Effectiveness of Health Information Package on Knowledge Regarding Cervical Cancer Among Female Students

Shweta Singh[1], Prof. Rossily Nirmal[2], Laxmi Pandey[3]

[1]M.Sc. Nursing, Dept. of OBG, Sahara College of Nursing, Lucknow.
[2]Principal and HOD, Dept. of OBG, Sahara College of Nursing, Lucknow.
[3]Associate Professor, Dept. of OBG, Sahara College of Nursing, Lucknow.

ABSTRACT

Cervical cancer is mainly caused due to infection with the human papilloma virus (HPV). HPV is mainly transmitted through sexual contact and most people are infected with HPV shortly after the onset of sexual activity. Lack of cervical cancer screening, poor knowledge about the disease and its prevention including the HPV vaccination, are some of the key factors resulting in increase of cervical cancer among women. Promoting awareness and knowledge regarding cervical cancer among females will serve as a proactive step towards prevention and their overall wellbeing, while also contributing to broader public health groups, creating a foundation for a healthier and more informed community. This study was conducted to assess the effectiveness of health information package on knowledge regarding cervical cancer among female students studying in a selected degree college of Lucknow, U.P. Pre-experimental one group pre-test post-test research design was used to conduct the study at City Women's College, Jankipuram, Lucknow, (U.P). Purposive sampling technique was used to select 50 female students in the age group of 18-25 years. The data was collected using self-structured knowledge questionnaire. The Health Information Package was administered to enhance their knowledge regarding cervical cancer. Statistical analysis of the study was done using descriptive and inferential statistics. The study findings revealed that the overall mean and SD of pre-test knowledge score was 13.14 and 3.30 and the post-test knowledge score was 19.96 and 2.94. The obtained t-value=16.291 is highly significant; where p<0.05. There was no significant association between the selected demographic variables and the pre-test knowledge score of female students. The present study underscores the significance of Health Information Package in enhancing knowledge about cervical cancer among female students. The effectiveness of the Health Information Package highlights its potential as a valuable educational tool for improving knowledge regarding cervical cancer and fostering a culture of health among females.

Keywords: Effectiveness, Health information package, Knowledge, Cervical Cancer, female students

INTRODUCTION

Cervical cancer starts when cells lining the cervix begin to grow out of control. Nearly all (99%) of cervical cancers cases are linked to infection with the human papilloma virus (HPV), an extremely common virus transmitted through sexual intercourse. The World Health Organization (WHO) data suggests that HPV is mainly transmitted through sexual intercourse and most people are infected with HPV shortly after the

onset of sexual activity.[1] Despite being a preventable and curable disease cervical cancer is responsible for a large burden of suffering in women around the world. Cervical cancer is the fourth most common cancer among women globally and currently, one life is lost every 2 minutes to this disease.[2] In India, cervical cancer is the 2nd most common cancer with an incidence rate of 18.3% (123,907 cases) and the second leading cause of death with a mortality rate of 9.1 % as per GLOBOCAN 2020.[3] The risk factors of cervical cancer includes early age at first intercourse, multiple sexual partners, poor sexual hygiene, repeated childbirth, smoking, immunodeficiency and having a family history of cancer. Cervical cancer usually grows slowly over many years; however, it may present with vaginal bleeding, post-coital and post-menopausal bleeding, abnormal foul smelling vaginal discharge, dyspareunia, pain in lower abdomen and weight loss. Usually there are no symptoms in the early stage, or it may be absent until the cancer is in its advanced stages.[1] Cervical cancer is preventable and treatable if caught early. Several factors contribute to the high burden of cervical cancer including poor knowledge about the disease; furthermore, there is a lack of screening among the general population. Knowledge of the women about cervical cancer and awareness about its prevention are the key factors that determine the utilization of screening services. A study conducted in the tribal population of Madhya Pradesh in the year 2020 shows that lack of awareness about cervical cancer accounts for about 25.06% which holds the one of the important criteria for poor utilization of cervical cancer screening services.[4] A research paper on knowledge about Cervical Cancer among 297 medical students of 2nd and 3rd year conducted in Belagavi, states that knowledge regarding risk factors and prevention techniques of cervical cancer were lacking in the students.[5] The data from the National Family Health Survey, 5th round (2019-21) revealed that the percentage of women ever screened for cervical cancer in Lucknow, Uttar Pradesh, among the age group of 30 to 49 years were 1.1% only.[6] Effective health education is required to spread awareness regarding cervical cancer screening and HPV vaccination and to address the factors linked with poor cervical screening rate in India. Mass health education conducted in various parts of rural villages of Uttar Pradesh increased the screening rate to 39% including both cervical and breast cancer.[7] Several research reports have also stated that health education is an immediate requirement to enhance awareness and knowledge about screening and prevention of cervical cancer. The Health Information Package (HIP) is a structured, planned health education program which can be used to increase the awareness and enhance the knowledge of female students regarding cervical cancer.

AIM OF STUDY

The aim of the study focuses on creating awareness and augmenting the understanding of cervical cancer among female students by empowering them with comprehensive knowledge in the form of health information package meticulously curated by the researcher, which will thereby facilitate access to cervical cancer screening and HPV vaccination programs, empowering the female students to take proactive steps in preventing cervical cancer.

PROBLEM STATEMENT

"A study to assess the effectiveness of Health Information Package on Knowledge regarding cervical cancer among female students studying in selected degree college of Lucknow, (U.P.)"

OBJECTIVES

- To assess the pre-test level of knowledge regarding cervical cancer among female students.

- To assess the post-test level of knowledge regarding cervical cancer among female students.
- To assess the effectiveness of Health Information Package on knowledge regarding cervical cancer among female students.
- To find out the association between the pre-test knowledge scores of female students with their selected demographic variables.

HYPOTHESES

- **H$_1$:** There will be significant difference in knowledge regarding cervical cancer among female students before and after the administration of Health Information Package.
- **H$_2$:** There will be significant association between the pre-test knowledge scores regarding cervical cancer among female students with their selected socio-demographic variables.

RESEARCH METHODOLOGY

Research design adopted for this study is pre-experimental one group pre-test post-test research design. This design was used by the researcher to assess the effectiveness of Health Information Package on knowledge regarding cervical cancer among female students studying in selected degree college of Lucknow, (U.P). The independent variable used in this study was the Health Information Package and the dependent variable was the knowledge regarding cervical cancer among female students. The demographic variable in this study consisted of age, marital status, previous knowledge of cervical cancer and source of information. The setting of the study was City Women's College, Jankipuram, Lucknow. The target population of the study included female students in the age group of 18-25 years, and the inclusion criteria of the study included the participants who were female students of age group 18-25 years studying in selected degree college of Lucknow and both married and unmarried female students. The exclusion criteria were female students who were unavailable at the time of data collection. Purposive sampling technique was used to select 50 female students in the age group 18-25 years who fulfilled the inclusion criteria. An appropriate structured knowledge questionnaire consisting of 30 questions regarding cervical cancer was developed. Score 1 was awarded for every correct response and 0 for incorrect response. The total score was 30. The knowledge levels were categorized as inadequate, (score 0-10) moderate (11-20) and adequate (21-30). The validity of the tool was established in consultation with 9 nursing experts in the field of obstetrics and gynecological nursing. The reliability of the tool was measured using test-retest method.[8] The pilot study was conducted at Rameshwaram Institute of Education and Training, Sitapur Road, Lucknow. Approval of the Institutional Ethical Committee was obtained for conducting the main study. Informed consent from the participants was obtained before the data collection procedure. Structured Knowledge Questionnaire was distributed to the samples to assess their pre-test level of knowledge regarding cervical cancer. Health information package curated by the researcher comprising of insightful details regarding cervical cancer was administered to the students after the pretest. After one week, the post-test knowledge level of the participants was assessed using the same tool.

DATA ANALYSIS AND INTERPRETATION

Analysis of the data is based on the objectives and hypothesis testing. In this study, the collected data was analyzed using the descriptive and inferential statistics. [9]

ORGANIZATION OF DATA

On the basis of the objectives, the analyzed data has been organized under the following sections:

SECTION A: Distribution of respondents according to the socio- demographic profile.

SECTION B: Pre-test knowledge scores of female students regarding cervical cancer.

SECTION C: Post-test knowledge scores of female students regarding cervical cancer.

SECTION D: Analysis of the effectiveness of Health Information Package on knowledge regarding cervical cancer among female students.

SECTION E: Association between pre-test knowledge score and demographic profile of female students.

SECTION - A

DISTRIBUTION OF RESPONDENTS ACCORDING TO THE DEMOGRAPHIC PROFILE

Table 1: Frequency and percentage distribution of female students according to socio-demographic profile

n = 50

S.NO.	DEMOGRAPHIC VARIABLES	CATEGORY	FREQUENCY (f)	PERCENTAGE (%)
01.	Age in years	18 – 20 years	44	88%
		21 – 22 years	04	8%
		23 – 25 years	02	4%
02.	Marital Status	Married	01	2%
		Unmarried	49	98%
03.	Knowledge	Yes	16	32%
		No	34	68%
04.	Source of Information	Teachers	5	31.3%
		Family and Friends	1	6.3%
		Health Professionals	0	0%
		Books	1	6.3%
		Mass Media	4	25%
		Others	5	31.3%

TABLE REVEALED:
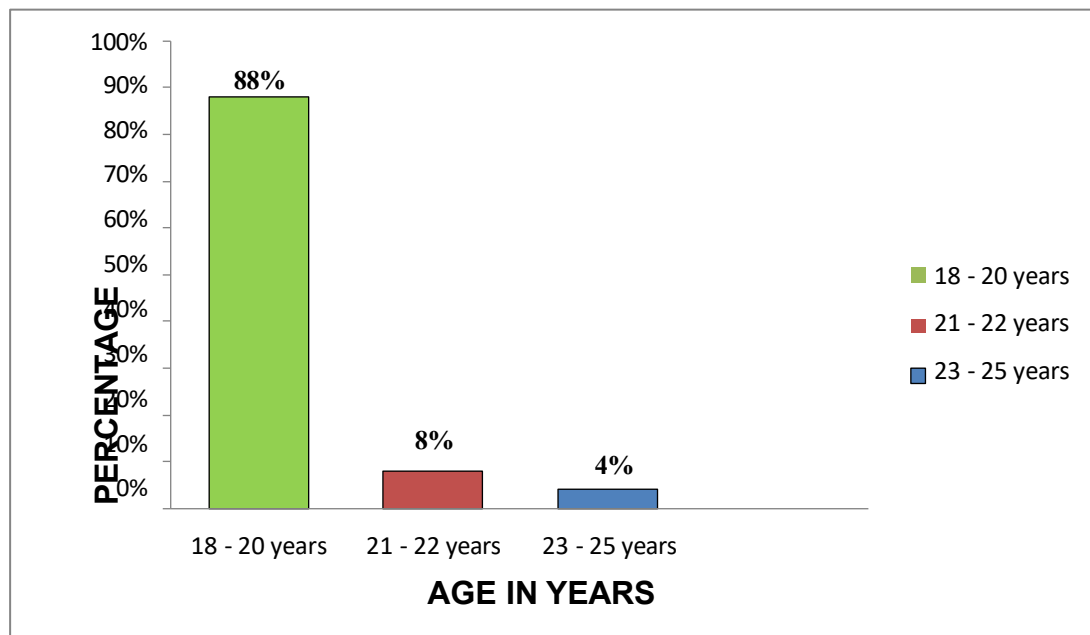
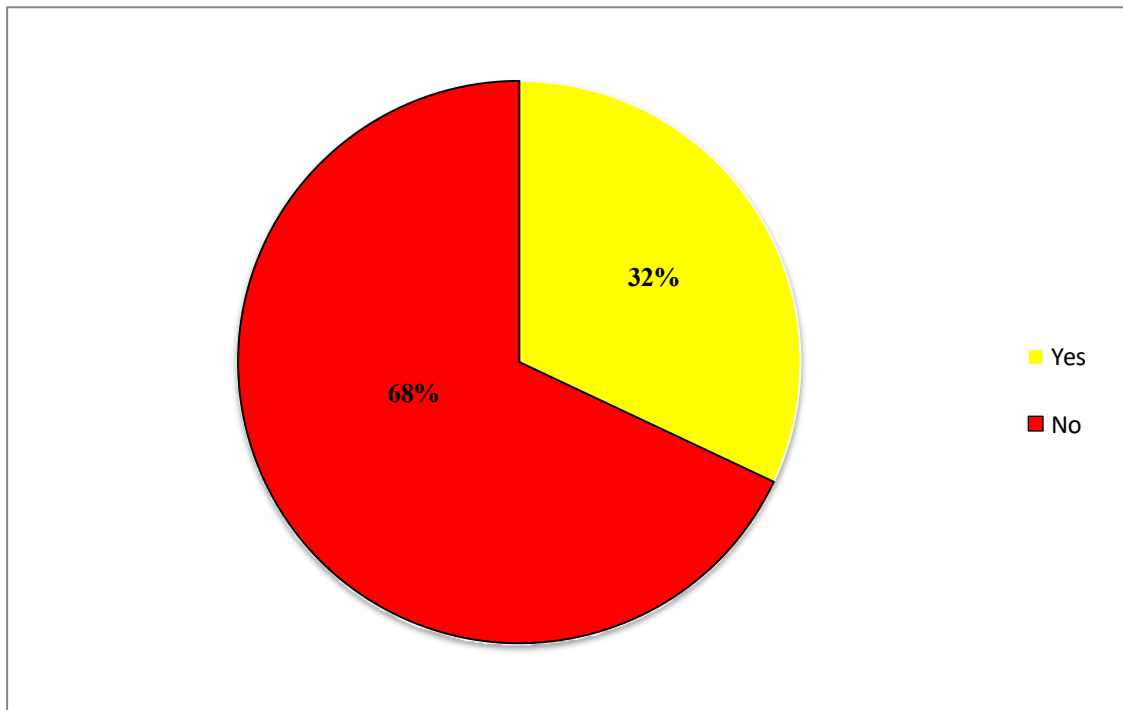**Figure 1: Bar graph showing distribution of female students according to age group.**

The above graph shows that maximum number of students, 44 (88%) fell within the age range of 18 to 20 years, indicating a predominant presence in this category. A smaller proportion, constituting 04 (8%) students belonged to the age group of 21 to 22 years, while the age range of 23 to 25 years encompassed only 02 (4%) of the total participants. This breakdown provides insights into the age distribution of the female students with a notable concentration in the 18 to 20 years category.
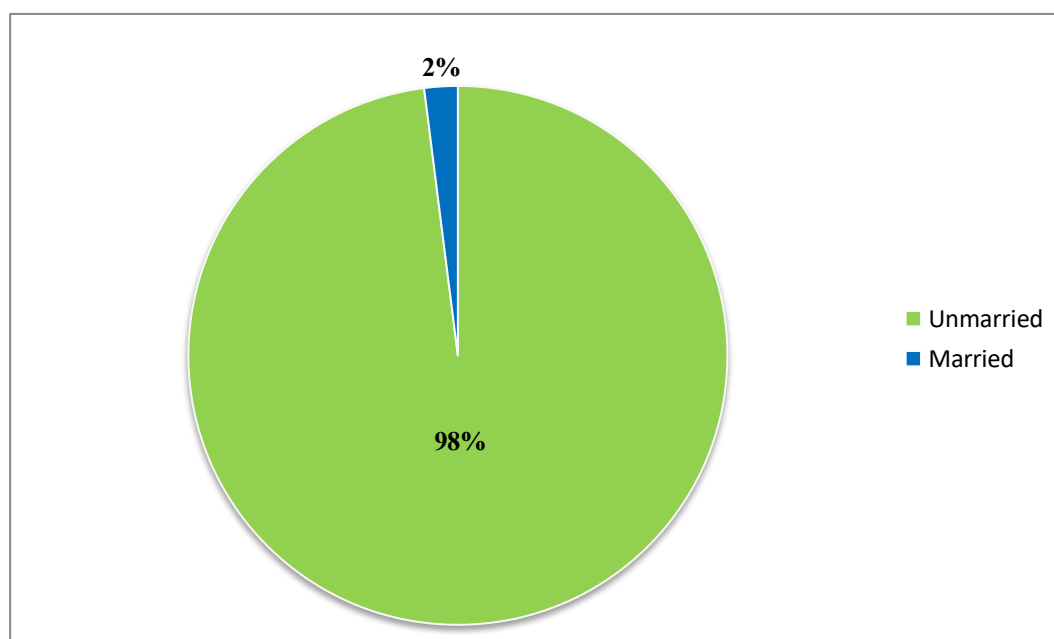
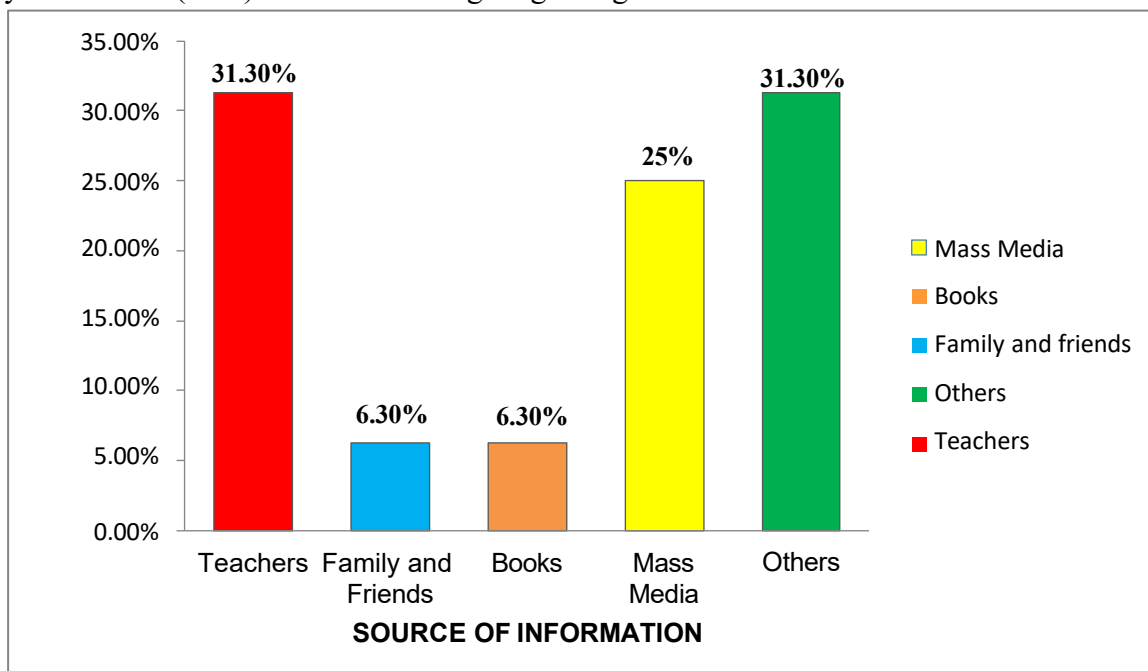**Figure 2: Pie chart showing distribution of female students according to marital status.**

The above pie chart depicts that a vast majority, comprising 49 (98%) of the participants, were unmarried. In contrast, only a small proportion, specifically 01 (2%), fell into the married category. This data

illuminates a predominantly unmarried status among the female students, highlighting the marital status distribution within the study population.

Figure 3: Pie chart showing distribution of female students according to knowledge about cervical cancer.

The above pie chart shows that 16 (32%) of female students had knowledge about cervical cancer and majority of them 34 (68%) had no knowledge regarding cervical cancer.

Figure 4: Bar graph showing distribution of female students according to source of information.

The above graph depicts that regarding the source of information; the female students drew knowledge from various outlets. Out of 16 female students who had knowledge regarding cervical cancer, 5 (31.3%) received information through teachers, 01 (6.3%) received information from family and friends, 01 (6.3%) received information through books, 4 (25%) through mass media and 5 (31.3%) received information through other sources.

SECTION – B
PRE-TEST KNOWLEDGE SCORES OF FEMALE STUDENTS REGARDING CERVICAL CANCER.

Table 2: Description of Pre-test knowledge score
n=50

LEVEL OF KNOWLEDGE	FREQUENCY (f)	PERCENTAGE (%)	MEAN	SD
Adequate (score 21-30)	00	00%	13.14	3.30
Moderate (score 11-20)	37	74%		
Inadequate (score 0-10)	13	26%		
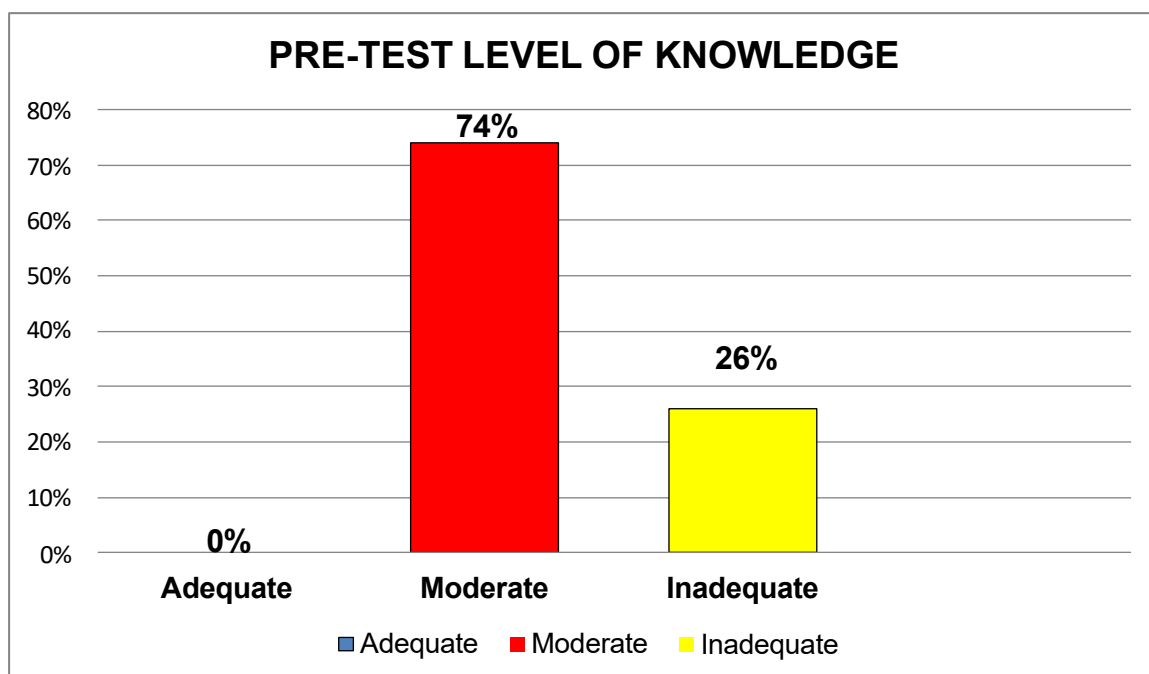
Figure 5: Bar graph showing pre-test knowledge score of female students.

The data in the above table depicts the overall knowledge level of participants, assessed in the pre-test. None of the participants had adequate knowledge representing a score range of 21 to 30. The majority of participants, 37 (74%) had moderate knowledge characterized by scores ranging from 11 to 20. A significant portion of female students, 13 (26%) had inadequate knowledge, reflecting scores in the range

of 0 to 10. This distribution suggests variability in the baseline knowledge levels among the participants before the intervention, with a substantial proportion having a fair understanding, while others had a poorer grasp of the subject matter. The pre-test mean score was 13.14 and SD was 3.30
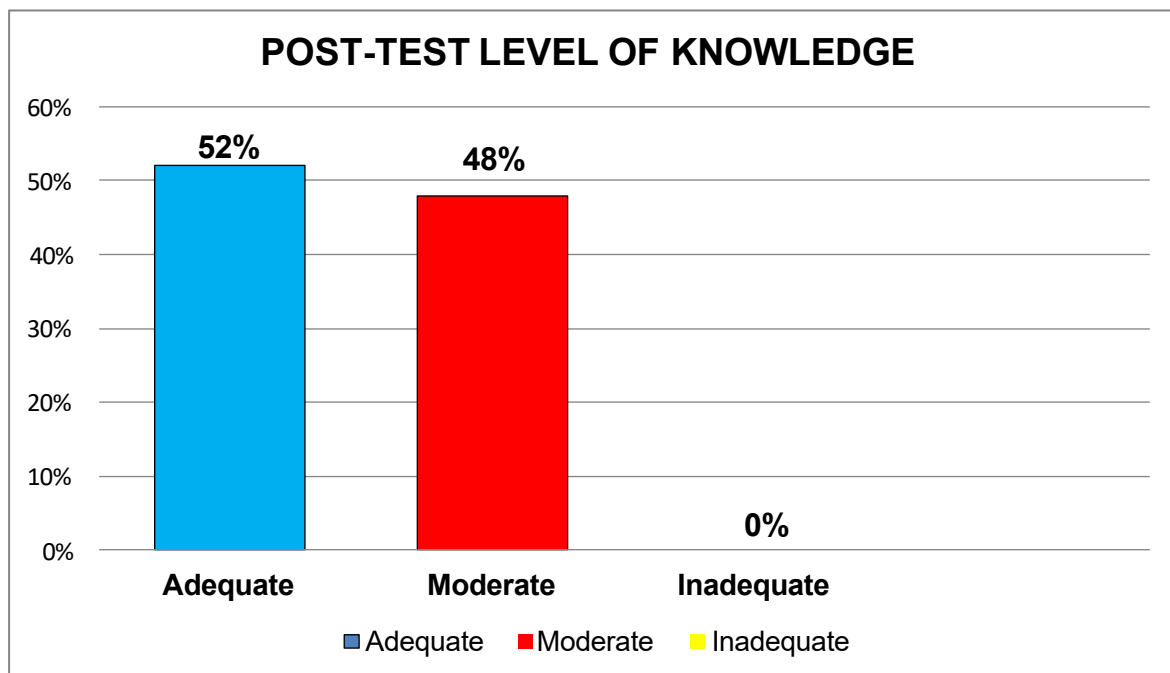
SECTION – C
POST – TEST KNOWLEDGE SCORES OF FEMALE STUDENTS REGARDING CERVICAL CANCER.

Table 3: Description of Post-test knowledge score
n=50

LEVEL OF KNOWLEDGE	FREQUENCY (f)	PERCENTAGE (%)	MEAN	SD
Adequate (score 21-30)	26	52%		
Moderate (score 11-20)	24	48%	19.96	2.94
Inadequate (score 0-10)	00	00%		

Figure 6: Bar graph showing post-test knowledge score of female students.

The data in the above table depicts the overall knowledge level of participants, assessed in the post-test. 26 (52%) female students had adequate knowledge. The majority of the participants, 24 (48%) had moderate knowledge, and none of them had inadequate knowledge regarding cervical cancer. The mean score was 19.96 and SD was 2.94

SECTION – D
ANALYSIS OF THE EFFECTIVENESS OF HEALTH INFORMATION PACKAGE ON KNOWLEDGE SCORE REGARDING CERVICAL CANCER AMONG FEMALE STUDENTS

Table 4: Analysis of the effectiveness of Health Information Package on knowledge score regarding cervical cancer among female students.

Knowledge	Mean score	Mean difference	SD	Paired t-test score	p-value
Pre-test	13.14	6.82	3.30	16.291	<0.05
Post-test	19.96		2.94		

In the above table, the pre-test mean score was 13.14 and the post-test mean score was 19.96; whereas the pre-test SD was 3.30, and the post-test SD was 2.94. The obtained t-value‟ was 16.291, which is highly significant at $p<0.05$ level. Since, the value obtained using 't' test is more than the table value, the statistical result examined significant difference between pre-test and post-test knowledge scores. Hence, it indicates that the Health Information Package was effective and had a positive impact on enhancing the overall knowledge levels of the participants regarding cervical cancer.

SECTION – E
ASSOCIATION BETWEEN PRE-TEST KNOLWEDGE SCORE AND DEMOGRAPHIC PROFILE OF FEMALE STUDENTS

Table 5: Association of demographic variables with the pre-test knowledge score.

n =50

Demographic Variables	Pretest knowledge Level			Chi-square	df	p-value
	Adequate	Moderate	Inadequate			
a) Age in years						
i)18 -20 years	00	33	11			
ii) 21-22 years	00	02	02	1.92	2	**0.382***
iii) 23-25 years	00	02	00			
b) Marital Status						
i) Unmarried	00	36	13	0.36	1	**0.549***
ii) Married	00	01	00			

c) Do you have any knowledge about cervical cancer						
i) Yes	00	14	02	2.23	1	**0.135***
ii) No	00	23	11			
d) If yes, source of information						
i) Teachers	00	03	02			
ii) Family & friends	00	01	00	5.03	5	**0.284***
iii) Health professional	00	00	00			
iv) Books	00	01	00			
v) Mass media	00	04	00			
vi) Others	00	05	00			

df = degree of freedom   *NS = Not significant

The above table depicts that there is no association between pre-test level of knowledge on cervical cancer among female students with their selected demographic variables.

DISCCUSSION AND CONCLUSION

The present study aimed to assess the effectiveness of Health Information Package on knowledge regarding cervical cancer among female students studying in selected degree college. The discussion of the study findings is organized under the following objectives and hypotheses:

OBJECTIVE 1: To assess the pre-test level of knowledge regarding cervical cancer among female students.

The data from the current study indicates that out of 50 female students, **none** of the participants **had adequate knowledge** regarding cervical cancer, majority of them, **37 (74%)** of the female students **had moderate knowledge** and **13 (26%) of them had inadequate knowledge** regarding cervical cancer in the pre-test. The **pre-test mean score was 13.14** and **standard deviation [SD] was 3.30** The study findings can be supported by a similar study conducted by **Khalifa FMA., (2023)** to assess the effectiveness of educational program on knowledge and attitude towards cervical cancer screening among women of reproductive age. The result showed that in the **pre-test, 21% of the participants had poor knowledge, 40% had moderate knowledge and 39% of them had good knowledge regarding cervical cancer**. **After implementing the educational program 69% of them had good knowledge, 31% had moderate knowledge and none of the participants had poor knowledge in the post-test.** [10]

OBJECTIVE 2: To assess the post-test level of knowledge regarding cervical cancer among female students.

In this study, the post-test knowledge scores of female students regarding cervical cancer were assessed following the administration of the health information package, and it was found out that, **26 (52%) female students had adequate knowledge**, the majority of the participants, **24 (48%) had moderate knowledge**, and **none of them had inadequate knowledge** regarding cervical cancer. The **post-test mean score was**

19.96 and **SD was 2.94** The study findings can be supported with the study of **Singh A., (2017)** who conducted a one group pre-test post-test study to evaluate the effectiveness of structured education program on knowledge regarding cervical cancer among women of selected area of Moradabad, (U.P.). The result revealed that the pre-test mean knowledge score was 7.36 and SD was 3.46 followed by **post-test mean knowledge score of 15.86 and SD was 2.80,** which highly signifies the value of structured education program. [11]

OBJECTIVE 3: To assess the effectiveness of Health Information Package on knowledge regarding cervical cancer among female students.

In the present study, the pre-test and post-test knowledge scores were analyzed to determine the effectiveness of the intervention. Before the intervention, the participants had a mean knowledge score of 13.14 and **pre-test SD was 3.30**. Following the intervention, there was a substantial improvement in knowledge levels as reflected in the post-test scores. The post-test mean knowledge score significantly increased to 19.96 and the **post-test SD was 2.94**. The obtained **'t-value' was 16.291, which is highly significant at $p<0.05$ level**. Hence, it indicates that the Health Information Package was effective and had a positive impact on enhancing the overall knowledge levels of the participants regarding cervical cancer. The study findings are consistent with the study of **Patidar D., (2023)** who conducted a study to assess the effectiveness of planned health teaching program on knowledge regarding HPV vaccine for cervical cancer among women in selected rural area. The result revealed that the **post-test knowledge mean score (14.1±3.26) was higher than the mean pre-test knowledge score of (8.25±3.10) The calculated 't' value (13.29) was also found to be greater than the table value (1.98)** at 0.05 level of significance which indicated that the planned health teaching program was found to be effective in improving the knowledge regarding cervical cancer among young women. [12]

OBJECTIVE 4: To find out the association between the level of pre-test knowledge score on cervical cancer among female students with their selected demographic variables.

In this present study, it was found out that there is **no significant association** between the pre-test knowledge level and their selected demographic variables. The study findings are consistent with **Rachana KC., (2019)** who conducted a study to assess knowledge regarding cervical cancer among undergraduate female students of selected degree college of Nepal. The study findings claimed that there was **no statistical significant association between knowledge and selected demographic variables** (age, religion, ethnicity, family income, smoking and sexual practice).[13]

H₁: There will be significant difference in knowledge regarding cervical cancer among female students before and after the administration of Health Information Package.

In this study, there was a **substantial and statistical significant difference in the pre-test and post-test knowledge scores** of female students regarding cervical cancer and hence, **the hypothesis is accepted.** The findings are consistent with the study of **Archana B., (2019)** who found that that there was a marked increase in knowledge of adolescent girls after exposing them to a structured teaching programme about cervical cancer.

H₂: There will be significant association in knowledge scores regarding cervical cancer among female students with their selected socio- demographic variables.

In this study, there was no significant association between the pre-test knowledge levels of female students and their selected socio-demographic variables, and hence, **H₂ was rejected**. The findings can be

supported with the study of **Vishal A.,** who conducted a pre-experimental study to assess the knowledge on prevention of carcinoma cervix among women in reproductive age group. The result stated that there was no statistical significant association between selected demographic variables and knowledge scores of women in reproductive age group.[15]

MAJOR FINDINGS OF THE STUDY
FINDINGS RELATED TO DEMOGRAPHIC PROFILE

- Majority of the female students 44 (88%) belonged to the age group 18-20 years.
- Majority of the female students 49 (98%) were unmarried.
- Majority of the female students 34 (68%) had no previous knowledge about cervical cancer.
- Out of 16 female students who had knowledge about cervical cancer, majority of them 5 (31.3%) had received information from teachers and other sources.

FINDINGS RELATED TO PRE-TEST LEVEL OF KNOWLEDGE

In the pre-test, none of the participants had adequate knowledge regarding cervical cancer, majority of the female students **37 (74%) had moderate knowledge** and a significant portion of the participants **13 (26%) had inadequate knowledge** about cervical cancer.

FINDINGS RELATED TO POST-TEST LEVEL OF KNOWLEDGE

After administering the health information package to the female students, the post-test knowledge scores of female students regarding cervical cancer were assessed. The result showed that **26 (52%) of the participants had adequate knowledge**, majority of the female students **24 (48%) had moderate knowledge** and **none of the participants had inadequate knowledge regarding cervical cancer.**

FINDINGS RELATED TO EFFECTIVENESS OF HEALTH INFORMATION PACKAGE ON KNOWLEDGE REGARDING CERVICAL CANCER

In the present study, the **pre-test mean score was 13.14** and the **post-test mean score** was **19.96**; whereas the **pre-test SD** was **3.30**, and the **post-test SD** was **2.94**. The obtained 't-value' was 16.291, which is highly significant at $p < 0.05$ level. Since, the value obtained using 't' test is more than the table value, the statistical result examined significant difference between pre-test and post-test knowledge scores. Hence, it indicated that the **Health Information Package was effective** and had a positive impact on enhancing the overall knowledge levels of the participants regarding cervical cancer.

FINDINGS RELATED TO ASSOCIATION OF PRE-TEST KNOWLEDGE SCORE WITH SELECTED DEMOGRAPHIC VARIABLES

In the present study, while assessing the association between the pre-test level of knowledge and the selected demographic variables (age, marital status, previous knowledge about cervical cancer, source of information) it was found that there was no significant association between the selected demographic variables and pre-test level of knowledge.

LIMITATIONS OF THE STUDY

- The study was conducted in a degree college and the researcher found difficulty in assembling the students.

• Generalizability of the study findings may be limited to due to selection of small sample size.

IMPLICATIONS OF THE STUDY

The researcher has drawn the following implications from the study which holds crucial significance in the field of nursing practice, nursing education, nursing administration and nursing research.

Nursing Practice

Nursing practice is one of the most important components of the hospital services in which the nurses play a vital role in satisfying the nursing needs of the community. Nurses can empower young females as well as women to advocate for their own health by imparting knowledge about cervical cancer, encouraging them for regular screenings and HPV vaccination.

Nursing Education

As the student nurses are the future of nursing profession there is a need that the student nurses get education regarding cervical cancer and its prevention, enabling them to effectively communicate cervical cancer related information to diverse populations during their future nursing practice. The nurse educators should utilize interactive and engaging learning tools, such as workshops, seminars and symposiums to effectively convey information about cervical cancer screening and prophylaxis and promote active participation of student nurses. They should also emphasize the importance of continuing education for nursing professionals to stay updated on advancements in cervical cancer research, ensuring that they can deliver accurate information to their patients.

Nursing Administration

The nursing administrators should organize CNE programs to create awareness among the staff nurses regarding cervical cancer and its preventive measures. The nursing administrators should conduct cervical cancer screening camps to ensure that regular screenings are conducted for eligible individuals according to the established guidelines as well as they should allocate resources for the development and distribution of educational materials such as brochures, workshops and online resources to enhance awareness regarding cervical cancer among nursing staff.

Nursing Research

Research in the field of nursing helps us to upgrade the theoretical knowledge as well as the clinical practice. The findings of the research conducted in the field of nursing can be included in the curriculum as well as, at the same time in the practice. Research findings can contribute to the development of evidence-based public health strategies. Nursing researchers can collaborate with public health professionals to inform policies aimed at improving cervical cancer awareness and prevention on a broader scale.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

• A similar study can be replicated on a larger sample size for wider generalizations.
• A similar study can be conducted among student nurses.
• A comparative study can be done to assess the knowledge of cervical cancer among staff nurses working in private hospitals and government hospitals.
• A similar study can be conducted to assess the knowledge on prevention of cervical cancer among sexual workers.

CONCLUSION

The newly found knowledge through the Health Information Package regarding cervical cancer acquired by the participants is expected to play a crucial role in empowering them to take preventive measures. Specifically, this includes adopting preventive practices such as regular cervical cancer screenings and considering HPV vaccination. By providing comprehensive and accessible information, this study not only contributes to bridging the knowledge gap but also equips the female students with the awareness necessary to safeguard their health and make informed decisions about cervical cancer prevention later in their life. The success of this Health Information Package underscores the potential of targeted educational interventions in promoting women's health and preventive care.

REFERENCES

1. Cervical cancer [Internet]. Who.int. Available from: https://www.who.int/news-room/fact-sheets/detail/cervical-cancer?gclid=EAIaIQobChMIhJDgiIH2gwMVyKNmAh359wYlEAAYASAA EgKs_PD_BwE

2. Cervical cancer elimination [Internet]. UICC. Available from: https://www.uicc.org/what-we-do/thematic-areas/cervical-cancer-elimination?gad_source=1&gclid=EAIaIQobChMIi8yOiID2gwMVDCiDAx1YDwN7EAAYASAAEgJsqfD_BwE

3. PRESCRIP – TEC Horizon 2020 Project in cervical cancer prevention [Internet]. PRESCRIPTEC.2021. Available from: https://prescriptec.org/

4. Thahirabanuibrahim., Logaraj M., "Impact of health education intervention in promoting cervical cancer screening among rural women of Chengalpattu District". Clinical Epidemiology and Global Health, published Nov 7, 2021, volume-12, DOI: https://doi.org/10.1016/j.cegh.2021.100895.

5. Singh J. Baliga SS. "Kowledge regarding cervical cancer and HPV vaccine among medical students: A cross-sectional study." Clin Epidemiol Glob Health [Internet]. 2021;9:289-92. Available from : https://www.sciencedirect.com/science/article/pii/S2213398420302207

6. National Family Health Survey (NFHS -5) 2019-21 Available from: https://main.mohfw.gov.in/sites/default/files/NFHS-5_phaseII_0.pdf

7. Chawla P, Chawla A, Chaudhary S. "Knowledge, attitude & practice on human papilloma virus vaccination: A cross-sectional study among healthcare providers" Indian J Med Res [Internet[]. 2016;144(5):741.

8. Polit F Denise. Beck Tatano Cheryl. Nursing Research. 10th Edition. New Delhi: Wolters Kluwer; 2016. Page no-39, 628-632

9. Sharma K. Suresh. Nursing Research and statics. 3rd edition, New Delhi: Elsevier.2018.page no: 101-309

10. Fawzy A, Hossien DY, Ibrahim DE, Taha DR. Effect of educational program on knowledge and attitudes towards cervical cancer screening among women of reproductive age. Minia Scientific Nursing Journal [Internet]. 2023;014(1):2–12. Available from: https://msnj.journals.ekb.eg/article_310907.html

11. Gupta P. A study to assess the effectiveness of structured education program on knowledge regarding prevention of cervical cancer among women in selected area at Moradabad. International Journal of Advanced Science and Research. 2017 sept; 2(1):p.33-38. Available from : https://www.academia.edu./3804562/A_study_to_assess-

the_effectiveness_of_structured_education_program_on_knowledge_regarding_prevention_of_cervical_cancer_among_women_in_selected_area_at_Moradabad.

12. Patidar D., Rawal S., A Study to Assess the Effectiveness of Planned Health Teaching Program on Knowledge regarding HPV vaccine for Cervical Cancer among Women in selected rural area of Mehsana District. International Journal of Nursing Education and Research. 2023;11(1):35-7. Doi: 10.52711/2454-2660.2023.00007 Available on: https://ijneronline.com/AbstractView.aspx?PID=2023-11-1-7

13. Rachana KC., Giri R., "Knowledge regarding cervical cancer among undergraduate female students at a selected college of Lalitpur, Nepal." Cancer Oncology Nursing Journal. 2019 July 1;29(3): 184-188. Doi: 10.5737/23688076293184188. Available from: https://ncbi.nlm.nih.gov/pmc/articles/PMC6970460/

14. Archana B., "A Study To Assess The Effectiveness Of Structured Teaching Programme On Causes And Prevention Of Cervical Cancer Among Adolescent Girls In Selected Junior Colleges At Bangalore." International Journal of Nursing Education and Research. 2019;7(4): 545-546. Doi:10.5958/2454-2660.2019.00120.00 Available on – https://ijneronline.com/AbstractView.aspx?PID=2019-7-4-20

15. Vishal A, G. UK, Tamizhini T, Priyanka P, S. RB. "Knowledge on prevention of carcinoma cervix among women in the reproductive age group at kokilamedu village, kanchipuram district, Tamil Nadu" [Internet]. Ebsco.com. 2020. Available from: https://openurl.ebsco.com/EPDB%3Agcd%3A14%3A9571742/detailv2?sid=ebsco%3Aplink%3Ascholar&id=ebsco%3Agcd%3A162448999&crl=c