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A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF A STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING HUMAN PAPILLOMA VIRUS AND ITS VACCINATION AMONG YOUTH

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ABSTRACT

Background:- The present study explored the knowledge regarding Human Papilloma Virus and its vaccination among youth in selected areas of Amritsar, Punjab. Human Papilloma Virus is second most common cause of cancer in women. In the present study primary prevention was done by giving health education through distribution of pamphlets and assessing knowledge regarding human papilloma virus and its vaccination in selected areas of Amritsar. Secondary prevention includes early case finding and treatment of symptoms and tertiary prevention includes rehabilitation, preadaptation and reassurance. Method:-The study assumed that youth has less knowledge regarding human papilloma virus and its vaccination. The design selected for study was Quasi Experimental Research Design. The study was conducted on 30 subjects. Systematic sampling technique was used . The tool included socio-demographic data and knowledge questionnaire for measuring the knowledge of youth regarding human papilloma virus and its vaccination. Result:-The data was analysed with the help of inferential and differential statistics. The major findings reveals that 96.6% of the subjects have very good knowledge and just 3.33% are having average knowledge regarding human papilloma virus and its vaccination. There is null correlation between knowledge and socio-demographic variables which was found statistically non significant p=0. A similar study can be conducted on different population in different settings. Conclusion:-The study showed that post test knowledge was increased (96.6%) from pre test knowledge (83.3%).

INTRODUCTION

Cervical cancer is the fifth most common cancer in humans, the second most common cancer in women worldwide and the most common cancer cause of death in the developing countries. Sexually transmitted human papilloma virus (HPV) infection is the most important risk factor for cervical intraepithelial neoplasia and invasive cervical cancer. Unlike many other cancers, cervical cancer occurs early and strikes at the productive period of a woman's life. Human Papillomavirus is sexually transmitted and most people become infected sometime during their lifetime, usually soon after becoming sexually active. HPV is a member of the family Papillomaviridae. They are small, non-enveloped deoxyribonucleic acid (DNA) viruses. They are classified according to DNA sequence using the L1 open reading

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frame of the genome. Over 100 serotypes of HPV have been discovered, of which 15–20 are oncogenic. The lag period between the oncogenic HPV infection and the invasive cervical cancer is 15–20 years. Based on the association with cervical cancer, genital HPVs are further grouped into high-risk types, probable high-risk types and low-risk types. Worldwide, high-risk type HPV-16 and 18 contribute over 70% of all cervical cancer cases (the most prevalent being HPV-16 in at least 50–60% and HPV-18 in at least 10–12%). Similarly, in Indian women, the most common prevalent genotypes are HPV-16 and 18. Non-oncogenic HPV serotypes-6 and 11 contribute over 90% of benign genital infections such as genital warts. Oncogenic HPV serotypes have also been implicated in the causation of anal, vulvar, vaginal, penile and oropharyngeal cancers [1].

Human Papillomavirus is the most common sexually transmitted infection. Human Papillomavirus is usually harmless and goes away by itself but some types can lead to cancer or warts. There are more than one hundred types of Human Papillomavirus. About 40 types can infect genital area, mouth and throat. Two type of Human Papillomavirus type16 and type 11 cause genital warts and at least dozen type of Human Papillomavirus can lead to cancer.

Human Papillomavirus is a member of the family Papillomaviridae. They are small, non-enveloped deoxyribonucleic acid (DNA) viruses. They are classified according to DNA sequence using the L1 open reading frame of the genome. Over 100 serotypes of Human Papillomavirus have been discovered, of which 15–20 are oncogenic. The lag period between the oncogenic HPV infection and the invasive cervical cancer is 15–20 years. Based on the association with cervical cancer, genital are Human Papillomaviruses further grouped into high-risk types, probable high-risk types and low-risk types. Worldwide, high-risk type HPV-16 and 18 contribute over 70% of all cervical cancer cases (the most prevalent being HPV-16 in at least 50–60% and HPV-18 in at least 10–12%). Similarly, in Indian women, the most common prevalent genotypes are HPV-16 and 18. Non-oncogenic Human Papillomavirus serotypes-6 and 11 contribute over 90% of benign genital infections such as genital warts. Oncogenic serotypes Human Papillomavirus have also been implicated in the causation of anal, vulvar, vaginal, penile and oropharyngeal cancers [2].

Human Papillomaviruses infect the basal epithelium and are grouped as cutaneous and mucosal types. HPV cervical infection results in cervical morphological lesions ranging from normal (cytological normal women) to development of different stages of high-grade precancerous lesions (cervical intraepithelial neoplasia: Cervical intraepithelial neoplasia (CIN)-1, CIN-2, CIN-3/Carcinoma in-situ) and, subsequently, invasive cervical cancer (ICC). HPV infection is measured by means of Human Papillomavirus DNA detection in cervical cells (fresh tissue, paraffin-embedded or exfoliated cells). The relative frequency of HPV-16/18 increases with the severity of the lesion [3].

In most cases, your body's immune system defeats an Human Papillomavirus infection before it creates warts. When warts do appear, they vary in appearance depending on which kind of Human Papillomavirus is involved flat lesions, small cauliflower-like bumps or tiny stem like protrusions. In women, genital warts appear mostly on the vulva but can also occur near the anus, on the cervix or in the vagina. In men, genital warts appear on the penis and scrotum or around the anus. Genital warts rarely cause discomfort or pain, though they may itch or feel tender. Common warts appear as rough, raised bumps and usually occur on the hands and fingers. In most cases, common warts are simply unsightly, but they can also be painful or susceptible to injury or bleeding. Plantar warts are hard, grainy growths that usually appear on the heels or balls of your feet. These warts might cause discomfort. Flat warts are flat-topped, slightly raised lesions. They can appear anywhere, but children usually get them on the face and men tend to get them in the beard area. Women tend to get them on the legs.

Many men have no symptoms, although some may develop genital warts. See your doctor if you notice any unusual bumps or lesions on your penis, scrotum, or anus. Some strains of Human Papillomavirus can cause penile, anal, and throat cancer in men. Some men may be more at risk for developing-related Human Papillomavirus cancers, including men who receive anal sex and men with a weakened immune system. The strains of Human Papillomavirus that cause genital warts aren’t the same as those that cause cancer.

It is estimated that 80% of women will contract at least one type of Human Papillomavirus during their lifetime. Like with men, many women that get Human Papillomavirus don’t have any symptoms and the infection goes away without causing any health problems. Some women may notice that they have genital warts, which can appear inside the vagina, in or around the anus, and on the cervix or vulva. Make an appointment with your doctor if you notice any unexplained bumps or growths in or around your genital area. Some strains of Human Papillomavirus can cause cervical cancer or cancers of the vagina, anus, or throat. Regular screening can help detect the changes associated with cervical cancer in women. Additionally, DNA tests on cervical cells can detect strains of Human Papillomavirus associated with genital cancers.

Human Papillomaviruses are divided into three main groups : cutaneous, mucocutaneous and those

associated with rare autosomal recessive disorder. The cutaneous Human Papillomavirus belong to beta genus and with members in gamma. The mucocutaneous Human Papilloma virus type mainly associated with benign warts approximately 70% of Human Papillomavirus infection resolves spontaneously in one year and 90% in two years. While Human Papillomavirus persistence develops in the remainder.

Genital warts sexually transmitted infections caused by low strain of Human Papillomavirus. these are the soft growth that appears on genitals. Genital warts on male may appear on penis , scrotum, groin thighs inside or around the anus. For female these appear inside of vagina or anus , outside of vagina or anus , on the cervix. A wart cant spread from someone's hand to genitals and vice versa [4,5].

Statement:- A Quasi Experimental study to assess the effectiveness of a structured teaching programme on knowledge regarding Human Papilloma Virus and its Vaccination among youth of selected Areas of Amritsar, Punjab.

Objectives:-

1. To assess the pre-test knowledge of youth regarding human papillomavirus and its vaccination among youth in experimental and control group.
2. To evaluate the effectiveness of structured teaching program on knowledge among youth regarding human papillomavirus and its vaccination among youth in experimental and control group.
3. To find out the association between the post-test knowledge scores with the selected demographic variables.

Hypothesis

H_1-There will be significant differences between pre-test and post-test knowledge scores of the youth regarding cervical cancer.

Operational definitions

Effectiveness: It refers to significant gain in knowledge as determined by significant difference in pre and post test scores.

Structured Teaching Programme: It refers to the systematically developed instructional method. Teaching aid designed for the youth to gain knowledge.

Knowledge: It refers to the appropriate response received from youth to the items elicited through a structured interview schedule.

Cervix: Cervix is defined as the lower and the narrower part of the uterus.

Cervical cancer: Cervical cancer is caused by an invisible virus that is spread by having sex by HPV (human papillomavirus), and more than half of women have it by age 35 years .

Vaccination: Injection of a killed microbe in order to stimulate the immune system against the microbe thereby preventing the disease.

Youth: The period between childhood and adult age.

Selected Area: There are two areas: Rural and Urban area which is Nag Kalan and GMC quarters.

ASSUMPTIONS

- The youth will have some knowledge about cervical cancer vaccination.
- Knowledge of adolescent regarding cervical cancer vaccination may vary with the demographic variables such as immune status (vaccinated or non vaccinated).
- The structured teaching programme will enhance the knowledge of adolescent on cervical cancer vaccination.
- Post-test score will be greater than pre-test score.

DELIMITATIONS

The study is limited to-

1. Youth.
2. Selected areas of Amritsar.
3. Quasi experimental study design.
4. Limited to 60 students.

METHODOLOGY

According to Kothari (2004) research methodology is a method to analytically explain the research problem. The methodology of the study includes research approach, research design, variables, setting of the study, population, sample and sampling technique, sampling criteria, Tool and Technique, content validity of the tool, reliability of the tool, ethical considerations, pilot study, data collection process and plan for data analysis. This chapter deals with the methodology that was selected by the investigator in order to assess the effectiveness of Structured Teaching Programme on Knowledge of Human Papilloma Virus and its vaccination among youth of 13-25 years of age.

Research approach:- In order to accomplish the main objective of assessing the effectiveness of structured teaching programme on human papilloma virus, a **quantitative approach** was adopted. Research approach is a plan and procedure that consists of the steps of broad assumptions to detailed method of data collection, analysis and interpretation. It is therefore, based on the nature of the research problem being addressed.

Variables:-Variables are the qualities, properties or characteristics of person, things or situations that change or vary. Chinn and Kramer stated that variables are concepts at different level of abstraction that are concisely

defined to promote their measurement or manipulation within study. The main types of variables were identified in this study.

1. **Independent variable:** The independent variable is the stimulus or activity that is manipulated by the researcher to create the effect on dependent variable. In the present study the independent variable is the individualized structured teaching programme by the investigator.
2. **Dependent variable:** The dependent variable usually is the outcome or response variable due to the effect of independent variable, which researcher wants to predict or explain. In the present study, knowledge scores of pre-test and post-test are the dependent variables.
3. **Extraneous variables:** Extraneous variables are the variables that are not the part of the study but may effect the measurements of the study variables. In the present study the extraneous variables are age, educational status, type of family, residence, immunization, religion.

Research setting:- The physical location and conditions in which data collection takes place in a study. The study was conducted in selected areas of Amritsar.

Criteria for sample selection:- Inclusion criteria

- Youth (only girls) of age 13 to 25 years residing in Amritsar.
- People who are interested to take part in the study.

Exclusion criteria

- Male candidates.

Data collection process: The data was collected in two phases. In phase 1 Pre-test questionnaire was served to each candidate and instructed to read and answer the questions. The duration taken for conducting pre-test was 1 day. In phase II the samples were provided with a structured teaching programme. Structured teaching programme was given in group for each stratum using instructional aids on human papilloma virus and its vaccination. The average time taken was 1 hour. A post - test was conducted on the 2nd day by administering the same questionnaire.

Ethical considerations:- Prior information and explanation given to participants. We explained the purpose of study to subjects and assured them that the response will be kept confidential. The professional interpersonal relationship was maintained with the subjects.

ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of data obtained from the sample of 30 number of young people to assess the effectiveness of teaching programme on knowledge regarding Human Papilloma Virus and its vaccination among youth of selected areas of Amritsar, Punjab.

The data analysis was based on the following objectives of the study:

1. To assess the knowledge regarding Human Papilloma Virus and its vaccination among youth.
2. To ascertain relationship between knowledge of H.P.V and selected socio-demographic variables.

The raw data was collected and entered in master sheet. Then it was analyzed and interpreted using statistics.

The analysed data are organized according to the objectives and presented under the following major headings:

1. Frequency and percentage distribution of sample characteristics.
2. Frequency and percentage distribution of knowledge regarding Human Papilloma virus and its vaccine among youth of selected area.
3. Relationship of knowledge regarding H.P.V vaccine among youth with selected demographic variables.

Table 1. Frequency and percentage distribution of sample characteristics (N=30)

s. no.	Demographic	Frequency(n)	Percentage(%)
1.	**Age in (years)**		
	13-16	3	10%
	16-20	14	46.6%
	21-24	13	43.3%
2.	**Education**		
	+2	14	46.6%
	Graduate	16	53.3%
	Post graduate	0	0%
3.	**Type of family**		
	Nuclear	22	73.3%
	Extended	8	26.6%
4.	**Residence**		

	Urban	15	50%
	Rural	15	50%
5.	**Religion**		
	Sikh	19	63.3%
	Christian	06	20%
	Muslim	0	0%
	Hindu	05	16.6%
6.	**Immunization**		
	Done	29	96.6%
	Not Done	1	3.3%

Table 2. Frequency and percentage distribution of knowledge regarding Human Papilloma Virus and its vaccine among youth of selected areas (N=30)

Level of knowledge	Frequency (n)	Percentage(%)
Good	03	10%
Average	25	83.3%
Below Average	02	6.66%

Table 3. Frequency and percentage distribution of knowledge regarding Human Papilloma Virus and its vaccine among youth of selected areas (N=30)

Level of knowledge	Frequency (n)	Percentage(%)
Good	29	96.6%
Average	1	3.3%
Below Average	0	0%

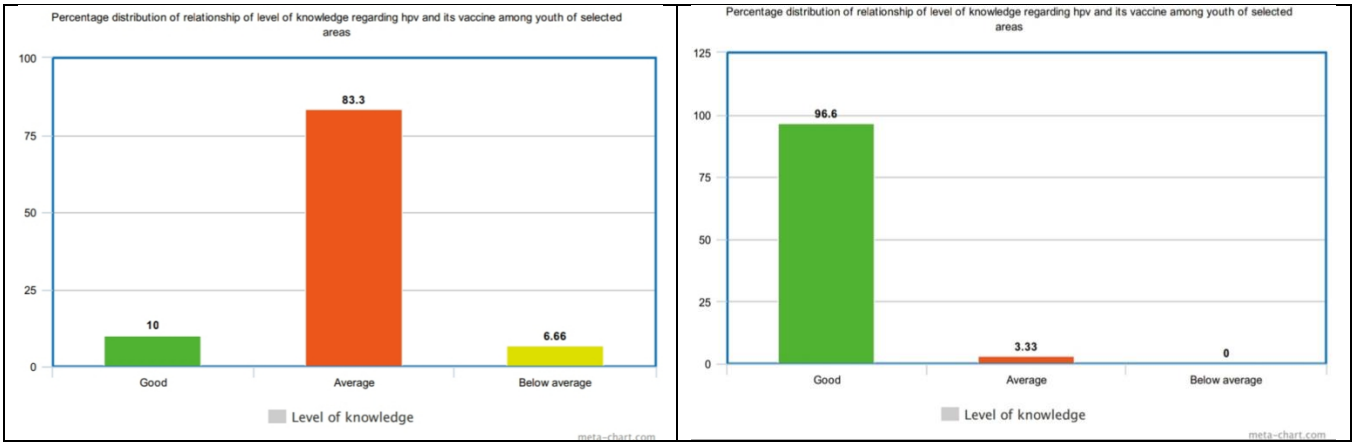

Table 1 and figures 1(A) to 1(F) reveals the frequency and percentage distribution of characteristics of the study subjects. Distribution of study subjects according to **age** revealed that 10% were between 13-16 years of age followed by 46.6% aged between 16-20 years and 43.3% were those between 21-24 years of age. As per **type of family,** 73.3% members belong to nuclear families whereas 26.6% belong to extended families. With respect to **residence**, 50% of subjects reside in urban areas whereas other 50% live in rural areas. **Education** revealed that more than half of the subjects i.e53.3% are graduate whereas 46.6% are up to 12th standard. With respect to **religion**, 63.33% are Sikh, 20% are Christian whereas 16.66% are Hindu. In case of **immunization**, it is done in 96.6% subjects and just 3.33% are not done with immunization.

Hence it can be concluded that majority of subjects are between age group of 16-20 years. More than half of the subjects are graduated. Majority of subjects live in a nuclear family. Half of the subjects live in urban area whereas other half lives in rural area. Majority of study subjects are Sikh and everyone is immunized except 1 of them.

This table and figure 2a reveals that in pre-test 83.3% subjects are having average level of knowledge whereas 10% are having good knowledge and 6.66% are

having poor knowledge regarding H.P.V.

This table and figure 3a reveals that maximum people are having good knowledge in post-test . It's shown in the graph and table that 96.6% of subjects have acquired a good knowledge and just 3.33% are having average knowledge [6-9].

DISCUSSION

This chapter deals with the findings of the present study "A quasi experimental study to assess the effectiveness of a structured teaching programme on knowledge regarding human papillomavirus and its vaccination among the youth of selected areas of Amritsar, Punjab". In this chapter, attempt has been made to discuss the findings of study in accordance with the objective of study. The present study was conducted in the areas of Amritsar. Total sample was 30 subjects. Systematic sampling technique was used to collect sample. Before collecting data, investigator gave a brief introduction about us. The purpose of our study is to check the awareness of HPV and its vaccination among the youth of selected areas.

Objective1. To assess the knowledge regarding HPV and its vaccination among youth. The analysis of data revealed that the majority 86.6% had average knowledge and 6.66% had below average knowledge. This finding was inconsistent with the study done by Yanru zhang Ying Wang, Shaofa Nie who said that pooled awareness and knowledge regarding HPV Vaccination were 15.95% and 17.55% respectively.

Objective 2. To evaluate the effectiveness of structured teaching programme on knowledge regarding the human papilloma virus and it's vaccination among the youth in experimental and control group. This finding was supported by the quasi experimental study conduct by the MGR medical university Chennai. They show that the knowledge level of cervical cancer and HPV and its vaccination has been increased from mean value of pre test to post test. The change in the knowledge from pre test to post test occur very effectively.

Objective 3. To assertion the relationship between knowledge and the social demographic variables regarding human papillomavirus and its vaccination among the youth of selected areas Amritsar. The chi square was computed and the analysis of data regarding the relationship between knowledge and selected demographic variables reveal that there was no relationship between knowledge and reason for HPV vaccination and virus. This finding was supported bya study conducted by Pyi Woo Angela Yam, Pal kin Lam and Wai lok Yeung on knowledge among the youth regarding HPV and its vaccination. They show and prove that there is no significant difference in the vaccination rate between medical and Non medical students suggests an important factor other than knowledge.

MAJOR FINDINGS

According to age , majority of the subjects were in the age group of 16-20 i.e.46.6%and 43.3% from>20 age group and 10% from 13-16 age group. According to type of family , majority of subjects were from nuclear family i.e.76.6% and 23.33% from extended family. According to residence , the half of the subjects were from urban area i.e. 50% and other from rural area i.e. also 50% . According to immunization , majority of subjects were immunized i.e.96.6% and 3.33% were not immunized. According to religion , majority of the subjects were from Sikh religion i.e. 63.3% , 20% from Christian,5%from Hindu religion. According to education, majority of subjects were graduated i.e.53.31% and 46.6% were 12^{th}passed.

As per level of knowledge in pre-test 83.3% subjects are having average level of knowledge where as 10% are having good knowledge and 6.66% are having poor knowledge regarding human papilloma virus and its vaccination .In post–test maximum subjects are having good knowledge i.e.96.6% and just 3.33% are having average knowledge.

According to relationship of knowledge among youth regarding human papilloma virus and its vaccination with selected demographic variables such as age, type of family ,residence, immunization, religion, education were found to be non significant as there correlation is null [7-12].

CONCLUSION AND RECOMMENDATIONS

This study reveals that 96.6% of subjects have good knowledge and 3.33% are having average knowledge regarding human papilloma virus and its vaccination .This study also shows that there is null correlation between the level of knowledge and socio demographic variables.

Implications

Nursing education:-The study has a important implication in nursing education and other field. In the revised curriculum of basic nursing and in post graduation there is much emphasis on knowledge regarding HPV its vaccination. In service and continuing education needs to be planned and implemented for Community health nurse to enrich their information on research regarding level of knowledge on HPV and its vaccination. Nurse educators should be more rigorously enlightened regarding need for knowledge regarding HPV and its vaccination.

Nursing research:- A very limited research studies have

been conducted on level of knowledge regarding human Papillomavirus and its vaccination in India. More research is needed to delineate specific intervention techniques. In addition it is essential that nurses acquire greater biotechnological knowledge regarding human Papillomavirus and its vaccination to facilitate the design and it's implementation of sophisticated nursing research on knowledge of human Papillomavirus and its vaccination that can address hypothesis about Human Papillomavirus and its vaccination among youth.

Nursing practice:- Nursing care of HPV affected adults residing in different areas of Amritsar focuses on problem identification and Stabilizing the situation. Early recognition of level of knowledge regarding Human Papillomavirus and its vaccination among youth are very essential .

The community health nurse can motivate subjects to gain knowledge regarding human Papillomavirus and its vaccination for uplift their lifestyle for better achievement.

Nursing administration:- Nurse administrator can conduct education and training program for student nurses to conduct more and more researches on level of knowledge regarding human Papillomavirus and its vaccination.

Recommendation

1. Similar study can be undertaken on a large sample for making a more valid generalization.
2. A comparative study can be conducted regarding attitude and level of knowledge regarding human Papillomavirus and its vaccination among urban and rural communities.
3. Similar study can be conducted on different population in different setting.

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