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Knowledge and practices of adult women aged (18-25 years) on prevention of cervical cancer

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Abstract
Purpose: Cervical cancer a complication of Human Papilloma virus infection, is the leading cancer in Indian women and the second most common cancer in worldwide. Aim of the study is to assess the knowledge and practices of adult women regarding prevention of cervical cancer.
Methods: A Descriptive Survey was done on 400 students from selected two Degree college by using non - probability, convenience sampling technique. The tools consists: personal data, knowledge questionnaire and practice checklist, data was analyzed by descriptive statistics and chi square tests.
Results: The result reveals that majority (87.5%) respondents were aged 18-20 years, more than half (66%) were from urban area, all (100%) respondents had heard of cervical cancer, their source of information (45.5%) was mass media. More than half (65.25%) were not screening regularly, majority (95.5%) respondents had not been vaccinated against HPV, and (51.25%) were unaware of vaccination as a prevention method. Less than half of respondents (41.25%) had good knowledge and nearly one forth (26.75%) had average knowledge regarding prevention of cervical cancer. The majority of adult women (81%) had good practice and (19%) had average practice related to prevention of cervical cancer. A non -significant negligible positive co-relation (r=0.09, P>0.05) was found between Knowledge and practice of respondents.
Conclusions: Study concludes that all respondents had some knowledge of cervical cancer but it was insufficient knowledge of degree college students in Ambala, Haryana. Thus, more awareness should be conducted in Degree College and universities to provide students with knowledge on cervical cancer.

Keywords: knowledge, practice, adult women, human papillomavirus, cervical cancer

Introduction

Cervical cancer a complication of Human Papilloma virus infection, is the leading cancer in Indian women and the second most common cancer in worldwide. Worldwide, every year cervical cancer is diagnosed in about 500,000 women and is responsible for more than 280,000 deaths annually [1].

Cervical cancer is the leading cause of mortality and morbidity among women globally in developing countries. The burden of cervical cancer is growing and threatens to exert a heavy morbidity, mortality and economic cost in the countries in the next 20 years [2].

In India, the most common woman-related cancer is cervical cancer, followed by breast cancer. Chance of surviving cervical cancer in India is 42% [1].

Indian women face a 2.5% cumulative lifetime risk from cervical cancer and 1.4% of cumulative death risk from cervical cancer. At any given time, around 6.6% of women in the general population are estimated to harbor cervical HPV infection [3, 10].

Human Papilloma Virus is the most common cause of all cervical cancer worldwide through sexual intercourse. The co-factor are multiple sexual partners, very younger age at first sexual act, low socio economic factors, prolonged use of contraceptives [4, 7]. Women at most risk factor for HPV infection are those who are aged group of 20-24 years [9].

All those women who are diagnosed with cervical cancer must acquire HPV earlier. There are many types of HPV that are considered to be most risky because they definitely lead to the cervical cancer such as HPV 45, HPV 33, HPV 31, HPV 18 and HPV 16. According to a careful estimate HPV 16 and HPV 18 cause 2/3rd of the cervical cancer cases [5, 7, 8].

The American cancer society confirmed that the risk of occurring cervical cancer is less in women who have never experience in sexual intercourse. Women who are waiting to have sex until older can help to avoid HPV. It also helps to limit the number of sexual partners and to avoid having sex with someone who has had many other sexual partners. Women with four full term pregnancies (parity) are having the risk of developing cervical cancer [6, 11].

Unlike many cancers, cervical cancer can be prevented. A first line of defence is to educate women about how to protect themselves against the Human Papilloma Virus, a common infection that causes most cervical cancers. For women at risk of cervical cancer, secondary prevention is the key to saving lives. Cervical cancer can be prevented by using relatively inexpensive screening and treatment technologies to detect abnormal cervical tissue before it progresses to invasive cancer. Practicing safe sex, regular screening test, and vaccination are the most effective option to prevent the development of cervical cancer [2, 7].

Objective

- To assess the level of knowledge and practices regarding prevention of cervical cancer among the adult women at the selected degree Colleges of Ambala Haryana.
- To determine the relationship between the knowledge and practices score regarding prevention of cervical cancer among the adult women at the selected degree college of Ambala Haryana.
- To seek the association between the knowledge and the practice score regarding prevention of cervical cancer among the adult women with the sample characteristics.

Methodology

A Descriptive survey was done on 400 students from two degree college of age group (18-25years) who are studying at Sant Mohan Singh Khalsa college of Barara, Ambala and the SD college Ambala, Haryana India. Non-probability, Convenience Sampling Technique was used to select the sample from accessible population.

A Structured knowledge questionnaire and practices checklist was used on the basis of the objectives of the study.

Data collection tool

The following data collection tools were constructed to obtain data.

- Sample characteristics to assess the personal data.
- Structured knowledge questionnaire to assess the knowledge of adult women regarding prevention of cervical cancer.
- Practices checklist to assess the practices of adult women regarding prevention of cervical cancer.

Development of the tool

A structured knowledge questionnaire was constructed to assess the knowledge of adult women regarding prevention of cervical cancer. The tools were prepared based on:

- The extensive review of literature and non-research literature, seeking the opinion of experts, formal and non-formal discussion with peer group.
- Item writing was done after preparing a blueprint specifying the domains of objectives (knowledge, comprehension, and application).
- Content validity.
- Reliability.
- Pilot study

Description of the tools

The structured knowledge questionnaire comprised of three sections:

Section I: It comprised of 8 items seeking information pertaining to background data such as: age, religion, educational status, family monthly income, place of residence, dietary pattern, Family members as health Profession and, previous knowledge about cervical cancer.

Section-II: It comprised of 34 knowledge questionnaire regarding prevention of cervical cancer.

All the items were multiple choices with four options. Each items had a single correct answer. Every correct answer was awarded a score of one and every wrong answer awarded zero score. The maximum possible score was 34 and the minimum possible score was zero.

The score obtained by the adult women were arbitrarily categorized into 4 levels, so given below

Very good	81 - 100%
Good	71 - 80%
Average	50 - 70%
Below average	<50%

Section-III: This section consists of 21 practices checklist which are based on the practice of adult women on prevention of cervical cancer.

Each right (Yes) question consists maximum score one and minimum score zero for every wrong response (No).

The score obtained by the adult women were arbitrarily categorized into 3 levels, so given below

Good	>71%
Average	38-71%
Poor	<38%

Validity and reliability of the tools

Content validity of the develop tools was obtained by submitting tools to seven experts. Experts were requested to judge the items for clarity, relevance, appropriateness, an meaning fullness for the purpose of the study to give their opinion and suggestions on the content, its coverage, organization presentation and language. Modification of the tool was done after careful review and discussion with experts.

Reliability of Structured Knowledge Questionnaire and practices checklist was computed by using Kuder & Richardson (Kr20) and Inter-Rater formula, the reliability value was 0.8 and 0.82 respectively. The tool was found to be valid, reliable and feasible for the purpose of the study.

Data collection technique

A self-report (paper- pencil technique) was considered to be most appropriate for collecting data related to knowledge of adult women. The structured tools with close ended items are efficient, easy to administer and analysis.

Procedure for data collection

Data was collected from 400 adult students from two Degree College who fulfilled the inclusion criteria. Formal administrative permission was obtained from the concerned authority before conducting the study. Self-introduction and overview to the nature of the study were given to the participants. The knowledge questionnaires were administered to the participants. The average time taken to collect the data was 40-45 minutes. All participants cooperated well with the investigator during data collection.

Ethical consideration

Ethical approval was taken from the institutional ethical committee for conducting the study. Consent form was prepared for the study respondent regarding their willingness to participate in the research project was explained to the participant verbally and assurance of confidentiality was

given.

Plan for data analysis

The data would be analyzed by using descriptive statistics and chi square tests.

Results

Section I: Sample characteristics

The findings of the present study shows that majority of the respondents (87.5%) were in the age group of 18-20 years, (72.25%) were belongs to Hindu religion, (74%) were B.A in educational status. More than half of the respondents (66%) were from urban area, (69%) were Vegetarian, (86.75%) had no family member as health profession, (100%) all the respondents had heard about cervical cancer and their source of information (45.5%) was mass media.

Section II: Findings regarding the assessment of level of knowledge and practice regarding prevention of cervical cancer among the adult women.

Less than half of the respondents (41.25%) had good knowledge, (26.75%) had average knowledge, (18.25%) had below average knowledge and (13.75%) had very good knowledge (Table 1).

Table 1: Description of respondents according to level of knowledge. N=400

Grade	Score	Percentage	Frequency	Frequency percentage (%)
Very Good	28-34	81-100	55	13.75
Good	24-27	71-80	165	41.25
Average	18-23	50-70	107	26.75
Below average	1-17	<50	73	18.25

Maximum Score = 34 Minimum score = 0

The data presented in Table: 2 indicates that the mean (21.74), median (23) and SD (5.528) of the adult women regarding prevention of cervical cancer.

Table 2: Mean median and SD of the knowledge of respondents. N=400

Test	Group	Range	Mean	Median	SD
Score of knowledge	Adult women	6-32	21.74	23	5.528

Maximum score = 34 Minimum score = 0

The respondents had good knowledge in the area of anatomy and definition of cervical cancer with mean, mean percentage and SD as (2.13, 71+0.97), and complications (2.02, 67.93+ 0.94) Table: 3. The adult women had average knowledge in the area of side effects (0.67, 66.75+ 0.47) causes & etiology (4.64, 66.29+1.61), treatment (1.94, 64.58+1.03), signs & symptoms (2.50, 62.44+1.04). And the respondents had poor knowledge in the area of prevention (5.56, 61.72+1.81), prognosis (1.19, 59.63+0.69), diagnosis (1.10, 54.75+0.77) (Figure 1).

Table 3: Mean, mean percentage, median and SD of the area-wise knowledge of respondents. N=400

Content area	Mean	Mean percentage	Median	SD	Rank
Anatomy and definition of cervical cancer	2.13	71	2	0.97	I
Causes and etiology	4.64	66.29	5	1.61	IV
Signs and symptoms	2.50	62.44	3	1.04	VI
Diagnostic finding	1.10	54.75	1	0.77	IX
Preventions	5.56	61.72	6	1.81	VII
Treatment	1.94	64.58	2	1.03	V
Side effects of drugs	0.67	66.75	1	0.47	III
Complications	2.02	67.93	2	0.94	II
Prognosis	1.19	59.63	1	0.69	VIII

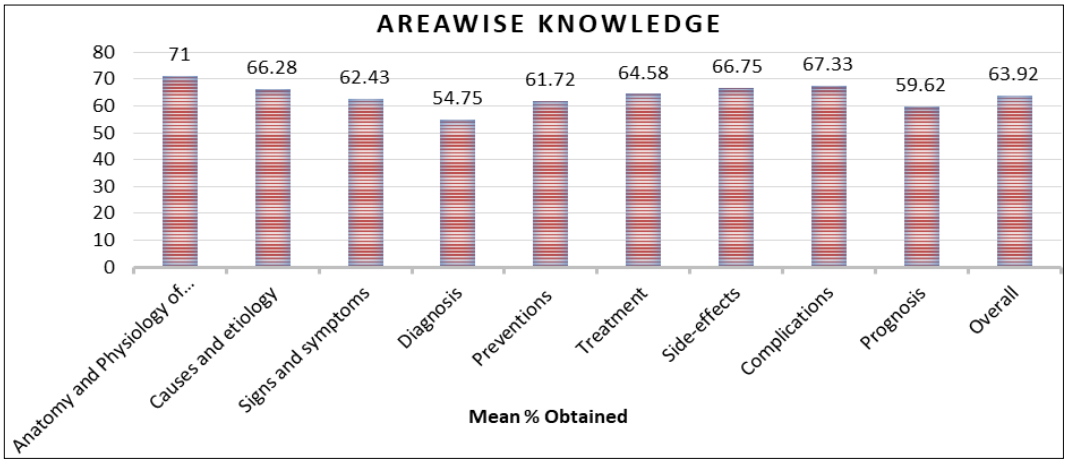

Fig 1: Bar diagram showing the mean percentage of the level of knowledge.

Majority of (81%) of the respondents had good practice and only (19%) had average practice and no one had poor practice and mean (17.55), median (18) and SD (2.31) of the adult women regarding prevention of cervical cancer has shown in Table 4.

Table 4: Frequency and percentage distribution of respondents according to level of practice. N=400

Grade	Score	Percentage	Frequency	Frequency percentage (%)
Good	16-21	>71%	324	81%
Average	8-15	38-71%	76	19%
Poor	0-7	<38%	-	-

Maximum Score =21 Minimum Score=0

More than half (65.25%) were not screening regularly, majority (95.5%) respondents had not been vaccinated against HPV, and (51.25%) were unaware of vaccination as a prevention method.

Section III: Findings regarding the relationship between knowledge and practice of adult women.

Co-relation of the knowledge score of adult women mean score (21.73) and SD (5.52), practice score of adult women - mean score (17.54) and SD (2.31) and the co-relation value is 0.09 (Figure 2). The results show that there was no significant relationship between knowledge and practice of respondents.

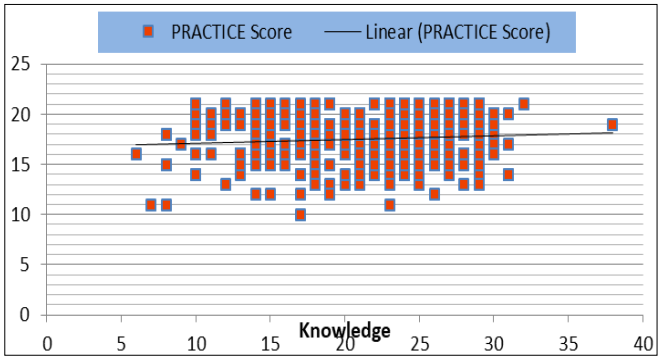

Fig 2: Scatter diagram showing the relationship between knowledge and practice score.

The results conclude that there was a non-significant negligible positive co-relation (r=0.09, P>0.05) was found between Knowledge and practice of adult women regarding prevention of cervical cancer; hence knowledge and practice exist independently.

Section IV: Findings regarding the association between knowledge and practice of adult women with sample characteristics.

There was significant association between knowledge score of adult women with no family members as health profession.

There was significant association between practice scores of adult women with place of residence.

The respondent's knowledge and practice is increases with residing in urban area and their source of information was mass media.

Discussion

Majority of the respondents (87.5%) were in the age group of 18-20 years, (72.25%) were belongs to Hindu religion. More than half of the respondents (66%) were from urban area, (69%) were Vegetarian, (86.75%) had no family member as health profession, (100%) all the respondents had heard about cervical cancer and their source of information (45.5%) was mass media.

A study conducted on Knowledge, attitudes, practices, and perceived risk of cervical cancer among Kenyan women: results reveal that 91% of the surveyed women had heard of cancer, only 29% of the 388 surveyed women had previously heard of cervical cancer and their source of information from health care workers [12].

Less than half of the respondents (41.25%) had good knowledge, (26.75%) had average knowledge, (18.25%) had below average knowledge and only (13.75%) had very good knowledge.

Area-wise knowledge, the respondents had good knowledge in the area of anatomy, definition & complications. The adult women had average knowledge in the area of side effects, causes, treatment, signs & symptoms and poor knowledge in the area of prevention, prognosis and diagnosis.

A study conducted by Tan Y *et al*, Mass media was most common source of information. The knowledge level of respondents on cervical cancer and its prevention was not satisfactory despite their positive attitude on prevention [13].

More than half (65.25%) were not screening regularly, nearly all (95.5%) respondents had not been vaccinated against HPV, and (51.25%) were unaware of vaccination as a prevention method.

Study conducted by Kamzol W, *et al*. Assessment of knowledge about cervical cancer and its prevention among female students aged 17-26 years. Result reveal nearly all respondents (98.5%) had heard of cervical cancer, 89.4% were aware risk of death associated with cervical cancer, and 44.8% believed the disease could affect them in the future. Most (91.5%) respondents had not been vaccinated against HPV, 47.9% did not know where to go to get vaccinated, and 30.1% were unaware of vaccination as a prevention method [14].

The co-relation between the knowledge and practice score shows that there was a non-significant negligible positive co-relation (r=0.09, P>0.05) was found hence, knowledge and practice exists independently.

Conclusion

The study concludes that all the respondents had heard about cervical cancer, majority (87.5%) respondents were aged 18-20 years, more than half (66%) were from urban area. More than half (65.25%) were not screening regularly, majority (95.5%) respondents had not been vaccinated against HPV, and (51.25%) were unaware of vaccination as a prevention method. The respondents had poor knowledge in the area of prevention, prognosis and diagnosis of cervical cancer.

The respondent's knowledge is increases with residing in urban area and their source of information was mass media. Thus, more awareness programs should be conducted in Degree College and universities to provide students with knowledge on prevention of cervical cancer.

Limitations

Present study is limited to only adult women of selected degree college, so the generalization is limited.

Recommendations

- A follow-up study can be conducted to assess the knowledge and practices of female college students regarding early detection and prevention of cervical cancer.
- A same study can be conducted to compare the knowledge and practice on the prevention of cervical cancer among the females of rural and urban areas.
- A study can be conducted to check an effectiveness of awareness programme on the prevention of cervical cancer among the women.

Conflict of interest: No conflict of interest.

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