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KNOWLEDGE AND ATTITUDE TOWARDS RISK FACTORS AND PREVENTION OF CERVICAL CANCER AMONG COLLEGE GOING GIRLS

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ABSTRACT
Worldwide cancer cervix is still among the top list of female genital cancers, inspite of the increasing awareness drives and better screening methods. In India, not only the incidence but also the prevalence is high, most of the patients report in advanced stage of the disease, which contribute to the associated higher morbidity. This study aimed at assessing the knowledge and awareness about cancer cervix, amongst college going girls, who have already completed their basic education. Out of total 1604 college going girls, only 44% had ever heard of a disease cancer cervix. Students of science stream (62.2%) and those residing in urban area (68.3%) were more aware, however the family size and income had no effect on their knowledge about the disease. Similar significant findings were obtained related to the knowledge of the risk factors of the disease. 83% in urban population as compared to rural (16.9%), and in science (50.2%) and non-science stream (48.9%). The term "Pap test" has been heard by most of science students (62.1%), as compared to students of non-science stream (42.7%). Knowledge of pap smear was found to have a significant effect by the type of family, Nuclear (62.7%) and Joint (37.2%), and also by the residential area, urban (84.4%) and rural (35.5%). As the study reflected the poor levels of knowledge about the disease and awareness of the risk factors of cancer cervix, even amongst the college going educated girls, it has become imperative to reform the present methods of spreading the awareness about the disease.

KEYWORDS: Cancer cervix, knowledge and awareness, pap smear, screening methods.

INTRODUCTION

Worldwide, cervical cancer still continues to be ranked as second amongst the most common cancers in women. Eighty six percent of all cervical cancer diagnosed and 88% deaths due to cancer cervix occur in developing region of the world.[1]

It has been estimated that 1,00,000 new cases of cancer of the cervix occur in India every year and 70% of most of these are stage III or higher at diagnosis.[2] Indian females are at greater risk of developing the disease because of various social barriers in approach to basics screening methods and treatment services. Also because of lack of knowledge and awareness of risk factors for the disease.

The primary underlying cause of cervical cancer is the (Human Papilloma Virus) HPV infection, which is a common sexually transmitted infection. It has a vulnerability of spread amongst people with early age of onset of sexual activity, increasing parity, multiple sexual partners, use of hormonal contraceptives for 5 year or longer, current or previous sexually transmitted infection and smoking.[1] Awareness related to these risk factors can help prevent from this dreaded disease. Also cervical cancer has a very long precancerous period, where the affected women can be screened and treated adequately. Thus a regular screening on routine check up for all women can help prevent development of this invasive disease, which is difficult to treat.

This study was done in college going girls doing their graduation, who have completed their senior secondary education, with the aim to know their knowledge about cervical cancer, its risk factors and their attitude towards its preventable measures. This study will reflect the success, benefit and limitations of various public health programs undertaken with the aim of spreading awareness of knowledge about the disease and screening of early stages of cancer cervix, and may prove helpful in reforming the awareness measures to be taken in future.

MATERIAL AND METHODS

A community based cross sectional study was carried out among college going female students of age group 18-25 years to assess knowledge and attitude in prevention of carcinoma cervix. The study was carried out over a period of one year August, 2015 to July, 2016.

The list of all colleges in Jaipur district (both urban and rural area) was procured. Using simple random sampling, 3 college in rural area and 2 colleges in urban area were selected. Permission to approach the students was obtained from the participating college authorities after explaining the aims and objectives of the study. The inclusion criteria was willingness to participate in the study and those who did not give consent and incompletely field questionnaire were excluded from the study. Around 1900 female students were interviewed out which 1604 students gave their consent and were included in the study.

Due approval from Institutional Ethics Committee was obtained before undertaking the present study. Prior approval from the college authorities was taken. Informed consent was taken from each and every student before the study.

A predesigned and pre tested structured questionnaire[4], was used to collect the information regarding knowledge to carcinoma cervix, most prevalent type of cancer cervix, whether it is preventable, knowledge of pap smear, and whether they have ever had pap smear done. Socio demographic characteristics were also collected including place of residence, type of family, family income.

Data was entered in Microsoft Office Excel worksheet. Unpaired t test and chi square test was used to find out significant association. p value < 0.05 was considered statistically significant.

RESULTS AND DISCUSSION

This study was conducted in the college going girls of the urban and rural colleges of Jaipur, who were subjected to a self evaluated questionnaire which they willingly answered.
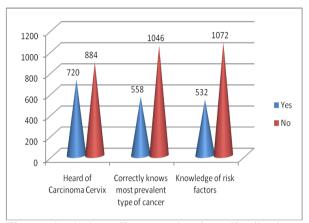

Figure 1: A bar diagram showing distribution of study population according to knowledge about carcinoma cervix

The bar diagram in figure 1 illustrates that 44.8% out of 1604 subjects have heard of carcinoma cervix, out of these 720 subjects, 77.5% knows that it is one of the most prevalent type of cancer, and 73.8% had some knowledge of the risk factors causing disease.

Table I: Distribution of population according to knowledge of Carcinoma cervix with mean age.

Knowledge of Ca cervix	Number	Age in years (Mean ± SD)	t value	p value
Yes	720	19.527 ± 2.473	10.621	0.000
No	884	18.411 ± 1.723		

The table no. I shows the distribution of the study population on the basis of the knowledge about cancer cervix. The total study population comprised of 1604 subjects, out of which 720 students 44 % had the knowledge of cancer cervix while the remaining 56% were unaware of it. A finding put forth by Joy et al in their study showed that among the female educated youth of India, Nepal, and Sri Lanka, the awareness of cancer cervix was 66% in India, 58.8% in Nepal and 57.7% in Sri Lanka which is average awareness.[5]

Table II: Distribution of the population based on their sociodemographic profile to assess the knowledge on cancer cervix.

Variables		Heard of Ca Cervix		Chi square (df)	p value
		Yes (N=720) n(%)	No (N=884) n(%)		
Subject	Science	448 (62.2%)	332 (37.5 %)	96.6 (1)	0.000
	Non science	272 (37.7%)	552 (62.4%)		
Family income	< 120 lakhs	288 (40%)	370 (41.8%)	0.564 (1)	0.452
	> 120 lakhs	432 (60%)	514 (58.1%)		
Type of family	Nuclear	406 56.3%)	470 (53.1%)	1.66 (1)	0.197
	Joint	314 (43.6%)	414 (46.8%)		
Residence	Rural	228 (31.6 %)	96 (10.8%)	105 (1)	0.000
	Urban	492 (68.3%)	788 (89.1%)		

Table no. II shows the distribution of population based on the socio demographic profile of the female students. The variables which were taken into consideration were as follows.

1. Curriculum

    In our study the science stream students were more aware of cancer cervix disease (62.2%) as compared to the non science stream students (37.7%). In corroboration to this finding a study done by Raychaudhari and Mondal revealed that those population who received higher education had greater knowledge of the disease.[6]

2. The location of the study population was important and relevant as it showed statistically significance finding in our study, that females in the urban college had a better knowledge (68.3%) than the rural population (31.6%).

    These finding is in accordance with the study done by Raychaudhari and Mondal where association between the area of residence was found, where the urban population showed a higher % as compared to the rural population.[6]

    Another study by Puri et al showed that the urban population were well versed with the knowledge of cancer cervix rather than the slum dwellers.[3]

3. The family income variable in the study population had no statistical significance in either of the groups.

4. The type of family pattern, whether nuclear or joint, was also a non significant finding in our study.

Table III: Distribution of study population according to knowledge of most prevalent type of cancer cervix.

Variables		Correctly knows most prevalent type of Ca Cervix		Chi square (df)	p value
		Yes (N=558) n(%)	No (N=1046) n(%)		
Subject	Science 780	404 (72.4%)	376 (35.9%)	194(1)	0.000
	Non science 824	154 (27.5%)	670 (64%)		
Family income	< 120 lakhs 658	212 (37.9%)	446 (42.6%)	3.25(1)	0.072
	> 120 lakhs 946	346 (62%)	600 (57.3%)		
Type of family	Nuclear 876	288 (51.6%)	588 (56.2%)	3.11(1)	0.078
	Joint 728	270 (48.3%)	458 (43.7%)		
Residence	Rural 324	212 (37.9%)	112 (10.7%)	168(1)	0.000
	Urban 1280	346 (62%)	934 (89.29%)		

The table no. III shows statistical significance for the knowledge of the most prevalent type of cancer to the variables for the curriculum selected and the area of residency.

In our study, the students of the science stream had a knowledge (72.4%) about the prevalence of cancer cervix as compared to other study population of the non science stream (27.5%). In contrast to our study , Puri et al mentioned that the respondents answered to cancer breast to be most common prevalent cancer.[3] Another study done by Saha et al found a low level of the knowledge of the graduate and post graduate students of leading women's college of Kolkata about cervical cancer to be the most prevalent type of cancer in the country.[4] The second significant variable for the table 3 shows that, less number of rural population were aware of the cancer cervix to be most prevalent type of cancer.

Table IV: Distribution of study population according to knowledge about risk factors.

Variables		No knowledge (N=1072) n(%)	Knowledge of < 3 risk factors (N=328) n(%)	Knowledge of 3-6 risk factors (N=204) n(%)	Chi square (df)	p value
Subject	Science 780	534 (49.8%)	160 (48.7%)	86 (42.1%)	0.107(1)	0.743
	Non science 824	538 (50.1%)	168 (51.2%)	118 (57.8%)		
Family income	< 120 lakhs 658	470 (43.8%)	102 (31%)	86 (42.9%)	16.9(1)	0.000
	> 120 lakhs 946	602 (56.1%)	226 (68.9%)	118 (57.8%)		
Type of family	Nuclear 876	579 (54%)	208 (63.4%)	89 (43.6%)	9.02(1)	0.003
	Joint 728	493 (45.9%)	120 (36.5%)	115 (56.3%)		
Residence	Rural 324	182 (16.9%)	114 (34.7%)	28 (13.7%)	47.6(1)	0.000
	Urban 1280	890 (83%)	214 (65.2%)	176 (86.2%)		

Table no. IV shows the knowledge about the risk factors of Ca Cervix in the population undertaken for the study. There is statistical significance observed in the location of the residence of the population who had a greater knowledge about the risk factors. Surprisingly the family income of the study population had a level of significance at p value less than 0.000. The higher income group population though less in number had a knowledge about the risk factors as compare to the lower income group. The table no. 4 was categorically further divided into no knowledge, more than 3 risk factors and knowledge of 3-6 risk factors. In our study , the urban

study population comprised of 1280 participants out of which 890 (83%) had no knowledge, only 390 (17%) had a knowledge and were aware of more than 3 risk factors for causing Cancer cervix and the remaining students had a knowledge for about 3-6 risk factors. A contradictory finding of ca cervix was observed in the study done by Puri et al where awareness of all the causes of ca cervix was more in the urban than in slum dwellers population, risk factors at least one or two were known to large population.[3] Joy et al in their study mentioned that there was awareness among the female educated youth of the various country, regarding 2 or more risk factors for cervical malignancy.[5] The % of the knowledge varied with the risk factors for the population but in general there was an awareness. Roy chaudhary and Mondal in their study metion that the data o awareness was not very encouraging. An illustrated demonstration in the local spoken language aroused their curiosity and they were abreast with the knowledge through friends, media like radio and television.[7] However of the study population, 96% of the population were unaware of the causes of the disease or their risk factors.
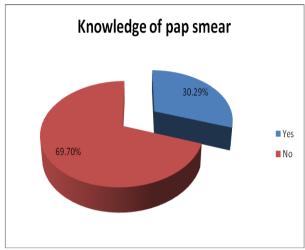

Figure 2: A pie diagram showing knowledge of pap smear among study population.

The diagram depicts that the knowledge of pap smear was there in 69.7% of population, which is a significant number and reflects the success of awareness programs related to screening methods.

Table V: Distribution of study population according to knowledge of pap smear.

Variables		Heard of pap smear		Chi square (df)	p value
		Yes (N=486) n(%)	No (N=1118) n(%)		
Subject	Science 780	302 (62.1%)	478 (42.7%)	51.0(1)	0.000
	Non science 824	184 (37.8%)	640 (57.2%)		
Family income	< 120 lakhs 658	196 (40.3%)	462 (41.3%)	0.138(1)	0.710
	> 120 lakhs 946	290 (59.6%)	656 (58.6%)		
Type of family	Nuclear 876	305 (62.7%)	571 (51%)	18.7(1)	0.000
	Joint 728	181 (37.2%)	547 (48.9%)		
Residence	Rural 324	173 (35.5%)	151 (13.5%)	103(1)	0.000
	Urban 1280	313 (64.4%)	967 (86.4%)		

The table no. V discusses the knowledge of the study population towards the screening of the cancer cervix specially for the PAP smear. A statistical significance was observed regarding the PAP smear test as a investigative tool for the cancer cervix in the science stream students.

A similar finding was found in the study done by Shah et al on the nursing staff of a tertiary health care.[8] A knowledge regarding the Pap smear was present in 88.4 % of the respondents. A similar finding was reported by Mytaba et al and Ali et al in their study where 75% of the respondents were aware that Pap smear is a screening tool for Cancer cervix.[9] Anantaram et al also in his study has mentioned that 95.3% of the respondents were aware of the Pap smear test and its application and out of these 62% knew the exact purpose of the investigation.[1] In contrast to our findings, Saha et al reported in their study that merely 11% had the knowledge of the test.[4] Another interesting finding in their study was that the nonscience strean students were more aware of the test rather than their science counterparts. Alok Goyal et al in

their study reported a 74% awareness in the women population regarding pap smear.[10]

CONCLUSION
Increasing incidence of cancer cervix in India and also worldwide is of major concern to public health. Data of our study suggest that the levels of knowledge and awareness of risk factors of cervical cancer is very less even amongst the college going educated girls. As WHO documents that cancer rates are set to increase at an alarming rate globally and it is projected by the WHO that cancer burden would increase to 20 million by 2020 with 70% in the developing world,[3] and increasing knowledge of risk factors related to cancer cervix and its detection in early noninvasive stages by various screening methods is the only preventive methods, we need to strengthen and reframe the present strategies of awareness and screening methods.

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