_____

"Effectiveness of QR Coded Self-Instructional Module (Sim) on Knowledge Regarding Human Papilloma Virus Vaccine (HPVV) Among Women in Field Practice Area of Dr. Dy Patil RHTC".

Ms. Prachi Chaudhari [1a]* ,Dr. Sujata Sawant[2b] ,Ms. Vishakha Patil [3c] ,Ms. Suryawanshi Shruti [4c] ,Ms. Ayesha Shaikh [5c] ,Mr. Sanket Kamble [6c]

[1]*Clinical Instructor, Dr. D. Y. Patil Institute of Nursing Education Pimpri, Pune.*

[2]*Principal, Dr. D. Y. Patil Institute of Nursing Education Pimpri, Pune.*

[3]*Student of Dr. D. Y. Patil Institute of Nursing Education, Pune.*

*Corresponding Author

Abstract

Background: Human Papilloma Virus (HPV) has been demonstrated to be the causative agent of cervical cancer.

Objectives: To assess effectiveness of the QR code self-instructional module on knowledge among women regarding Human Papilloma Virus Vaccine (HPVV).

Method: A Pre-experiment one group pretest -post-test design was adapted. 80 samples were selected using simple random technique. The quantitative research approach was used. The population for the study is women residing in rural area and women between the age group 21 to 45 years of age. Data collection was done by using demographic variables and multiple-choice questionnaires. Reliability was assessed using Test-retest method. Pearson's correlation coefficient was 0.83. The data analysis done with descriptive and inferential statistics.

Results: The result showed that the majority of women had 42.5% of the women had age 21-25 years, 53.8% of them had primary education, 87.5% of them were Hindu, 91.3% of them were married. In this study 57.5% of the women had poor knowledge (score 0-4) and 42.5% of them had average knowledge (score 5-9) regarding Human Papilloma Virus Vaccine (HPVV).

Conclusion: The study indicated that the knowledge among women regarding Human Papilloma Virus Vaccine (HPVV) improved remarkably after QR code self-instructional module.

Keywords: Effectiveness, QR Coded Self-Instructional Module (SIM), Human Papilloma Virus Vaccine (HPVV), Women, Field Practice Area.

1.   Introduction

Cancer is the second leading cause of death in the worldwide, and 10 million deaths occur in 2020 were attributed to cancer. There is a Low-and-middle-income countries shoulder most of the cancer burden. In 2020, out of nearly 10 million cancer-related deaths occur worldwide, 70% were in low-and-middle-income countries. The disparity is even 90% of new cases more striking in case of cervical cancer.

[1] Papillomaviruses had a wide variety of higher vertebrates in a species-specific manner and induce cellular proliferation and only bovine papillomaviruses (BPVs) 1 and 2 are known to infect mesenchymal tissues and to show cross-species transmission. There are more than 100 types of human papillomaviruses (HPVs) have been

_____

identified and approximately half of them infect the genital tract and many types of HPV have been found in cervical cancers. Human papillomavirus (HPV) is the most common causative agent of the cervical cancer.

[2] India is the highest number of cervical cancers of annual incident cases and mortality rates for worldwide. 366.58 million women having the highest risk of cervical cancer. Annual number of cervical cancer cases 1.3lakhs, and cervical cancer deaths 7.3 lakhs. Projects number of new cervical cancer cases in 2025 is 2.03lakhs and cervical cancer death is 1.2lakhs.

A crude incidence rate of cervical cancer in India is 23.5 per 1lakh population per year. If all women taken the vaccine, widespread vaccination has the potential to reduce cervical cancer deaths around the world by as much as two thirds. In addition, the vaccines can reduce the need for the medical care, biopsies and invasive procedures and anxieties related to abnormal pap tests for cervical cancer and follow up procedures. For women aged 9 to 26 years who receive the Human Papilloma Virus Vaccine, maximum effectiveness will be achieved for those that have not been exposed to Human Papillomavirus.

[3] Vaccination against Human papilloma virus is the safest and the most reliable means of primary prevention of cervical cancer. Currently, there are three major vaccines available worldwide for Human papilloma virus; Cervarix, Gardasil and Gardasil 9, But due to the high cost, these vaccines are not accessible to all women in developing countries. The age-standardized incidence ratio for cervical cancer in the world is 14/100,000 women, while in India, it is 22, which is significantly higher in comparison.

[4] The success and benefit of control and prevention of cervical cancer mostly depend on the level of awareness and knowledge about different aspects of the disease and the vaccine. [5] Therefore, the aim of this study was to assess effectiveness of the QR code self-instructional module on knowledge among women regarding Human Papilloma Virus Vaccine (HPVV).

Hypothesis-

H_0- There is no significant difference between pre-test and post-test knowledge score on women selected area.

H_1 – There is significant difference between pre-test and post-test knowledge among women selected area.

2.   Methods

A Pre-experiment one group pretest -post-test design was adapted for this study. The study was conducted in rural area of community in Alandi, Pune city, Maharashtra, India. The sample selected for the present study was women between the age group 21 to 45 years of age residing in rural area. A Simple Random Sampling Technique was used for selecting 80 women who met the designated set of criteria in the period of data collection. Women between the age of 21 and 45, patient who are willing to participate, who are present at the time of data collection were included in the study.

Exclusion criteria was the women who cannot handle a smart phone and cannot participate in the online teaching program. The actual data was collected from 8 April 2024 to 8 May 2024. The instruments in this study consisted of demographic variable and multiple-choice questionnaires.

a)   **Demographic variable**

In the Demographic variable include Age, Education, Religion, Marital Status.

b)   Multiple-Choice Questionnaires.

Scoring And Interpretation:

The score indicates to rate their knowledge.

•   Poor: 0-4

•   Average: 5-9

•   Good:10-14

_____

Results

SECTION I: Description of Samples Based on Their Personal Characteristics

Table 1: Description of samples (women) based on their personal characteristics in terms of frequency and percentage N=80

Demo graphic variable	Frequency	%
Age		
21-25 years	34	42.50%
26-30 years	23	28.80%
31-35 years	15	18.80%
41-45 years	8	10.00%
Education		
No formal education	15	18.80%
Primary education	43	53.80%
Secondary education	21	26.30%
Higher and above	1	1.30%
Religion		
Hindu	70	87.50%
Muslim	7	8.80%
Buddhist	2	2.50%
Christian	1	1.30%
Marital status		
Married	73	91.30%
Unmarried	3	3.80%
Widow	4	5.00%

In this study majority, 42.5% of the women had age 21-25 years, 53.8% of them had primary education, 87.5% of them were Hindu, 91.3% of them were married.
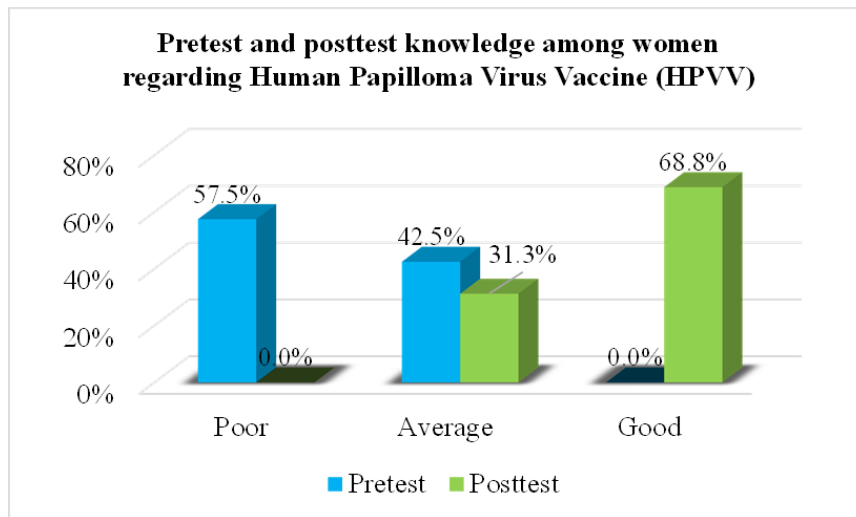
SECTION II: Knowledge Regarding Human Papilloma Virus Vaccine (HPVV) On Knowledge Among Women
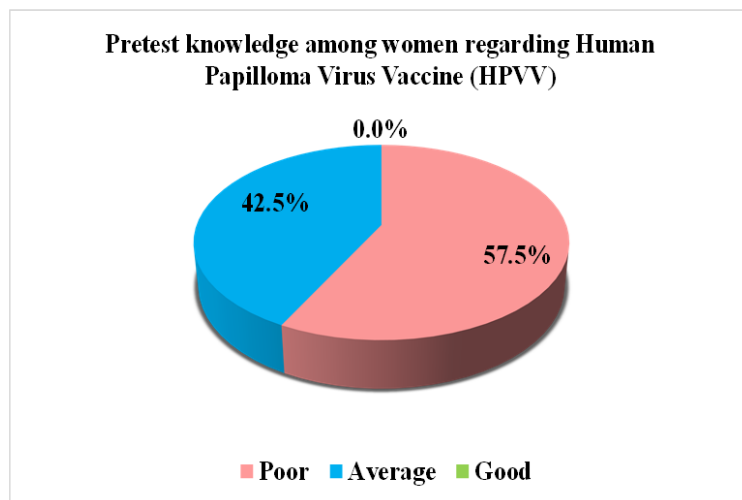
Figure 1: Knowledge Regarding Human Papilloma Virus Vaccine (HPVV) On Knowledge Among Women.

_____

In this study 57.5% of the women had poor knowledge (score 0-4) and 42.5% of them had average knowledge (score 5-9) regarding Human Papilloma Virus Vaccine (HPVV)**.**

SECTION III: Analysis of Data Related to The Effectiveness of The QR Code Self-Instructional Module on Knowledge Among Women Regarding Human Papilloma Virus Vaccine (HPVV)
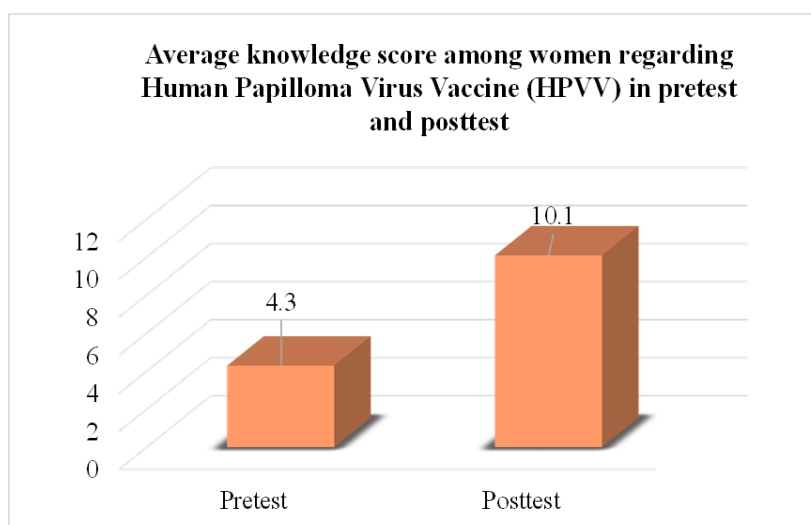

Figure 2: Effectiveness of the QR code self-instructional module on knowledge among women regarding Human Papilloma Virus Vaccine (HPVV)

In pretest, 57.5% of the women had poor knowledge (score 0-4) and 42.5% of them had average knowledge (score 5-9) regarding Human Papilloma Virus Vaccine (HPVV).

In post-test, 31.3% of the women had average knowledge (score 5-9) and 68.8% of them had good knowledge (score 10-14) regarding Human Papilloma Virus Vaccine (HPVV).

This indicates that the knowledge among women regarding Human Papilloma Virus Vaccine (HPVV) improved remarkably after QR code self-instructional module.

Figure 3: Paired t-test for the effectiveness of the QR code self-instructional module on knowledge among women regarding Human Papilloma Virus Vaccine (HPVV)

N=80

_____

Paired t-test for the effectiveness of the QR code self-instructional module on knowledge among women regarding Human Papilloma Virus Vaccine HPVV). Average knowledge score in pretest was 4.3 which increased to 10.1 in post-test.

T-value for this test was 32.2 with 79 degrees of freedom. Corresponding p-value was small (less than 0.05), the null hypothesis is rejected.

It is evident that the knowledge among women regarding Human Papilloma Virus Vaccine HPVV) improved remarkably after QR code self-instructional module.

SECTION IV:

Table 2: Fisher's exact test for the association of knowledge about Human Papilloma Virus Vaccine (HPVV) with selected demographic variable

N=80

Demographic variable		Knowledge		p-value
		Average	Poor	
Age	21-25 years	15	19	0.058
	26-30 years	14	9	
	31-35 years	4	11	
	41-45 years	1	7	
Education	No formal education	5	10	0.835
	Primary education	20	23	
	Secondary education	9	12	
	Higher and above	0	1	
Religion	Hindu	28	42	0.085
	Muslim	5	2	
	Buddhist	0	2	
	Christian	1	0	
Marital status	Married	30	43	0.091
	Unmarried	3	0	
	Widow	1	3	

None of the demographic variables was found to have significant association with the knowledge about Human Papilloma Virus Vaccine (HPVV).

Discussion

Karthi. R et al. conducted study on Effectiveness of Self-Instructional Module (SIM) on Knowledge Regarding Prevention of Cervical Cancer among Women at Selected Village, Tamil Nadu with aim to assess the effectiveness of self -instructional module (SIM) on knowledge regarding prevention of cervical cancer among women. A quantitative research approach-pre-experimental one group pretest and post- test design was adopted for the study. 50 samples were selected by using non probability convenient sampling technique.

The result of the study showed that the pretest mean 9.28 with the standard deviation of 2.23 and the post-test mean 21.62 with the standard deviation of 2.3; the mean difference between pretest and posttest is 12.34and standard error is 0.45. The paired 't' test value is 27.3 which is highly significant and it indicates that the Self-instructional Module Improved the level of knowledge regarding cervical cancer among the women. Hence the hypothesis H1 is accepted. The study concluded that, self-instructional module (SIM) on prevention of cervical cancer was effective in improving the knowledge level among women.[6]

_____

Conclusion:

The study was conducted to find out if the knowledge of Human Papilloma Virus Vaccine (HPVV) among women in RPH. On performing the research, the outcome started that after giving the knowledge regarding Human Papilloma Virus Vaccine (HPVV) they are aware about Human Papilloma Virus Vaccine. There was no significant between women score, age, marriage and education. Thus, the research study concluded that the knowledge given by QR code is effective to improve their knowledge regarding Human Papilloma Virus Vaccine (HPVV).

Funding

Acknowledgment

References:

[1] WHO International Agency for Research on Cancer. Estimated number of deaths in 2020, all cancers, both sexes, all ages. Cancer today. Published 2020. Accessed January 14, 2022. https://gco.iarc.fr/today/online-analysis-pie.

[2] IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, No. 90. IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Lyon (FR): International Agency for Research on Cancer; 2007. https://www.ncbi.nlm.nih.gov/books/NBK321770/

[3] Key statistics in India World Health Organisation. (Internet) Available from: http//www.who.int/hpv centre Janki Patel. A Study to Evaluate the Effectiveness of Self Instructional modual on Knowledge regarding HPV Vaccination among Adolescent Girls in Selected Arts and Commerce College of Mehasana city. Asian J. Nursing Education and Research. 2018; 8(3):369-370. doi: 10.5958/2349-2996.2018.00075.7.

[4] 6. Ferlay J., Soerjomataram I., Dikshit R., Eser S., Mathers C., Rebelo M., Parkin D.M., Forman D., Bray F. Cancer incidence and mortality worldwide: Sources, methods and major patterns in GLOBOCAN 2012. Int. J. Cancer. 2015;136:E359–E386. doi: 10.1002/ijc.29210.

[5] Kaidarova D. The experience of Cervical Cancer screening program in Kazakhstan. In: Eurasian Cancer Screening Conference. Minsk; 2018. Available from: https://onco.kz/wp-content/uploads/2018/05/Cervical_

[6] Karthi. R et al. (2021) Effectiveness of Self-Instructional Module (SIM) on Knowledge Regarding Prevention of Cervical Cancer among Women at Selected Village, Tamil Nadu International Journal of Science and Healthcare Research (www.ijshr.com) Vol.6; Issue: 2; April-June 2021