Tuijin Jishu/Journal of Propulsion Technology
ISSN: 1001-4055
Vol. 45 No. 4 (2024)

"Effect of Audio Assisted Teaching on Knowledge Regarding Hiv, Hbsag, Hcv (Hhh) among the Residents Of Selected Areas."

Mrs. D. Priya [1a*] DR. (Mrs.) Sadhana Adhyapak [2b] Dr. (Mrs.) Khurshid Jamadar [3c] Mr. Dhananjay Walunj [4d] Ms. Tejashree Jadhav [5d] Mr. Saurabh Yadav [6d] Ms. Anagha Thorat[7d] Ms. Preeti Jamdhade [8d] Ms. Komal Jadhav [9d]

a. *Associate Professor, Dr. D.Y. Patil College of Nursing, Pimpri, Pune.*

b. Professor, Dr. D.Y. Patil College of Nursing, Pimpri, Pune.

c. Principal Dr. D.Y. Patil College of Nursing, Pimpri, Pune.

d. Students of Post B. Sc nursing Dr. D.Y. Patil College of Nursing, Pimpri, Pune.

Abstract

Purpose: Aim of the study was to assess the effect of audio assisted teaching on knowledge regarding HIV, HBsAg, HCV (HHH) among the residents of selected areas.

Methods: In this study the Quantitative research approach was used. This study used a Quasi pre-experimental one group pre-test and post-test research design. The population of the study included residence of selected area of Pimpri-Chinchwad Municipal Corporation. (age between 18 to 60 years). The sample size consisted of 100 residents (age between 18 to 60 yr.). Non-probability purposive sampling technique was used to select the sample. Pearson's correlation coefficient was found to be 0.96.

Results: The result of the study showed that the in pretest, 62% of the residents had poor knowledge, 37% of them had average knowledge and 1% of them had good knowledge regarding HHH. In post test, 27% of the residents had average knowledge and 73% of them had good knowledge regarding HHH. Paired t-test was used for the effect of audio assisted teaching on knowledge regarding HHH among residents of selected areas. Average knowledge score in pretest was 7 which increased to 15.3 in post test. T-value for this test was 27.3 with 99 degrees of freedom. Corresponding p-value was small (less than 0.05), hence the null hypothesis is rejected

Conclusion: Audio assisted teaching was found to be significantly effective in improving the knowledge regarding HHH among residents.

Keywords: Effect, Audio Assisted Teaching, Knowledge, HIV, HBsAg, HCV.

Background Of Study

The human immune system is complex and multidimensional. It works to protect against invasion by foreign substances, protect against the proliferation of neoplastic cells, and plays a key role in inflammation and healing.[1]

India has the third largest HIV epidemic worldwide. There are many studies conducted in various states assessing the knowledge among the key population, general population but there is no systematic study done to assess the overall knowledge and attitudes of people towards HIV//AIDS. 93 million donations made every year worldwide, blood transfusion continues to save millions of lives each year and improve the life expectancy and

quality of life of patients suffering from life threatening conditions. At the same time, blood transfusion is an important mode of transmission of infection to the recipient. The present study was conducted to estimate the prevalence of HIV, HBV and HCV infections in voluntary blood donors at a tertiary care teaching hospital in Mumbai over a decade.[1]

The lives of millions of adolescents worldwide are at risk because they do not have the information; skills, health services and support which they need to go through sexual development during adolescence. The epidemic of Hepatitis B/HCV is now progressing at a rapid pace among young people.[2]

Need For The Study

The HIV is a one of the important communicable diseases which effect on immune body system. HIV remains a critical public health issue in communities across the country and around the world. [3]

As it is very important in every residence which allows to provide awareness about HHH among the residence in specific areas. All the residence should know about HIV, HBsAg and HCV (HHH) to differentiate all the peoples in community. How to implement the awareness in residence which reduce the social stigma in community. 1.06% peoples are suffering from HIV, HBsAg and HCV (HHH) in INDIA.[3]

As per the report, India accounted for the second-highest number of cases of Hepatitis B and C in 2022 after China, with 3.5 crore infections. According to the WHO's 2024 Global Hepatitis Report released on Tuesday, 254 million people lived with hepatitis B and 50 million with hepatitis C in 2022 globally and the number of lives lost due to viral hepatitis is increasing with the disease being the second leading infectious cause of death globally -- with 1.3 million deaths per year – the same as tuberculosis.[4]

Mansi Malik, Siaa Girotra etc all (2019-2021) conducted a study on knowledge of HIV/AIDS and its determinants in India. The objective of study was to determine the proportion and predictors of knowledge and attitude of HIV/AIDS in the Indian population through a large, nationally representative demographic and health survey. The conclusion of study was nearly three in four young and middle-aged Indians have a persistent lack of comprehensive knowledge of HIV, which increases their risk of infection, a situation which has worsened in a 5-year period.[5]

HIV, HBsAg, and HCV are both blood-borne and sexually transmitted, although it is rare to contract HCV sexually. The occurrence of HBsAg and HCV transmission routes varies in individuals living in Western countries as compared to individuals in Sub-Saharan Africa. Studies have found that people in Sub-Saharan Africa are infected with HBsAg and HCV in their childhood while people in Western countries are more likely to be infected in adulthood] Therefore, individuals in Sub-Saharan African are most likely exposed to hepatitis infection before being at risk of HIV. The knowledge of these diseases transmission routes and their prevention was developed from experiences in Western countries; therefore, their relevance in the context of Malawian population needs further exploration. The most effective prevention of HIV, HBsAg, and HCV infection is through health education of both infected and uninfected high-risk groups to prevent further transmission of the viruses.[6]

Infection with the Human Immunodeficiency Virus (HIV), the Hepatitis B Virus (HBsAg) and the Hepatitis C Virus (HCV) is a global health problem. Epidemiological studies worldwide show wide variations in the prevalence patterns of the HIV, Hepatitis B and the Hepatitis C Virus infections. Globally, a total of 39.5 million were living with HIV in 2006, of which approximately 5.7 million were from India. Early detection can contribute substantially to the timely diagnosis of the patients with acute illnesses and to an early treatment and hence, it can limit the transmission of the infection.[7]

The above-mentioned details indicated that the people are having less knowledge related to HIV, HBsAg and HCV (HHH) because of lack of knowledge and awareness about HIV, HBsAg and HCV in the community often leads to misinformation, missing of opportunities for prevention and treatment, and stigmatization of infected patients. So, with this experience the researcher wanted to improve knowledge regarding HHH among residents of selected areas.

Objectives

- To identify the knowledge regarding HHH among the residence of selected areas.
- To determine the effect of audio assisted teaching on knowledge regarding HHH among residents of selected areas.
- To find association of knowledge with selected demographic variables.

Research Methodology

HYPOTHESIS

Ho: There is no effect of audio assisted teaching on knowledge regarding HHH among the residents of selected areas.

Variables

Independent Variable: Audio Assisted Teaching.

Dependent Variable: Knowledge Score.

Research Design

The research design used for the study was Quasi pre-experimental one group is pre-test and post-test research design.

Setting of the study

The setting for this study is the selected area of Pimpri-Chinchwad Municipal Corporation those including Phule Nagar and Masulkar Colony.

Population

The population of the study included residents of selected area of Pimpri-Chinchwad Municipal Corporation. (age between 18 to 60 years).

Sample

In the present study the samples residents of selected areas Pimpri Chinchwad Municipal Corporation, Pune. (age between 18 to 60y ears)

Sample size

The sample size consisted of 100 residences (age between 18 to 60 yr.)

Sampling technique

A non-probability purposive sampling technique was used for this inquiry.

Sampling criteria:

Inclusion criteria

Patients who are willing to participate.

Patients who are able to read & write Marathi.

Exclusion criteria:

Those who are infected with HIV, HBsAg and HCV (HHH).

Description of the tool

The tool was divided in to IV Section that is:

Section I – Socio Demographic Data

Section II – Questionnaire on knowledge regarding HHH

Section III- Audio recording on knowledge regarding HHH

Section I

This includes information regarding the demographic profile of the respondents. The itemsincluded; Age, Gender, Marital status, Education, Occupation, Family income, Types of family, Diet, living area, do you hear about HHH, source of information.

Section II

This section includes the structured interview scheduled regarding HHH. It consists of 21 multiple choice type questions. Knowledge levels were scored as;

Poor: 1-7

Average: 8-14

Good: 15-21

Reliability

Reliability was assessed using test-retest method. Pre-test and post-test method of reliability was done. Pearson's correlation coefficient was found to be 0.96.

Pilot study

Pilot study was conducted from 2nd May 2024 to 8th May 2024 on 10 samples. First the prior permission was taken from corporator of Phule Nagar on 30th April 2024.

Procedure for data collection

In this final study was conducted from 10th May 2024 to 24th May 2024 on 100 samples. First the prior permission was taken from corporator of Masulkar Colony on 3rd April 2024. For each sample investigator informed the approach regarding the objectives of the study, then consent was obtained from the residents, followed all the confidentiality of resident's needs. A pre-test was conducted on 10th May 2024 by administering questionnaire to each resident after that health teaching was provided by using audio recording regarding awareness on HHH. Each sample required 10-15 minutes to fill data on same day of pre-test. Post-test was conducted using the same tool on the 7th day after pretest.

RESULT:

Table 1: Description of samples (residents) based on their personal characteristics in terms of frequency and percentage. N=100

Demographic variable	**Freq**	**%**
Age		
18-30 years	43	43%
31-40 years	33	33%
41-50 years	16	16%

51-60 years	8	8%
Gender		
Male	61	61%
Female	39	39%
Marital status		
Unmarried	28	28%
Married	70	70%
Widow/Widower	2	2%
Education of resident		
Graduate and above	45	45%
Secondary	41	41%
Primary	13	13%
Illiterate	1	1%
Occupation of resident		
Labor	7	7%
Self employed	16	16%
Private job	50	50%
Student	5	5%
Government job	5	5%
Unemployed	14	14%

Demographic variable	**Freq**	**%**
Monthly income		
Up to 10,000 Rs	37	37%
10001 to 20000 Rs	28	28%
20001 to 30000 Rs	29	29%
30001 Rs and above	6	6%
Type of family		
Nuclear	36	36%
Joint	48	48%

Extended	3	3%
Blended	13	13%
Diet		
Vegetarian	26	26%
Non-Vegetarian	6	6%
Eggetarian	1	1%
Mixed diet	67	67%
Living area		
Urban	97	97%
Rural	3	3%
Do you know about HHH		
Yes	57	57%
No	43	43%
If yes from whom		
Friends, Relative	6	6%
Internet	35	35%
Media, Newspaper	15	15%
Books	1	1%

Above table 1 showed that the 43% of the samples were in age 18-30 years, 61% of samples were males, 70% of samples were married, 45% of samples were graduates, 50% of samples were private job, 37% of samples where monthly income was up to Rs.10000, 48% of samples were from joint family, 67% of samples were mixed diet, 97% of samples were from urban area, 35% of them knew from internet.

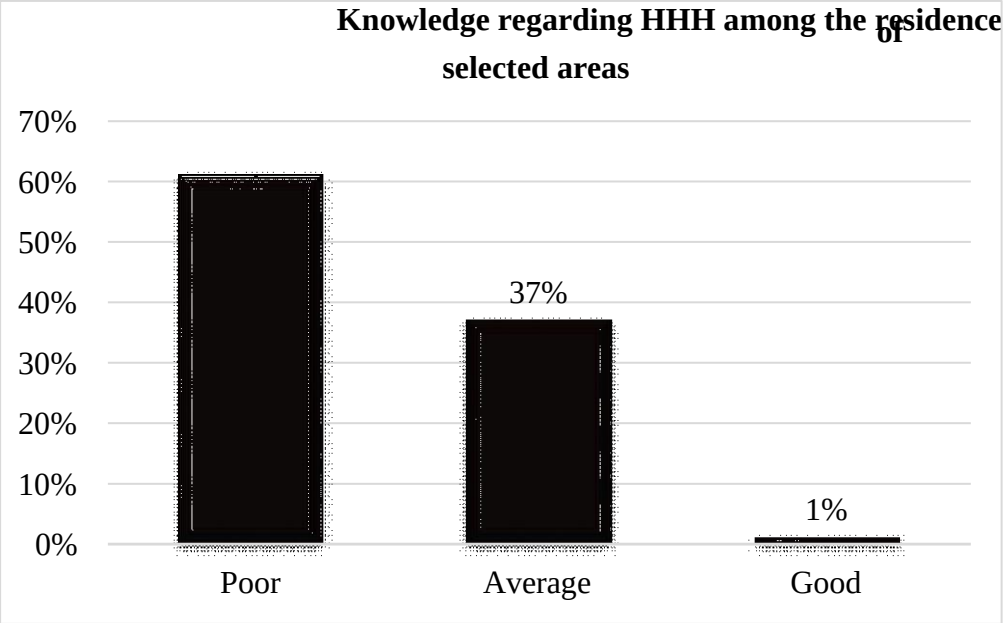

Figure indicated that the 61% of the residents had poor knowledge, 37% of them had average knowledge and 1% of them had good knowledge regarding HHH.

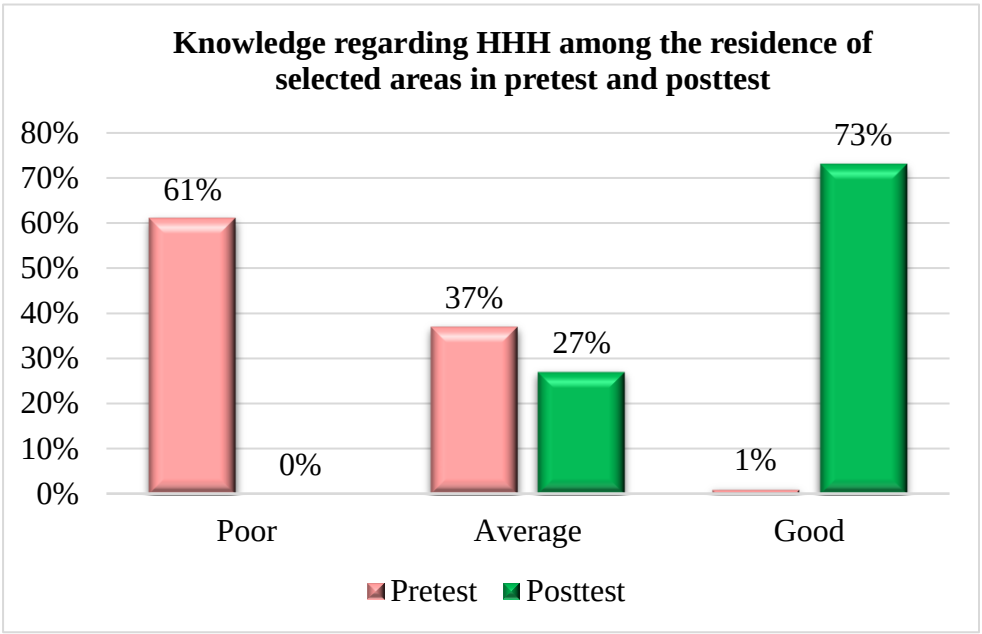

Figure No. 2 :-

Knowledge regarding HHH of Residents in Percentage

Figure 2 indicated that the in pretest, 62% of the residents had poor knowledge, 37% of them had average knowledge and 1% of them had good knowledge regarding HHH. In posttest, 27% of the residents had average knowledge and 73% of them had good knowledge regarding HHH. This indicates that the knowledge among residents regarding HHH improved remarkably after audio assisted teaching.

Table 2: Paired t-test for the effect of audio assisted teaching on knowledge regarding HHH among residents of selected areas

N=100

	Mean	SD	T	df	p-value
Pretest	7.0	2.6	27.3	99	0.000
Posttest	15.3	2.1			

Researcher applied Paired t-test for the effect of audio assisted teaching on knowledge regarding HHH among residents of selected areas. Average knowledge score in pretest was 7 which increased to 15.3 in posttest. T-value for this test was 27.3 with 99 degrees of freedom. Corresponding p-value was small (less than 0.05), the null hypothesis is rejected. It is evident that the knowledge among residents improved significantly after audio assisted teaching. Audio assisted teaching was found to be significantly effective in improving the knowledge among residents regarding HHH.

Table 3: Item analysis of knowledge regarding HHH

N=100

Knowledge item	Pretest		Post test	
	Freq	%	Freq	%
Full form of HHH is	41	41%	97	97%
HIV is transmitted by	75	75%	97	97%
Symptoms of HIV is	9	9%	75	75%
The most common test used to detect HIV is	19	19%	83	83%
The most effective therapy used in HIV is	26	26%	73	73%
Protective method of sexual intercourse is	72	72%	90	90%
Where to access HIV testing and counselling services in your community	56	56%	78	78%
Chronic type of Hepatitis-B also known as	9	9%	40	40%
The organ affected by Hepatitis-B is	33	33%	72	72%
Hepatitis-B is transmitted by	40	40%	64	64%
Sign and symptoms of Hepatitis-B is	31	31%	78	78%
Hepatitis-B can be caused by	21	21%	60	60%
The vaccine used to prevent the Hepatitis-B is	42	42%	71	71%
The test used for the Hepatitis-B is	23	23%	60	60%
The risk factor caused by HCV is	40	40%	79	79%
The medicine used to treat HCV is	13	13%	38	38%
Hepatitis-C is transmitted by	33	33%	84	84%
The most common symptom associated with chronic HCV infection is	8	8%	52	52%

The organ affected by HCV is	32	32%	75	75%
The test used for to detect HCV is	20	20%	65	65%
The precautionary measure of HHH is	59	59%	96	96%

Table 3 presents frequency and percentage of correct responses of residents to each knowledge item in pretest and post test. It is clear from this table that correct responses in post test are more than those in pretest.

Analysis of data related to association of knowledge with selected demographic variables

Table 4: Fisher's exact test for the association of knowledge with selected demographic variables

N=100

Demographic variable		**Knowledge**			**p-value**
		Poor	**Average**	**Good**	
Age	18-30 years	23	19	1	0.494
	31-40 years	21	12	0	
	41-50 years	11	5	0	
	51-60 years	7	1	0	
Gender	Male	38	22	1	1.000
	Female	24	15	0	
Marital status	Unmarried	13	15	0	0.024
	Married	49	20	1	
	Widow/Widower	0	2	0	
Education of resident	Graduate and above	26	18	1	0.724
	Secondary	25	16	0	
	Primary	10	3	0	
	Illiterate	1	0	0	
Occupation of resident	Labor	4	3	0	0.433
	Self employed	11	5	0	
	Private job	32	17	1	
	Student	2	6	0	
	Government job	13	6	0	
Monthly income	Up to 10,000 Rs	24	13	0	0.182
	10001 to 20000 Rs	21	7	0	
	20001 to 30000 Rs	13	15	1	
	31000 Rs and above	4	2	0	
Type of family	Nuclear	21	14	1	0.525

	Joint	30	18	0	
	Extended	1	2	0	
	Blended	10	3	0	

Table 4 cont.…

Demographic variable		**Knowledge**			**p-value**
		Poor	**Average**	**Good**	
Diet	Vegetarian	16	10	0	0.213
	Non-Vegetarian	3	2	1	
	Eggetarian	1	0	0	
	Mixed diet	42	25	0	
Living area	Urban	60	36	1	1.000
	Rural	2	1	0	
Do you know about HHH	Yes	31	25	1	0.118
	No	31	12	0	

Since p-value corresponding to marital status was small (less than 0.05), the demographic variable marital status was found to have significant association with then knowledge regarding HHH among residents.

Discussion

Ajay Kumar Jain, Amit D. Joshi et al (2023) conducted a study on knowledge, attitude, and practice regarding hepatitis B infection in first-degree relatives of patients suffering with hepatitis B infection with aim of study was to assess the knowledge, attitude, and practice regarding hepatitis B virus infection among first-degree relatives of hepatitis B patients. A cross-sectional, observational study was conducted amongst the 354 first-degree relatives of HBsAg-positive patients. A validated questionnaire consisted of twenty questions of knowledge, seven questions of attitude, and ten practice questions were employed to gather information. The study concluded that there is insufficient knowledge regarding hepatitis B, its common symptoms, modes of transmission, and preventive tools among close relatives of patients suffering from chronic hepatitis B. The result of study was show that mean knowledge, attitude, and practice (KAP) were significantly better amongst participants aged 55-65 years and those who were educated. There was a positive correlation between knowledge and attitude ($r=0.58$, p value<0.05) and knowledge and practice ($r=0.64$, p value<0.05). [8]

The conclusion of study was there is insufficient knowledge regarding hepatitis B, its common symptoms, modes of transmission, and preventive tools among close relatives of patients suffering from chronic hepatitis B.[8]

Conclusion

This study concludes during pretest that the pretest, 62% of the residents had poor knowledge, 37% of them had average knowledge and 1% of them had good knowledge regarding HHH. In post test, 27% of the residents had average knowledge and 73% of them had good knowledge regarding HHH. Paired t-test for the effect of audio assisted teaching on knowledge regarding HHH among residents of selected areas. Average knowledge score in pretest was 7 which increased to 15.3 in post test. T-value for this test was 27.3 with 99 degrees of freedom. Corresponding p-value was small (less than 0.05), the null hypothesis is rejected. It is evident that the knowledge

among residents improved significantly after audio assisted teaching. Audio assisted teaching was found to be significantly effective in improving the knowledge among residents regarding HHH.

Acknowledgement

Authors acknowledge the immense help received from the scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to authors/ editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

Source of Funding

There is no funding source for this study.

Conflict of interest

The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

Authors' Contribution

All the authors have contributed to the planning, implementation and analysis of the research study and its presentation in the form of the manuscript.

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