority of the study participants did not know about Pap Smearing test and none of them had undergone the test. In our study only 4% of the population knew about PAP smear which is in contrast to the study done in Iran by Mousavi F et al where 84.75 % knew about PAP smear this difference may be because of different levels of intervention and strategies used to popularize screening practices for early detection of cervical CA, the knowledge about PAP smear is important because it directly help in practicing preventive screening method and thereby help to curb the prevalence of cervical CA.¹⁵

In this study, majority of study participants didnt know about vaccines that are available for Cervical Cancer which is similar to the study done in Delhi by Singh J et al but interestingly in both the studies willingness to get vaccinated observed among the study participants after educating about the vaccines were high, these high acceptance to vaccination after educating about the vaccination is also observed in study done in Mysore by Madhivanan et al and in Kolkata by Basu et al and as suggested by Montgomery et al that the acceptance rate of vaccination and willingness to undergo screening test were high when the awareness were spread by the medical date.¹⁶⁻¹⁹ Cervical CA has been found to affect younger age group and has been diagnosed in women as young as 20-24 years of age majority of the study population were not even aware of cervix and thereby did not knew about cervical cancer, in our study concerning observation made is that schools and colleges are not acting as significant media for vital information regarding sexual organs(cervix), risks and diseases associated with it (cervical CA), very few respondent (6%) got information about cervix and cervical cancer from teachers and schools which is in contrast to the study

done by Ifediora CO et al in Nigeria where majority of the sources of the information about the cervical CA were teachers (28.3%), since the vaccination for cervical CA starts as early as 9 year the vital source of information to be passed to the younger generation should begin in school to curb the disease.²⁰

Limitation

In our study, there were a few limitations such as limited variation in some of the factor variables. Also, the small sample size may have limited our ability to detect disassociations that were small and moderate in magnitude.

CONCLUSION

In conclusion, we like to highlight the grave need of promotion of sexual health awareness that might reduce risks of casualties caused by diseases like cervical cancer due to mere lack of information about the sexual organs, diseases, and treatment options for cervical cancer that are already available.

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Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

- Bulkmans NW, Berkhof J, Bulk S, Bleeker MC, Kemenade FJ, Rozendaal L, et al. High-risk HPV type-specific clearance rates in cervical screening. *British J Cancer*. 2007;96(9):1419-24.
- Walboomers JM, Jacobs MV, Manos MM, Bosch FX, Kummer JA, Shah KV, et al. Muñoz. Human papillomavirus is a necessary cause of invasive cervical cancer worldwide. *NJ Pathol*. 1999;189(1):12-9.
- Bruni L, Albero G, Serrano B, et al. Human papillomavirus and related diseases report. information centre on HPV and Cancer (HPV Information Centre); 2019.
- Gakidou E, Nordhagen S, Obermeyer Z. Coverage of cervical cancer screening in 57 countries: Low average levels and large inequalities. *PLoS Med*. 2008;5(6):e132.
- Mishra GA, Pimple SA, Shastri SS. Prevention of cervix cancer in India. *Oncology*. 2016;91(1):1-7.
- Nour NM. Cervical cancer: A preventable death. reviews in *Obst and Gyne*. 2009;2(4):240.
- Aggarwal P. Cervical cancer: can it be prevented?. *World J of clinical Oncology*. 2014;5(4):775.
- Vidhubala E, Niraimathi K, Shewade HD, Mahadevan S. Cervical Cancer care continuum in South India: Evidence from a community-based screening program. *J of epidemiology and Global Health*. 2020;10(1):28.
- Mathiyalagen P, Peramasamy B, Vasudevan K, Basu M, Cherian J, Sundar B. A descriptive cross-sectional study on menstrual hygiene and perceived reproductive morbidity among adolescent girls in a union territory, India. *J Family Med Primary Care*. 2017;6(2):360.
- Gupta A. Health, social and psychological problems of women employees in BPO: A study in India 2012.
- Varadheswari T, Dandekar RH, Sharanya T. A study on the prevalence and KAP regarding cervical cancer among women attending a tertiary care hospital in Perambalur. *International J of Preventive Med Res*. 2015;1(3):71-8.
- Yifru T, Asheber G. Knowledge, attitude and practice of screening for carcinoma of the cervix among reproductive health clients at three teaching hospitals, Addis Ababa, Ethiopia. *Ethiop J Reprod Health*.
- Chande HM, Kassim T. Assessment of women's knowledge and attitude towards carcinoma of the cervix in Ilala Municipality. *East Afr J Public Health*. 2010;7:74-7.
- Mwaka AD, Orach CG, Were EM, Lyratzopoulos G, Wabinga H, Roland M. Awareness of cervical cancer risk factors and symptoms: cross-sectional community survey in post-conflict northern Uganda. *Health Expectations*. 2016;19(4):854-67.
- Mousavi F, Shojaei P, Aryan H. Knowledge, attitudes, and practice related to pap smear test among Iranian Women. *Int J Womens Health Wellness*. 2018;4(076):1353-2474.
- Singh J, Roy B, Yadav A, Siddiqui S, Setia A, Ramesh R, Singh K. Cervical cancer awareness and HPV vaccine acceptability among females in Delhi: a cross-sectional study. *Indian J Cancer*. 2018;55(3):233.
- Madhivanan P, Krupp K, Yashodha MN, Marlow L, Klausner JD, Reingold AL. Attitudes toward HPV vaccination among parents of adolescent girls in Mysore, India. *Vaccine*. 2009;27(38):5203-8.
- Basu P, Sarkar S, Mukherjee S, Ghoshal M, Mittal S, Biswas S, et al. Women's perceptions and social barriers determine compliance to cervical screening: Results from a population based study in India. *Cancer Detect Prev*. 2006;30(4):369-74
- Montgomery MP, Dune T, Shetty PK, Shetty AK. Knowledge and acceptability of human papillomavirus vaccination and cervical cancer screening among women in Karnataka, India. *J of Cancer Education*. 2015;30(1):130-7
- Ifediora CO, Azuikwe EC. Knowledge and attitudes about cervical cancer and its prevention among female secondary school students in Nigeria. *Tropical Med and International Health*. 2018;23(7):714-23

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