A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING HUMAN PAPILLOMA VIRUS INFECTION AND ITS PREVENTION AMONG ADOLESCENT GIRLS IN MAHARISHI COLLEGE OF NATURAL LAW, BHUBANESWAR, ODISHA.

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Abstract

The study is conducted to assess the knowledge of human papilloma virus and its prevention among adolescent girls at Maharishi College of Natural Law, Bhubaneswar, Odisha. Objectives of the study include to assess the level of knowledge regarding the human papilloma virus and its prevention among the adolescent girls, to develop a planned teaching programme on human papilloma virus and its prevention, to assess the effectiveness of planned teaching programme on knowledge regarding human papilloma virus and its prevention among the adolescent girls, to find out the significance difference between pre-test and post-test knowledge scores regarding human papilloma virus and its prevention among the adolescent girls, to find out the association between post-test knowledge score with their selected demographic variables. The research design selected was one group pre-test post-test pre experimental research design. The study was conducted on 100 adolescent girls at Maharishi College of Nursing, Bhubaneswar, Odisha. Convenience sampling technique was used to select the samples. The tool included demographic variables, planned questioner schedule on knowledge regarding human papilloma virus and its prevention. The data was analyzed by using descriptive and inferential statistics. Findings revealed that in pre test majority 88.0% of adolescent girls had poor level of knowledge, 10.0% of adolescent girls had very poor level of knowledge, 2.0% of adolescent girls had average level of knowledge, 0% of adolescent girls had good level of knowledge and in post test majority 98% of adolescent girls had good level of knowledge, 2.0% of adolescent girls had average level of knowledge, 0% of adolescent girls had poor level of knowledge, 0% of adolescent girls had very poor level of knowledge. Area wise comparison on mean, standard deviation and mean percentage reveals that in pre-test the lowest mean percentage (45.43%) in knowledge assessment area of human papilloma virus and its prevention and highest mean percentage (56.17%) in knowledge assessment area of human papilloma virus and its prevention and in post-test the lowest mean percentage (87%) in knowledge assessment area of human papilloma virus and its prevention and highest mean percentage (88.9%) in knowledge assessment area of human papilloma virus and its prevention which suggested that adolescent girls had better knowledge on human papilloma virus and its prevetion in post-test than pre-test. Pair-ed 't' test was calculated which shows highly significant difference scores of pre-test and post-test. Chi-square analysis showed that there was no significant association between levels

of knowledge score and selected demographic variables. Hence majority of adolescent girls had good knowledge but they had some extend lack of knowledge on human papilloma virus and its prevention.

Keywords: *Assess, effectiveness, planned teaching programme, knowledge, human papilloma virus and its prevention, adolescent girls*

INTRODUCTION

Human Papilloma Virus infection is an infection caused by human papilloma virus (HPV). It is the most common infection of the reproductive tract. It is a viral infection that's passed between people through skin-to-skin contact. [1] According to the Centers for Disease Control and Prevention, HPV is the most common sexually transmitted infection. It's so common that most sexually active people will get some variety of human papilloma virus at some point, even if they have few sexual partners. [1] Human papilloma virus (HPV) is one of the most common causes of sexually transmitted infections. About 50% - 80% of sexually active women are exposed to at least one human papilloma virus type during their lifetime. [2] Human papilloma virus (HPV) are a small group of non – enveloped viruses belonging to the Papillomaviridae family with strong similarities to polyoma viruses. The viral particles consist of a genome in the form of a circular double- stranded DNA, encompassing eight open reading frames, as well as a non – enveloped icosahedral capsid. Human papilloma virus infection is considered the most common sexually transmitted disease in both sexes and is strongly implicated in the pathogenesis of different types of cancer. [2] Risk factors for persistent HPV infection include multiple sex partners, sex at an early age, weakened immune system and history of sexually transmitted infections. [2] Human papilloma virus infection occurs when the virus enters the body, usually through a cut, abrasion or small tear in the skin. The virus is transferred primarily by skin-to-skin contact. Genital human papilloma virus infections are transmitted through sexual intercourse and other skin-to-skin contact in the genital region.[3] Genital human papilloma virus infection can be divided into two categories: low risk infections which are associated with genital warts and high risk infections which are associated with cervical cancers. Within 12 to 24 months of exposure to the virus, 90% of HPV infections are cleared or become inactive. However, infections by the high-risk HPV types persist which then increase the risk of progression to cervical cancer. There are over 100 varieties of HPV, more than 40 strains of which are passed through sexual contact and can affect the genitals. Of those, approximately 13 are considered "high risk" because they can lead to cervical cancer.[4] Occasionally, HPV 6 and 11 are transmitted from mothers to infants, and in rare occasions they induce a persistent infection in those infants, and in young adults, of the upper respiratory tract, known as recurrent respiratory papillomatosis (RRP), a condition that can be devastating to children and families.[4] Some cases of genital HPV infection may not cause any health problems. However, some types of human papilloma virus commonly causes skin or mucous membrane growths or warts. It can lead to the development of genital warts and even cause cancers of the cervix. Genital warts usually appear as a small bump or group of bumps in the genital area. They can be small or large, raised or flat, or shaped like a cauliflower.[5] Certain strains of HPV can cause changes in the cells of the cervix, a condition called cervical dysplasia. If it is not treated, dysplasia can advance to cervical cancer. Cervical cancer is a condition in which the cells in the lining of the cervix change and grow very fast, producing a grouping of cells called a tumor. Human papilloma virus is almost always the cause of cervical cancer. Cancer of the cervix is the second most common malignancy in women worldwide. Cervical cancer is ranked as the fourth most frequently diagnosed cancer and the fourth leading cause of cancer death in women with an estimated 570,000

cases and 311,000 deaths in 2018 worldwide. It is the second most common cancer in women living in less developed regions of the world. The development of cervical cancer is a multi-stage process that occurs over many years and begins when a woman gets infected with an oncogenic type of the HPV. More than 470,000 new cases of cervical cases and 250,000 deaths due to it are reported annually. Approximately 75% - 80% of cervical cancer cases are seen in developing countries where efficient cervical screening is insufficient. Two HPV types 16 and 18 are responsible for about 70% of cervical cancers and pre-cancerous cervical lesions. Cancer of the cervix is a major health problem in India and accounts for 26.1-43.8% of all cancers in Indian women. Cervical cancer is the 2nd leading cause of cancer deaths in women aged 15 to 44 years in India. 67,477 new cervical cancer deaths occur annually in India.[6] Early diagnosis of precancerous lesions is important because the progression to invasive neoplasia takes as long as 15 – 20 years giving enough time for treatment.[7] Getting vaccinated against HPV infection is the best protection from cervical cancer. Vaccines can protect against several types of HPV, including some that can cause cancer. Because early cervical cancer does not cause symptoms, so it is vital that women have regular screening tests to detect any precancerous changes in the cervix that might lead to cancer. Current guidelines recommend that women ages 21 to 29 have a Pap smear or Pap test every three years.[8] According to the World Health Organization (WHO) estimates, until September 2016, HPV vaccination as a part of the national immunization programme, has been introduced in 67 countries or 34.5% of the world. (WHO, 2016) Further, WHO recommends that routine HPV vaccination should be included in national immunization programs provided that:

• Prevention of cervical cancer and other HPV-related diseases is a public health priority.
• Vaccine introduction is programmatically feasible.
• Sustainable financing can be secured.
• The cost-effectiveness of vaccination strategies in the country or region has been duly considered.
• Primary target population is girls prior to onset of sexual activity, in age range of 9-13 years. [8]

Governmental health agencies worldwide state that HPV vaccines are safe and effective and that the benefits of HPV vaccination outweigh the risks. It is therefore important that women are informed of the benefits of vaccination and prevention. It is imperative that government health departments and primary health services ensure proper vaccine rollout, coverage as well as sustainability of the vaccine coupled with information dissemination and targeting population at risks such as rural communities. [8]

OBJECTIVES OF THE STUDY
- To assess the level of knowledge regarding the human papilloma virus and its prevention among the adolescent girls.
- To develop a planned teaching programme on human papilloma virus and its prevention.
- To assess the effectiveness of planned teaching programme on knowledge regarding human papilloma virus and its prevention among the adolescent girls.
- To find out the significance difference between pre-test and post-test knowledge scores regarding human papilloma virus and its prevention among the adolescent girls.
- To find out the association between post-test knowledge score with their selected demographic variables.

OPERATIONAL DEFINITIONS

Assess

Assess is the process of documenting, usually in measurable terms, knowledge, skill, attitudes and beliefs. It refers to the organized systematic and continuous process gathering information of knowledge on human papilloma virus and its prevention among the adolescent girls.

Effectiveness

Effectiveness is the capability of producing a desired result or the ability to produce desired outcome. It refers to significant difference between the pre-test and post-test knowledge scores regarding the human papilloma virus and its prevention.

Planned teaching programme

Planned teaching programme refers to a planned health education regarding knowledge. It refers to a planned health education which provides information on human papilloma virus and its prevention. It includes meaning of human papilloma virus, risk factors of human papilloma virus, causes of human papilloma virus and prevention of human papilloma virus.

Knowledge

Knowledge is the facts, information and skills acquired through experience or education and the theoretical or practical understanding of a subject. It refers to the level of understanding of the adolescent girls regarding human papilloma virus and its prevention.

HUMAN PAPILLOMA VIRUS INFECTION AND ITS PREVENTION

Human papilloma virus infection refers to the infection that can cause genital warts and lead to cervical cancer in the women. Prevention refers to the steps or measures taken to protect the spread of human papilloma virus infection.

ADOLESCENT GIRLS

Adolescence is a transitional stage of physical and psychological development that generally occurs during the period from puberty to adulthood. They are adults, usually defined as the ages of 16 to 21 years old.

HYPOTHESIS

- H1:- The post-test knowledge score will be significantly higher than the pre-test knowledge score.
- H2:- There will be a significant association between post-test knowledge scores with selected demographic variable.

DELIMINATION

- The study is limited-
- To the adolescent girls.
- In Maharishi College of Natural Law, Bhubaneswar, Odisha.
- Assessment of knowledge was based on only the responses given by the adolescent girls to the items in the planned questioner schedule.

CONCEPTUAL FRAMEWORK

The theoretical framework for this study is based on general system theory of bertalanffy (1968). Ludwig von bertalanffy first articulated the principles of general system theory in 1950, katz & khan were the first to apply system theory to organization in the late 1960s, In this main focus is on the disease and life style practice & their inter-relationship with preventive knowledge. General system theory is a logic mathematical discipline that significance of general system laws which apply to any system of a certain type, irrespective of the particular properties of the system or the elements involves. General system theory is new doctrine of wholeness. In the present study, the adolescent girls that will be considered as a system with the various elements with various factor related to knowledge and practice regarding human papilloma virus and its prevention.

INPUT

According to him, "input refers to information related to the system."All system must receive varying type of information from the environment. The system will the input to maintain and implies a basic re-orientation in scientific thinking. In the present study input will be considered to be-
- Demographic data sheet.
- Knowledge of human papilloma virus and its prevention to be followed by adolescent girls through lecture cum discussion method by using planned teaching programme.

THROUGH PUT

According to the theory through put refers to the processing of planned teaching programme regarding human papilloma virus and its prevention to be followed by adolescent girls by use of planned questioner schedule and various leaflets, charts and posters.

OUTPUT

Output is the transformed form of information, energy and matter that is gu=iven out by individual after processing. It is the evaluation phase. In this present study the expected outcome refers to post-test knowledge scores of the adolescent girls regarding human papilloma virus and its prevention to be followed through multiple choice close ended questionnaire.

FEEDBACK

Feedback as per theory refers to the output that is return to the system, which allow monitor itself in attempt to move close to a steady state known as equilibrium. It may be positive, negative or neutral. The process of feedback enables the individual to evaluate whether the input is processed satisfactorily or not and if needed enables to recycle the entire process. In this present study, feedback is the process of measuring the effectiveness planned teaching programme. It is measure by finding out the pre-test and post-test knowledge scores of adolescent girls according to demographic variables. It will assumed that post-test knowledge scores will be varied according to the demographic variables such as age, area of residence, type of family, religion, educational status, habits and family history of human papilloma virus infection.

RESEARCH METHODOLOGY

Research Approach:- A quantitative research approach was adopted for this study.
Research Design:- One group pre-test post-test pre experimental research design was used for the study.

Setting Of The Study:- The present study was conducted in the Maharishi College of Natural Law, Bhubaneswar, Odisha, India.

Population:- The population of this study includes adolescent girls (16 to 21 years of age).

Sample:- In this study, adolescent girls (16 to 21 years of age) of Maharishi College of Natural Law, Bhubaneswar, Odisha, India, who had fulfilled the inclusion criteria were taken as sample for the study.

Sample Size:- For the current study 100 nos. of samples were chosen.

Sampling Technique:- In this study convenience sampling technique was used to select the samples.

SAMPLING CRITERIA

a) Inclusion criteria:-

Adolescent girls---

- who can understand and speak english.
- Whose age group are 16-21 years.
- who will willing to participate in the data collection.
- who will available during the period of data collection.

b) Exclusion criteria:-

Adolescent girls---

- who are physically ill.
- who will away from college at the time data collection.

IDENTIFICATION VARIABLE

a) Dependent variable:- In this study dependent variable is level of knowledge among adolescent girls (16 to 18 years of age) regarding human papilloma virus and its prevention.

b) Independent variable:- In this study independent variable is planned teaching programme on knowledge regarding human papilloma virus and its prevention.

c) Extraneous variable:- In this study extraneous variables are natural intelligence, concentration, mood and physical abilities among the adolescent girls.

d) Demographic variables:- In this study demographic variables are Age, religion, area of residence, educational status, habits, family history of human papilloma virus among the adolescent girls.

DEVELOPMENT OF RESEARCH TOOL

The tool used for gathering relevant data which was prepared as planned questioner schedule on knowledge base aspects of human papilloma virus and its prevention for assessing the knowledge among adolescent girls who are present during my data collection period in Maharishi College of Natural Law, Bhubaneswar, Odisha.

Pre-test and post-test will be used to assess the knowledge of human papilloma virus and its prevention among the adolescent girls (16 to 21 years of age). It consist of two parts-

- Section A:- It includes demographic variables.
- Section B:- It includes planned questioner schedule on knowledge regarding human papilloma virus and its prevention.

The following steps were carried out in preparing the tool:-

- Review of literature
- Preparation of the blueprint

- Construction of module and tool
- Consultation with experts
- Content validity of tool
- Reliability
- Preparation of final draft

PROCEDURE FOR DATA COLLECTION

- Data was collected after obtaining permission from the concerned authority.
- After assuring the adolescent girls (16 to 18 years of age) about the confidentiality of the collected data, informed consent will be obtained from those adolescent girls who will willing to participate in this study.
- First give self-introduction, explain objectives of the study.
- For pre-test Data will be collected from approx 100 adolescent girls (16 to 18 years of age) through planned questioner schedule on human papilloma virus and its prevention. Per day 20 adolescent girls for consecutive 5 days.
- After pre-test a planned teaching programme will be organized about human papilloma virus and its prevention.
- After Planned teaching programme a post test will be done to assess the knowledge gain about human papilloma virus and its prevention.

ETHICAL CONSIDERATIONS

- The study approved by the research committee and ethical clearance was obtained from the ethical committee of the Lord Jagannath Mission's College of Nursing, Mancheswar, Bhubaneswar, Odisha, India.
- Permission letters were obtained from the concerned authority of the Maharishi College of Natural Law, Bhubaneswar, Odisha, India.
- Informed consent will be obtained from adolescent girls who will willing to participate prior to distribution of questionnaire.
- Informed consent were used in only those who willing to consent. Privacy and confidentiality were ensured throughout and after the study.
- The subjects were informed that their participation will be purely on the voluntary basis & they can withdraw from the study at any time.
- The collected data were used only for research purpose. The data were stored in the computer with password encryption of the file.
- The informed consent form were confined to personal locker of the principal investigator with proper seal.

PLAN FOR DATA ANALYSIS

The data collected in this study was analyzed by using descriptive and inferential statistics.
The plan data analysis was analyzed as follows---

- Organization data in master sheet.
- Frequency and percentage distribution were used to analyse the demographic variables.
- Frequency and percentage distribution, mean standard, mean percentage were used to analyse the knowledge level.
- Chi square test was used to determine the association between selected demographic

variable with knowledge level of adolescent girls (16 to 18 years of age).

Results

SECTION I:- Frequency and percentage wise distribution of data on demographic variables of adolescent girls (16 to 18 years of age).

Frequency and percentage distribution of socio-demographic variable

Demographic Variables	Frequency	Percentage
Age in Years		
16-18	38	38.0
19-21	62	62.0
Area of Residence		
Rural	38	38.0
Urban	62	62.0
Type of Family		
Nuclear	69	69.0
Joint	29	29.0
Extended	2	2.0
Religion		
Hindu	83	83.0
Muslim	13	13.0
Christian	4	4.0
Others	Nil	Nil
Education Status		
1st year	38	38.0
2nd year	27	27.0
3rd year	35	35.0
Habits		
Smoking	Nil	Nil
Using alcohol	3	3.0
Tobacco chewing and pans	6	6.0
None of the above	89	89.0
Others specify	2	2.0
Family history of human papilloma virus infection		
No	92	92.0
Yes, if Yes, then specify	8	8.0

Table- 1

SECTION II:- Data on overall pre test – post test score of level of knowledge among adolescent girls (16 to 18 years of age). Data on area wise distribution of mean, mean percentages, SD of knowledge scores regarding human papilloma virus and its prevention.

Section A :- Overall comparison on level of knowledge of pre test and post test knowledge regarding the human papilloma virus and its prevention among the adolescent girls:-

Sl no	Level of knowledge	Pre test		Post test	
		Frequency	Percentage	Frequency	Percentage
1	Very Poor	10	10.0	0	0
2	Poor	88	88.0	0	0
3	Average	2	2.0	2	2.0
4	Good	0	0	98	98.0
5	Total	100	100	100	100

Table No: 2

Section B :- Area wise comparison on mean, standard deviation and mean percentage regarding the human papilloma virus and its prevention among the adolescent girls:-

Area	Pre test			Post test			Effectiveness
	Mean	Mean % X	Sd	Mean	Mean % Y	Sd	Mean % Difference (Y-X)
Disease Condition and its Causes	5.45	54.5	1.56	12.18	87	1.25	32.5
Clinical Manifestations and Complications	3.37	56.17	1.21	8.77	87.7	0.85	31.53
Diagnosis and Treatment	1.99	49.75	0.86	5.27	87.83	0.66	38.08
Prevention	3.18	45.43	1.03	8.89	88.9	0.92	43.47

Table No : 2

SECTION III:- Testing hypothesis to evaluate the effectiveness of planned teaching programme.

Assessment of the pair - ed t– value regarding the human papilloma virus and its prevention among the adolescent girls (pair – ed t -test)

Mean difference	Standard error difference	Calculated t value	Tabulated t value	Level of significance
-21.12	0.34	62.44	1.98	Highly signifcant

Table no : 3

SECTION IV :- Association of knowledge scores of adolescent girls (16 to 18 years of age) regarding human papilloma virus and its prevention with their demographic variable.

Association between post-test knowledge scores with selected demographic variable:-

Demographic Variables	Chi-Square	Degree Of Freedom	Table Value of p at 0.05	Level Of Significance
1. Age (in years):-	1.251	1	3.84	Not significant
2. Area of residence:-	1.251	1	3.84	Not significant
3. Type of family:-	0.917	2	5.99	Not significant
4. Religion:-	2.499	2	5.99	Not significant
5. Educational Status:-	3.79	2	5.99	Not significant
6. Habits:-	0.252	3	7.82	Not significant
7. Family history of human papilloma virus infection:-	0.177	1	3.84	Not significant

Table No : 4

DISCUSSION

Section I:- Highest percentage (62.0%) of adolescent girls belongs to age group in 19 – 21 years, whereas 38.0% of adolescent girls belongs to age group in 16 – 18 years. Majority (62.0%) of adolescent girls belongs to urban area, whereas 38.0% of adolescent girls belongs to rural area. Majority (69.0%) of adolescent girls belongs to nuclear family, whereas 29.0% of adolescent girls belongs to joint family, 2.0% of adolescent girls belongs to extended family. Majority (83.0%) of adolescent girls belongs to Hindu religion, whereas 13.0% of adolescent girls belongs to Muslim religion, 0% of adolescent girls belongs to others religion. Majority (38.0%) of adolescent girls belongs to 1st Year, whereas 27.0% of adolescent girls belongs to 2nd Year, 35.0% of adolescent girls belongs to 3rd Year. Majority (89.0%) of adolescent girls belongs to none of the above, whereas 6.0% of adolescent girls belongs to tobacco chewing and pans, 3.0% of adolescent girls belongs to using alcohol, 0% of adolescent girls belongs to smoking. Majority (92.0%) of adolescent girls belongs to no family history of human papilloma virus, whereas 8.0% of adolescent girls belongs to family history of human papilloma virus.

Section II:-

Section A:- The knowledge level of adolescent girls was found out by using 4-point scale categorization of adolescent girls was done according to the scale. The scoring in assessment was interpreted that in pre test majority 88.0% of adolescent girls had poor level of knowledge, 10.0% of adolescent girls had very poor level of knowledge, 2.0% of adolescent girls had average level of knowledge, 0% of adolescent girls had good level of knowledge. Where as in post test majority 98% of adolescent girls had good level of knowledge, 2.0% of adolescent girls had average level of knowledge, 0% of adolescent girls had poor level of knowledge, 0% of adolescent girls had very poor level of knowledge. Hence it can be interpreted that planned teaching programme was effective in post test and data reveals that without any intervention as the level of knowledge increased it was clear that planned teaching programme on human papilloma virus and its prevention was effective in increasing knowledge among adolescent girls.

Section B:- The assessment was interpreted that in pre test area wise of mean, mean percentage and standard deviation of knowledge scores of adolescent girls regarding human papilloma virus and its prevention reveals that the mean score was 5.45 which shows 54.5% and the standard deviation score was 1.56 in assessment area of disease condition and its causes. The mean score was 3.37 which shows 56.17% and the standard deviation score was 1.21 in assessment area of clinical manifestations and complications. The mean score was 1.99 which shows 49.75% and the standard deviation score was 0.86 in assessment area of diagnosis and treatment. The mean score was 3.18 which shows 45.43% and the standard deviation score was 1.03 in assessment area of prevention. Where as in post test area wise of mean, mean percentage and standard deviation of knowledge scores of adolescent girls regarding human papilloma virus and its prevention reveals that the mean score was 12.18 which shows 87% and the standard deviation score was 1.25 in assessment area of disease condition and its causes. The mean score was 8.77 which shows 87.7% and the standard deviation score was 0.85 in assessment area of clinical manifestations and complications. The mean score was 5.27 which shows 87.83% and the standard deviation score was 0.66 in assessment area of diagnosis and treatment. The mean score was 8.89 which shows 88.9% and the standard deviation score was 0.92 in assessment area of prevention. The significance difference between pre-test and post-test knowledge scores was 32.5% regarding human papilloma virus and its prevention among

the adolescent girls in assessment area of disease condition and its causes. The significance difference between pre-test and post-test knowledge scores was 31.53% regarding human papilloma virus and its prevention among the adolescent girls in assessment area of clinical manifestations and complications. The significance difference between pre-test and post-test knowledge scores was 38.08% regarding human papilloma virus and its prevention among the adolescent girls in assessment area of diagnosis and treatment. The significance difference between pre-test and post-test knowledge scores was 43.47% regarding human papilloma virus and its prevention among the adolescent girls in assessment area of prevention. In each area of knowledge assessment of human papilloma virus and its prevention such as disease condition and its causes, clinical manifestations and complications, diagnosis and treatment and prevention reveals that adolescent girls has good knowledge.

Section III:- The assessment was interpreted that the calculated paired 't' value (t = 62.44) is greater than tabulated 't' value (t = 1.98) which shows highly significant difference scores of pre-test and post-test. Hence H1 is accepted.

Section IV:- The assessment was interpreted that Chi square was calculated to find out the association between post-test scores of adolescent girls on human papilloma virus and its prevention with their selected demographic variables. It was found that there was no significant association between post test scores among adolescent girls regarding human papilloma virus and its prevention when compared with age, area of residence, type of family, religion, educational status, habits and family history of human papilloma virus infection. So, in these areas the stated alternative hypothesis (H1) is rejected and null hypothesis (H0) is accepted.

CONCLUSION

From the findings of the present study it was concluded that majority of adolescent girls had good knowledge but they had some extend lack of knowledge on human papilloma virus and its prevention. No Significant association was found between the knowledge scores of adolescent girls and demographic variable such as age, area of residence, type of family, religion, educational status, habits and family history of human papilloma virus infection. Planned questioner schedule was one of the appropriate tools to assess the knowledge of adolescent girls.

REFERENCES

1. World Health Organization 2016. Human papilloma virus and cervical cancer. Geneva: WHO.
2. Ljubojevic S, Skerlev M. HPV associated diseases. Clinics in Dermatology. 2014; 32(2): P. 227-234.
3. D C Dutta's Textbook of Gynecology. 8th ed. New Delhi: JAYPEE Brothers Medical Publishers; 2020. P. 270.
4. Almeida CM, Tiro JA, Rodriguez MA, Diamant AL. Evaluating associations between sources of information, knowledge of the human papillomavirus, and human papillomavirus vaccine uptake for adult women in California. Vaccine. 2012; 30: P. 3003–3008.
5. Dunne EF, Markowitz LE. Genital human papillomavirus infection. Clinical infectious diseases : an official publication of the Infectious Diseases Society of America. 2006; 43: P. 624–629.
6. Dunne EF, Park IU. HPV and HPV-associated diseases. Infectious Disease Clinics of North America. 2013. P. 765–778.

7. Schuler CL, Reiter PL, Smith JS, Brewer NT. Human papillomavirus vaccine and behavioural disinhibition. Sexually Transmitted Infections. 2011; 87: P. 349–353.
8. Allen JD, Othus MKD, Shelton RC, Li Y, Norman N, Tom L, et al. Parental decision making about the HPV vaccine. Cancer Epidemiology, Biomarkers & Prevention. 2010; 19: P. 2187–2198.
9. Basavanthappa, B.T., Nursing Research, New Delhi, Jaypee Brother's Medical Publishers Pvt. Ltd., 344-353, 1998.
10. Polit F.D, Hungler PB. Nursing Research: Principles and Method. 6th edition. Philadelphia. Lippincoat. 2000:69.
11. Suresh K. Sharma, Nursing Research & Statistics, 3rd Edition, ELSEVIER, 2017; 268-280.
12. Nima Bhaskar, Midwifery and Obstetrical Nursing, 3rd edition, EMMESS Medical Publishers, 2019; 400-410.
13. Alizon S, Murall CL, Bravo IG. Why human papillomavirus acute infections matter. Viruses. (2017) 9:293. doi: 10.3390/v9100293
14. Ahdieh-Grant L, Li R, Levine AM et al. (2004) Highly active antiretroviral therapy and cervical squamous intraepithelial lesions in human immunodeficiency virus-positive women. Journal of the National Cancer Institute 96, 1070-1076.
15. Chesson HW, Dunne EF, Hariri S, Markowitz LE. The estimated lifetime probability of acquiring human papillomavirus in the United States. Sex Trans Dis. (2014) 41:660–4. doi: 10.1097/OLQ.00193.
16. Balachandra S, Kusin SB, Lee R, et al. Blood-based biomarkers of human papillomavirus-associated cancers: A systematic review and meta-analysis. Cancer 2021; 127:850.
17. Forman D, de Martel C, Lacey CJ, Soerjomataram I, Lortet-Tieulent J, Bruni L, et al. Global burden of human papillomavirus and related diseases. Vaccine. (2012) 30:F12–23. doi: 10.1016/j.vaccine.2012.07.055
18. Buchanan TR, Graybill WS, Pierce JY. Morbidity and mortality of vulvar and vaginal cancers: Impact of 2-, 4-, and 9-valent HPV vaccines. Hum Vaccines Immunother. (2016) 12:1352–6
19. Asiaf A, Ahmad ST, Mohammad SO, Zargar MA. Review of the current knowledge on the epidemiology, pathogenesis, and prevention of human papillomavirus infection. Eur J Cancer Prevent. (2014) 23:206–24. doi: 10.1097/CEJ.0b013e328364f273
20. Patel H, Wagner M, Singhal P, Kothari S. Systematic review of the incidence and prevalence of genital warts. BMC Infectious Diseases, 2013;13:39. pmid:23347441