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# A Study To Assess The Effectiveness of Structured Teaching Programme on Knowledge Regarding Management and Prevention of Cervical Cancer Among ANM Students in Selected Nursing Institute Of Mahisagar District.

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## A B S T R A C T

**Background study:** Cervical cancer remains a significant global health issue, particularly in low and middle- income countries like India. HPV infection is a primary cause of cervical cancer. Despite effective prevention strategies like HPV vaccination and regular screening, the burden of cervical cancer in India remains high due to low screening rates and limited access to HPV vaccination. Factors such as early sexual initiation, multiple sexual partners, and immunosuppression increase the risk of HPV infection and subsequent cervical cancer. This research aim to assess the current awareness, willingness, and barriers towards HPV vaccination among female healthcare students in India, with the goal of improving HPV vaccination rates and reducing the burden of cervical cancer. By addressing the knowledge gap and addressing barriers to HPV vaccination, this research can contribute to increased awareness about cervical cancer and its prevention, improved uptake of HPV vaccination, enhanced cervical cancer screening rates, and reduced incidence and mortality rates of cervical cancer in India.

**Methods:** In this study, Quantitative research approach with pre- experimental one group pre- test and post

test design was used to conduct study. Non- probability convenient sampling technique was adapted to100 ANM students from nursing institute from Mahisagar district. Self-structured knowledge was used to assess the level of knowledge of ANM student of nursing institute of Mahisagar district regarding management and prevention of cervical cancer.

**Results:** The results of the study showed that out of 100 subjects in that pre-test knowledge score of ANM student has 40(40%) inadequate knowledge and 2(2%) their post- test knowledge score of ANM student had 53(53%) and moderate knowledge 40(40%) post test. 7(7%) score had adequate knowledge in pre test and 57(57%) had post test knowledge score. . The pre test and post test mean score is 13.3, 20.7 and standard deviation score is 4.633and 6.387 respectively. The paired "t" test value is 2.26 greater than the table value at level <0.05 hence, there is effectiveness of planned teaching programme and there is significant association between pre- test knowledge score and selected demographic variable in terms of marital status and religion.

**Keywords**: Effectiveness, structured Teaching Program, Management, Prevention, Cervical cancer, ANM student, Institute.

**INTRODUTION:-**

Population based cancer registries within the National Cancer Registry Programme and outside the network has provided a picture of the cancer pattern in India. There are areas, which are largely un-represented, but the general pattern seems to hold good. Cervical cancer ranks third in cancer incidence worldwide and is the most frequent gynecological cancer in developing countries. (Chawla, Taneja, Awasthi, Kaur, & Janardhanan, 2021) Among women between the ages of 20 to 39 years, cervical cancer is the second leading cause of cancer deaths among women in medically underserved countries. The frequency of cervical cancer after treatment for dysplasia is lower then 1% and mortality is less than 0.5%. (Loopik, InHout, Ebisch, Massuger, Siebers, & Bekkers, 2020) Early on typically no symptoms are seen. Later symptoms may include abnormal vaginal bleeding, pelvic pain during intercourse. Early detection of cervical cancer remains a dream in India even after the vaccine available to prevent cervical cancer. Current estimates indicate that every year 123907 women are diagnosed and 77348 die from cervical cancer. (Cancer, 2023-03-10)

The increasing trend of the disease in developing countries is attributed to the early beginning of sexual activities, certain sexual behaviors like high number of multiple partners, early age at first intercourse, infrequent use of condoms, multiple pregnancies with Chlamydia association, and immunosuppression with HIV, which is related to higher risk of HPV infection. (He, et al., 2024)This condition usually develops over time. Normal cervical cells may gradually undergo changes to become precancerous and then cancerous. Most (80-90%) invasive cervical cancer develops in flat, scaly surface cells that line the cervix (called squamous cell carcinomas). (Institute)

In developed countries, incidence and mortality from cervical cancer have been reduced through measures, which include cytological screening and prompt treatment of early cervical lesions. Among all malignant tumors, cervical cancer is the one that can be most effectively controlled by organized screening programs.

(Perkins & Eun, 2020)

According to NHFS report, in India, 22% of women have undergone cervical examination, the pattern of cervical examination indicated that the southern region mainly Kerala has the major contribution toward screening followed by the various districts of Maharashtra. (Chawla, Taneja, Awasthi, Kaur, & Janardhanan, 2021) This is one of the main reasons that in India patients are being diagnosed at advanced stages. The main risk factor for development of cervical cancer is infection with human papilloma virus (HPV) types (HPV 16 and HPV 18). (Institute) HPV-DNA viral load quantification and integration and E6/E7expression are promising biomarkers that can predict the progression of lesions to cervical cancer. In the USA, 16 and 18 types are detected in 70% of high grade squamous intraepithelial lesions (HGSIL) as well as invasive cervical cancer cases. (Abreu, Consolaro, Souza, & Gimenes, 2012)

Cervical cancer screening program is acknowledged currently as the most effective approach for cervical cancer control. Cervical cancer prevention has focused on screening sexually active women using different diagnostic test and control.

The awareness and acceptance of HPV vaccine in the general population is limited and largely influenced by cost, socio cultural factors, and paucity of awareness. Several studies conducted in various states of India among different population categories (including medical students) have shown poor awareness about cervical cancer and HPV vaccination. (Verma, et al., 2024)

**OBJECTIVES OF THE STUDY:-**

1. To assess the existing knowledge regarding management and prevention of cervical cancer among the ANM students.
2. To evaluate the effectiveness of structure teaching programme in improving knowledge regarding management prevention of cervical cancer among the ANM students.
3. To find out the association between knowledge score of ANM student regarding management and prevention of cervical cancer with demographic variable.

**Conceptual framework:-**

**Input:-**

The information about the knowledge regarding the cervical cancer help to identify the student regarding the early stage signs and symptoms regarding the disease condition which help them to provide the awareness about the condition to the personal knowledge and help to other to improve the their health condition.

**Throughput:-**

In present study it refers to structured education on knowledge regarding management and prevention of cervical cancer among the ANM student.

**Output:-**

After processing the input throughout the system return to the output matter, energy and information to change the process that is observable as output. In this study assess the knowledge level regarding the management and prevention of the cervical cancer among ANM students considered as output.

**Feedback:-**

• In this study it refers to analysis of the pre test-post test.

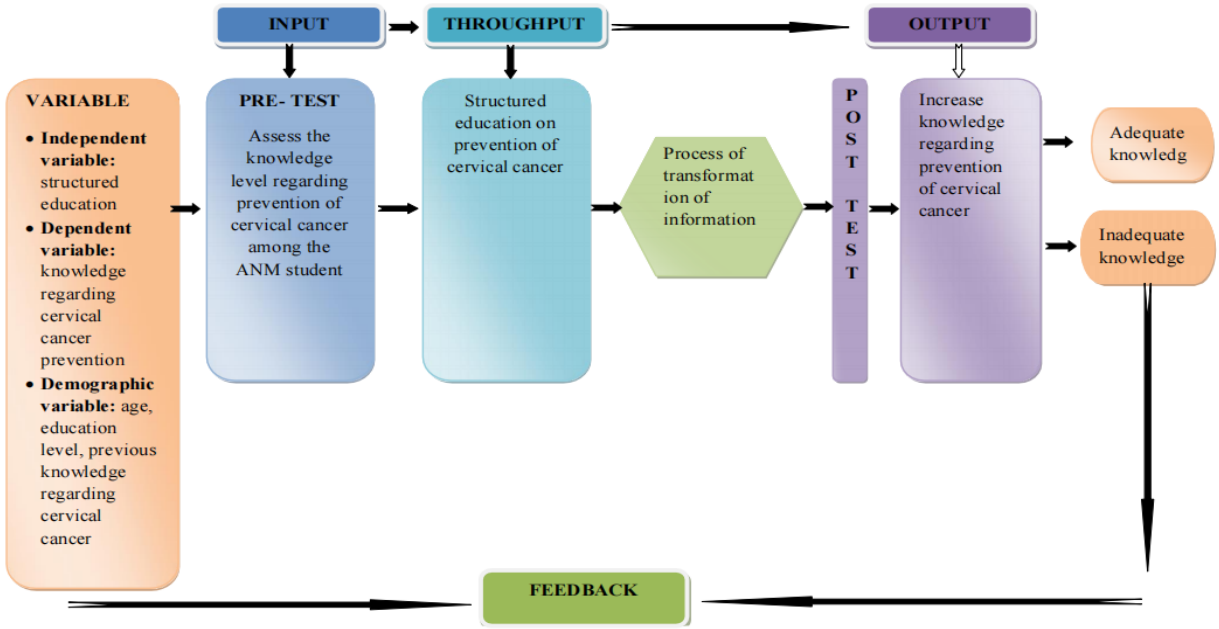



**Figure no: 1:- CONCEPTUAL FRAMEWORK BASED ON J. W. KEENY'S OPEN SYSTEM MODEL**

## METHOD AND MATERIAL:-

The methodology used in the present study is a pre-experimental approach, a sub type of Quantitative approach was adopted for the present study a one group pre- test and post- test research design.

The study was carried among 100 students in selected nursing institute of Mahisagar district. The researcher used self- structured questionnaire to collect demographic, self- structured questionnaire for the assessment of knowledge regarding management and prevention of cervical cancer. Content validity of tool was calculated and 'r' found to be 0.7 for knowledge assessment by the test of Karl Pearson correlation coefficient formula, which is statistically reliable for the present study.

**Result:-**

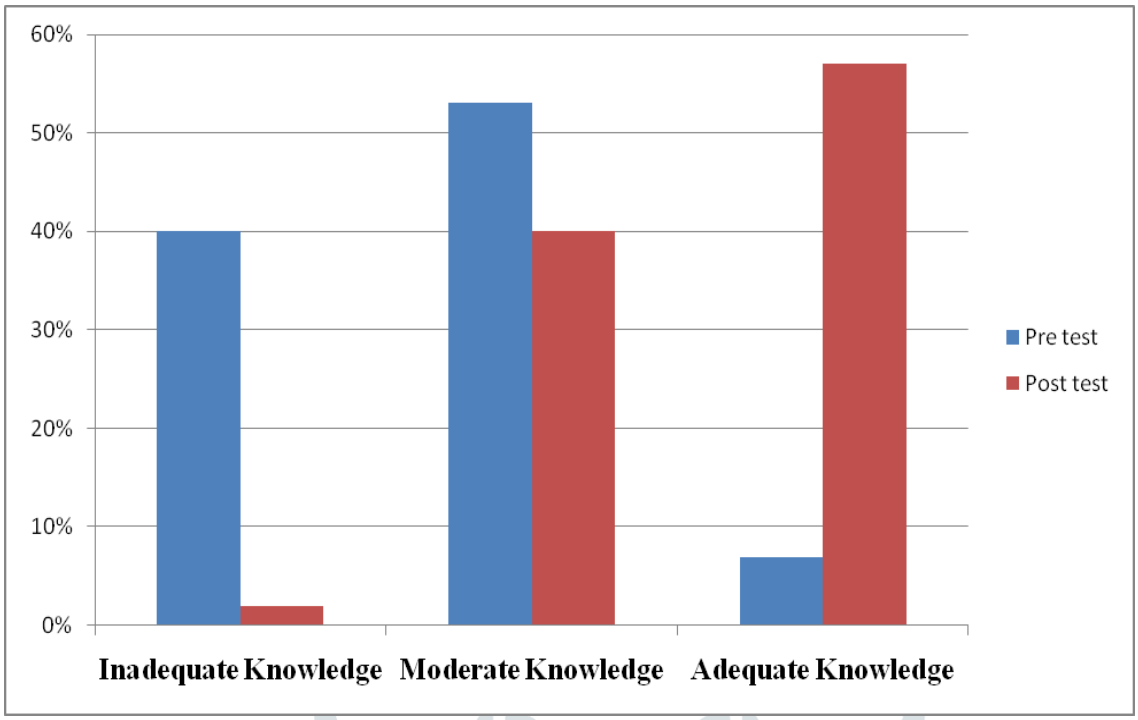
**Table. I. Frequency and percentage distribution of samples is according to their demographic variables.**

| Sr. No. | Demographic variable | | Frequency | Percentage |
|---|---|---|---|---|
| 1. | Age In Year | Less than 20 years | 28 | 28% |
| | | 21-25 years | 42 | 42% |
| | | 26-30 year | 22 | 22% |

| | | | | |
|---|---|---|---|---|
| | | 31-35 year | 8 | 8% |
| 2. | Religion | Hindu | 61 | 61% |
| | | Muslim | 25 | 25% |
| | | Christen | 13 | 13% |
| | | Other | 1 | 1% |
| 3. | Marital status | Married | 35 | 35% |
| | | Unmarried | 50 | 50% |
| | | Divorce | 13 | 13% |
| | | Widow | 2 | 2% |
| 4. | Aware about cervical cancer | Yes | 75 | 75% |
| | | No | 25 | 25% |
| 5. | Source of information | Mass media | 21 | 21% |
| | | Parents/ relative/ friends | 43 | 43% |
| | | Health professional | 34 | 34% |
| | | If other specific | 2 | 2% |
| 6. | Attend any health awareness program | Yes | 83 | 83% |
| | | No | 17 | 17% |

The table show that the majority of the 42 (42%) of the subject were belong to 21-25 year age group. 61 (61%) of the subject were belong to the Hindu religion. In respect to the marital status 50 (50%) of the subject unmarried. It show that 75 (75%) subject were aware about the cervical cancer and 25 (25%) subject were not aware about the cervical cancer. In, 43 (43%) subject were used parents/relatives/friends as a source of information and 2 (2%) of subject were used for other specific source of information. In, 83 (83%) subject were attended the program and 17 (17%) subject were not attended any health awareness program.

**Figure:- bar diagram of management and prevention of cervical cancer among ANM student on level of knowledge.**




It shows that score of the pre test 40% student have Inadequate knowledge, 53% student have moderate knowledge and 7% student have adequate knowledge. After the intervention score of the post test 2% of student have inadequate score, 40% of students have moderate knowledge, and 57% of student have adequate knowledge.

**Table. II. Comparison of Pre- test and Post test Mean Knowledge score**

| Sr. No. | Test | Mean | Standard deviation | Mean difference | 't' value | 'p' value |
|---|---|---|---|---|---|---|
| 1. | Pre- test | 13.3 | 4.633 | 7.4 | 2.26 | <0.05 significant |
| 2. | Post test | 20.7 | 6.387 | | | |

**Table. III. Association between demographic variables with pre-test knowledge scoring.**

| Sr. No. | Demographic variable | | LEVEL OF KNOWLEDGE | | | | | | Level of significance |
|---|---|---|---|---|---|---|---|---|---|
| | | | Inadequate knowledge | | Moderate knowledge | | Adequate knowledge | | |
| | | | F | % | F | % | F | % | |
| 1. | Age in year | <20 year | 13 | 13% | 13 | 13% | 2 | 2% | $X^2$= 4.7924 df= 6 NS |
| | | 21-25 year | 14 | 14% | 24 | 24% | 4 | 4% | |
| | | 26-30 year | 8 | 8% | 13 | 13% | 1 | 1% | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 31-35 year | 5 | 5% | 3 | 3% | 0 | 0% | |
| 2. | Religion | Hindu | 22 | 22% | 35 | 35% | 4 | 4% | $X^2$=5.88 df= 6 NS |
| | | Muslim | 13 | 13% | 10 | 10% | 2 | 2% | |
| | | Chirstion | 5 | 5% | 7 | 7% | 2 | 2% | |
| | | Other | 0 | 0% | 1 | 1% | 0 | 0% | |
| 3. | Marital status | Married | 13 | 13% | 19 | 19% | 2 | 2% | $X^2$= 0.952 df= 6 NS |
| | | Unmarried | 19 | 19% | 27 | 27% | 4 | 4% | |
| | | Widow | 6 | 6% | 6 | 6% | 1 | 1% | |
| | | Divorce | 1 | 1% | 1 | 1% | 0 | 0% | |
| 4. | Awareness about the cervical cancer? | Yes | 28 | 28% | 42 | 42% | 5 | 5% | $X^2$=1.322 df= 2 NS |
| | | No | 12 | 12% | 11 | 11% | 2 | 2% | |
| 5. | Source of information | Mass media | 6 | 6% | 14 | 14% | 1 | 1% | $X^2$= 9.219 df= 6 NS |
| | | Parents/ relatives/friends | 13 | 13% | 26 | 26% | 4 | 4% | |
| | | Health workers | 20 | 20% | 12 | 12% | 2 | 2% | |
| | | If other specific… | 1 | 1% | 1 | 1% | 0 | 0% | |
| 6. | Are you attend any health awareness program? | Yes | 32 | 32% | 45 | 45% | 6 | 6% | $X^2$= 0.439 df=6 NS |
| | | No | 8 | 8% | 8 | 8% | 1 | 1% | |

Table I, shows aspect wise distribution of knowledge questionnaire. In the pre test mean score is 13.3 post test mean score is 20.7. Pre test standard deviation score is 4.633 and post test standard deviation score is 6.387. 't' value is 2.26 that sows the level of knowledge of significance is <0.05. The result value show that objective two had accepted and null hypothesis is rejected.

Table II, Represent that $X^2$ was less than value in term of like source of information, awareness about the cervical cancer, marital status and attending any health awareness program. Hence objective third determine that statistical significance of the association between demographic variables and the level of knowledge about management and prevention of cervical cancer variables**.**

Table III, shows the association between level of knowledge score in pre- test and age in year. There was (X2= 4.7924, df= 6, not significant) association between level of knowledge in pre- test and religion, association between level of knowledge in pre- test and religion seen between level of knowledge in pre- test and religion (X2= 5.88, df= 6, not significant), association between level of knowledge in pre- test and marital status (X2= 0.952, df= 6, not significant), association between level of knowledge in pre- test and awareness about the cervical cancer (X2= 1.322, df= 2, not significant), association between level of knowledge in pre- test and source of information (X2= 9.219, df= 6, not significant), and association between level of knowledge in pre- test and attend any health awareness program (X2= 0.439, df= 6, not significant.

**Discussion:-**

The finding of the present study were analyzed and discussed with the finding of the similar studies which confirmed that STP was effective in increasing the knowledge about management and prevention of cervical cancer among ANM student in selected nursing institute of Mahisagar District.

A study was conducted on 489 female students in the healthcare sector in the age group of 19- 25 years. Prior to the lecture, knowledge regarding cervical cancer and vaccines was generally low across subgroups, witnessing improvements ranging from 60% to 100% in various questionnaire sections post- education. Understanding of the importance of a Pap smear (papanicolaou test) increased significantly from 21% to 79% after the educational session. (Verma, et al., 2024)

A cross-sectional online poll was conducted between March and April 2022, focusoing on women aged 18 to 65. The study was included 4518 women, with 87.16% living in metropolitan areas. The median level of awareness on cervical cancer was 16 out of 26. Over 84% of respondents were willing to get frequent screenings, while nearly 40% had never undergone one. The study suggests improving comprehensive health education through social media platforms and physicians, as well as establishing nationwide free cervical cancer screening using high- performance screening tools. (Zhang, et al., 2023)

**Conclusion:-**

To conclude, intervention was very helpful in improving the knowledge of the ANM student regarding management and prevention of cervical cancer. The study showed the knowledge of ANM student was not up to the mark related to the knowledge about management and prevention of cervical cancer. After the STP induction, the post-test finding showed significant increased knowledge about management and prevention of cervical cancer. The study proved STP to be kept for future reference. STP will be beneficial for student and staff who can utilize the STP in the further study and handling Patient care.

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