



“Effectiveness Of Structured Teaching Programme On Knowledge And Attitude Regarding Sexually Transmitted Diseases Among Undergraduate Students In Selected Colleges, Kamrup(M), Assam: A Quasi Experimental Study”

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ABSTRACT

BACKGROUND:

Sexually Transmitted Diseases (STDs) are caused by Sexually Transmitted Infections (STIs). They are spread mainly by sexual contact. STIs are caused by bacteria, viruses or parasites. A Sexually Transmitted Infection may pass from person to person in blood, semen, or vaginal and other bodily fluids. STDs have a profound impact on health. If untreated, they can lead to serious consequences including neurological and cardiovascular disease, infertility, ectopic pregnancy, stillbirths, and increased risk of Human Immunodeficiency Virus (HIV). If persons are sexually active, it's important to be aware of sexually transmitted diseases and get tested. Young individuals are more likely to practice unprotected sex and have multiple sexual partners. In addition, they may not have access to the required information and services to avoid STDs. Furthermore, they may feel hesitant to approach the facilities where information is

available. If the STDs are not treated adequately, it can lead to various complications such as infertility, urethral stricture, abortions, malignancies, perinatal, and neonatal morbidities. Both ulcerative and nonulcerative STDs enhance the transmission of HIV/AIDS.

OBJECTIVES

1. To assess the Knowledge regarding Sexually Transmitted Diseases among Undergraduate students in selected Colleges, Kamrup(M), Assam before and after administration of Structured Teaching Programme.
2. To assess the Attitude regarding Sexually Transmitted Diseases among Undergraduate students in selected Colleges, Kamrup(M), Assam before and after administration of Structured Teaching Programme.
3. To find out the effect of Structured Teaching Programme on Knowledge and Attitude regarding Sexually Transmitted Diseases among Undergraduate students in selected Colleges, Kamrup(M), Assam.
4. To find out the correlation between Knowledge and Attitude regarding Sexually Transmitted Diseases among Undergraduate students in selected Colleges, Kamrup(M), Assam.
4. To find out the association between pretest Knowledge and Attitude regarding Sexually Transmitted Diseases among Undergraduate students with the selected demographic variables.

METHODS AND MATERIALS

Quasi-experimental one group pre-test post-test design was used in this study to accomplish the objectives. Non probability convenience sampling technique was used for obtaining the adequate sample for the study. Study was undertaken on 100 Undergraduate students studying in Humanities, Science and Commerce stream in selected Colleges of Kamrup(M), Assam. Students were selected base on the inclusion criteria. Pre-test knowledge was checked using self-structured Knowledge questionnaire and Attitude was assessed using five-point Likert scale. The post test was conducted after seventh days in the same manner.

RESULTS

Study shows that out of 100 students, majority i.e. 72 (72%) of students belongs to 18-19 years of age, 15 (15%) of students belongs to <18 years and the rest 13 (13%) of students belongs to 20-21 years of age, 53(53%) of the students were male, 47 (47%) of the students were female, 37 (37%) of the students belongs to 3rd semester, 36 (36%) of the students belongs to 5th semester and 27 (27%) of the students belongs to 1st semester, 42 (42%) of the students belongs to humanities stream, 32 (32%) of the students belongs to science stream and 26 (26%) of the students belongs to commerce stream, 100 (100%) of the students have heard about STD, 55 (55%) of the students got their information about STD through friends, 45 (45%) through mass media, 80 (80%) of the students were Hindu, 20 (20%) were Islam, 100 (100%)

of the students have no family history of STD. In pretest Knowledge, majority i.e. 97(97%) had inadequate Knowledge, 3(3%) had moderately adequate Knowledge regarding STD. In post-test, 60 (60%) had moderately adequate Knowledge, 40(40%) had adequate Knowledge regarding STD. In pretest Attitude; majority i.e.94(94%) had desirable Attitude, 6(6%) had moderately desirable regarding STD. In post-test majority i.e.100(100%) had desirable Attitude regarding STD. In pretest mean score of Knowledge was 12.12 ± 1.41 . In post-test mean score of Knowledge was 15.56 ± 1.58 . The calculated paired “t” test value of value of $t=17.924$ was statistically significant at $p<0.001$ level. This clearly infers that the administration of STP on Knowledge regarding STD among Undergraduate students was found to be effective in improving the level of Knowledge in the post test. In pretest mean score of Attitude was 41.88 ± 1.89 . In posttest mean score of Attitude was 45.75 ± 1.17 . The calculated paired “t” test value of value of $t=26.242$ was statistically significant at $p<0.001$ level. This clearly infers that the administration of STP on Attitude towards STD among Undergraduate students was found to be effective in improving the level of Attitude in the post test. The analysis depicted that the correlation between the pretest Knowledge and pretest Attitude of students regarding STD. The correlation was statistically calculated by using Karl Pearson correlation coefficient (r). The calculated ‘r’ ($r= -0.100$), showed there was poor negative correlation between pretest Knowledge and pre-test Attitude. And in post-test the correlation coefficient calculated ‘r’ value ($r= 0.452$), showed there was fair positive correlation between post-test Knowledge and post-test Attitude. Hence increased Knowledge, there is gradually increased in positive Attitude. The analysis depicted that demographic variable stream ($p=0.047$) had statistically significant association with pretest level of Knowledge regarding Sexually Transmitted Diseases at $p<0.05$ level and the other demographic variables such as age, gender, educational qualification, heard about STD, source of getting information, religion, family history of STD did not show statistically significant association with pretest level of Knowledge regarding Sexually Transmitted Diseases among Undergraduate students at $p<0.05$ level. The analysis depicted that there was no significant association between pretest Attitude regarding STD and selected demographic variables such as age, gender, educational qualification, stream, heard about STD, source of getting information, religion, family history of STD.

CONCLUSION

Based on the analysis of the findings of the study, the following inferences were drawn. There was evident increase in the Knowledge and Attitude in all areas included in the study after administration of Structured Teaching Programme on Sexually Transmitted Diseases. Thus, it was proved that the Structured Teaching Programme was an effective teaching method for creating awareness on importance of Sexually Transmitted Diseases.

KEY WORDS: Knowledge, Attitude, Sexually Transmitted Diseases, Structured Teaching Programme, Students.

1. INTRODUCTION:

Sexually Transmitted Infections are the source of Sexually Transmitted Diseases (STDs). Sexual contact is the major way they are spread. Viruses, bacteria, and parasites are the causes of STIs. Transfusions of blood, semen, vaginal secretions, and other body fluids can spread sexually transmitted infections.

STDs significantly affect one's health. Serious illnesses include neurological and cardiovascular disorders, infertility, ectopic pregnancies, stillbirths, and an elevated risk of HIV can result from them if left untreated. It is crucial for those who engage in sexual activity to understand sexually transmitted infections and to get tested.

The majority of illnesses known as sexually transmitted infections (STIs) are spread through sexual activity. Common Sexually Transmitted Diseases (STDs) that are encountered in daily practice include gonorrhoea, chlamydial, and syphilis infections, which are curable, and HIV, genital herpes, HPV, and hepatitis B infections, which are not curable but can be managed with the right care.

As they pursue further education, many young people choose to live apart from their family. They may stay in paid guest houses, rent, or hostels and interact with individuals from a variety of socioeconomic backgrounds.

Younger generations may have several sexual partners and are more prone to engage in unprotected sex. Furthermore, individuals might not have access to the necessary data and/or resources to prevent STDs. They could be hesitant to get near the information-gathering locations.

Untreated STDs can result in a number of problems, including urethral stricture, cancer, infertility, abortions, and perinatal and neonatal morbidities. STDs, both ulcerative and nonulcerative, increase the risk of HIV/AIDS transmission.

Preventive and treatment efforts must take into account young people's attitudes toward sexual health as well as their knowledge of STIs and associated repercussions. Due to government and media campaigns, the majority of people are aware of HIV/AIDS; nevertheless, in developing nations, there is a dearth of information regarding STIs other than HIV/AIDS.

Infections that are mostly spread through sexual activity are known as sexually transmitted infections (STIs), and they represent a significant public health issue in India.

According to the **World Health Organization (WHO) 2020**, individuals between the ages of 15 and 24 have the highest recorded rates of STIs, accounting for up to 60% of new infections and half of all seropositive cases. The WHO defines adolescents as people who are between the ages of 10 and 19. With the exception of HIV and other viral diseases, it has been noted that one in 20 teenagers gets a STI annually. There are a number of reasons why this age group is more susceptible to getting STIs. This age group's majority distances themselves from their families in order to pursue higher education, exposing them to others from various socioeconomic backgrounds.

2. NEED OF THE STUDY:

STDs can raise the risk of HIV and have a direct influence on sexual and reproductive health through stigmatization, infertility, malignancies, and pregnancy difficulties. Understanding STIs is crucial for effective prevention and treatment, since those who are unaware of the symptoms may not realize they are in need of assistance and may not get it. In the poor world, there is a dearth of knowledge on STDs other than HIV/AIDS.

WORLDWIDE

Survey from World Health Organization, 2023 reveals that an estimated 374 million adults between the ages of 15 and 49 contract one of the four treatable sexually transmitted infections (STIs) each year: chlamydia, gonorrhoea, syphilis, or trichomoniasis. Additionally, over 490 million people are thought to have genital herpes, and 300 million women are thought to be infected with HPV. Globally, an estimated 296 million people have chronic hepatitis B.

The World Health Organization (WHO) estimates that in **1999**, there were 340 million new cases worldwide of a few treatable STIs: chlamydia, syphilis, gonorrhoea, and trichomoniasis. Infections from novel sources were more prevalent in South and Southeast Asia.

INDIA

Vasudev, et al. (2024) conducted a study on "Knowledge, Attitude, and Practice Related to Sexually Transmitted Infections Among Students of Nonmedical Background in Manipal, India" reveals that, out of 507 participants (mean age 20.5 years) approximately 97.4% and 85.7% of respondents, respectively, said that STIs are spread through sexual contact and blood transfusion. 99% of respondents claimed that their main source of information about STIs was the Internet.

Patel JN and Mazumdar SV (2019) India conducted a study on "The Current Status of Sexually Transmitted Infections/ Reproductive Tract Infections in Vadodara City: Health care Provider Perspective". Study reveals that around 6% of the adult population has one or more STIs which means amounts to the occurrence of about 30-35 million episodes of STIs every year.

3. OBJECTIVES:

1. To assess the Knowledge regarding Sexually Transmitted Diseases among Undergraduate students in selected Colleges, Kamrup(M), Assam before and after administration of Structured Teaching Programme.
2. To assess the Attitude regarding Sexually Transmitted Diseases among Undergraduate students in selected Colleges, Kamrup(M), Assam before and after administration of Structured Teaching Programme.
3. To find out the effect of Structured Teaching Programme on Knowledge and Attitude regarding Sexually Transmitted Diseases among Undergraduate students in selected Colleges, Kamrup(M), Assam.

4. To find out the correlation between Knowledge and Attitude regarding Sexually Transmitted Diseases among Undergraduate students in selected Colleges, Kamrup(M), Assam.

4.To find out the association between pretest Knowledge and Attitude regarding Sexually Transmitted Diseases among Undergraduate students with the selected demographic variables.

4. METHODS AND MATERIALS:

Quasi-experimental one group pre-test post-test design was used in this study to accomplish the objectives. Non probability convenience sampling technique was used for obtaining the adequate sample for the study. Study was undertaken on 100 undergraduate students studying in Humanities, Science and Commerce stream in selected Colleges of Kamrup(M), Assam. Students were selected base on the inclusion criteria. Pre-test Knowledge was checked using self-structured Knowledge questionnaire and Attitude was assessed using five-point Likert scale. The post test was conducted after seventh days in the same manner.

5. DESCRIPTION OF THE TOOL:

The tools used for the study consisted of three sections:

Section I: -Demographic variables: Age, gender, educational qualification, stream, heard about STD, source of getting information, religion, family history of STD.

Section II: Self-Structured Knowledge questionnaire: This part of the tool consisted of 20 questions (each question had one correct answer out of the four options). For every correct response a score of 1 mark was given and a score of 0 mark for incorrect response.

To interpret the level of Knowledge, the scores were converted to percentage and were categorized as follows:

Knowledge scores:

The level of Knowledge was interpreted in the following way:

The scores were converted into percentage and were arbitrary categorized as-

- Inadequate Knowledge: <33% (<7 scores)
- Moderately adequate Knowledge: 33%-75% (7-15 scores)
- Adequate Knowledge: >75% (>15 scores)

Section III: 5 Point-Likert Scale: This part of the tool consisted of 8 positive statements and 2 negative statements.

- For positive statement: Strongly agree-5 marks, Agree-4 marks, Neutral-3 marks, Disagree-2 marks, strongly disagree-1 mark.
- For negative statement: Strongly agree-1 mark, Agree-2 marks, Neutral-3 marks

Disagree-4 marks, strongly disagree-5 marks.

- Total scores: 50

Attitude scores:

The scores were converted into percentage and were arbitrary categorized as-

- Unfavourable Attitude: <33% (<17 scores)
- Moderately favourable Attitude: 33%-75% (17-38 scores)
- Highly favourable Attitude: >75% (>38 scores)

6. DATA COLLECTION PROCESS:

The data collection was scheduled from 10th September to 3rd October 2024. A formal written permission was obtained from the respective Principals of the selected Colleges for conducting the research study by the investigator before collection of the data.

The investigator visited the Colleges on the given respective dates and was introduced to the students who fulfilled the pre-determined selection criteria. A brief introduction and the purpose of the study were explained prior to data collection. The participants were assured of the confidentiality and anonymity to get their co-operation and prompt responses during data collection.

The pre-test Knowledge questionnaire and 5-point Likert scale were administered on 11th September, 2024 at Arya Vidyapeeth College, on 12th September, 2024 at Dispur College and on 13th September, 2024 at Beltola College which took 30 minutes to complete in average. Structured Teaching Programs were administered on the same day after completion of each pre-test of the hospitals respectively. The students interacted and cooperated well with the investigator and were satisfied with the information they got.

Post-test was administered to the same group of students using the same Knowledge questionnaire and 5-Point Likert Scale on the seventh day after giving the Structured Teaching Programme respectively.

7. RESULT:

SECTION-I

- Frequency and percentage of the students according to their demographic characteristics.

Table 1: Frequency and percentage distribution of demographic variables of Undergraduate students

n = 100

Demographic Variables	Frequency (f)	Percentage (%)
Age (in years)		
<18	15	15.0
18 – 19	72	72.0
20 – 21	13	13.0
>21	-	-
Gender		
Male	53	53.0
Female	47	47.0
Transgender	-	-
Educational qualification		
1 st semester	27	27.0
2 nd semester	37	37.0
3 rd semester	36	36.0
4 th semester	-	-
5 th semester	-	-
6 th semester	-	-
Stream		
Humanities	42	42.0
Science	32	32.0
Commerce	26	26.0
Have you heard about regarding sexually transmitted diseases?		
Yes	100	100.0

Demographic Variables	Frequency (f)	Percentage (%)
No	-	-
If yes, specify source of getting information		
Parents	-	-
Relatives	-	-
Mass media	45	45.0
Friends	55	55.0
Medical professionals	-	-
Others	-	-
Religion		
Hindu	80	80.0
Islam	20	20.0
Christian	-	-
Others	-	-
Do you have any family history of STD?		
Yes	-	-
No	100	100.0

The table 1 portrays that most of the Undergraduate students, 72(72%) were aged between 18 – 19 years, 53(53%) were male, 37(37%) were studying 2nd semester, 42(42%) had chosen humanities stream, 55(55%) were getting information through friends, 80(80%) were Hindus and 100(100%) did not have family history of STD.

SECTION II

- **Assessment of Knowledge and Attitude score regarding Sexually Transmitted Disease among students before and after administration of the Structured Teaching Programme.**

Table 2: Frequency and percentage distribution of the students according to their level of Knowledge regarding Sexually Transmitted Diseases before and after administration of STP.

n= 100

Knowledge	Pretest		Post Test	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Inadequate (<7)	97	97%	0	0%
Moderately adequate (7 – 15)	3	3%	60	60%
Adequate (>15)	0	0%	40	40%

The table 2 shows that out of 100 students in pretest Knowledge, majority i.e. 97(97%) had inadequate Knowledge, 3(3%) had moderately adequate Knowledge regarding Sexually Transmitted Diseases. In post-test 60 (60%) had moderately adequate Knowledge, 40(40%) had adequate Knowledge regarding Sexually Transmitted Diseases.

Table 3: Frequency and percentage distribution of the students according to their level of Attitude regarding Sexually Transmitted Diseases before and after administration of STP

n = 100

Attitude	Pretest		Post Test	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Undesirable (<17)	0	0%	0	0%
Moderately desirable (17 – 38)	6	6%	0	0%
Desirable (>38)	94	94%	100	100%

Table 3 shows that out of 100 students in pretest Attitude; 94(94%) had desirable Attitude, 6(6%) had moderately desirable Attitude regarding Sexually Transmitted Diseases. In post-test majority i.e.100(100%) had desirable Attitude regarding Sexually Transmitted Diseases,

Section-III

- **Evaluation of the effect of Structured Teaching Programme regarding Sexually Transmitted Disease among Undergraduate students in selected Colleges of Kamrup(M), Assam.**

Table 4: Effectiveness of STP on Knowledge regarding Sexually Transmitted Diseases among the Undergraduate students

H₀₁: There is no significant difference between the pre-test and post-test Knowledge score among Undergraduate students regarding Sexually Transmitted Diseases.

H₁: There is significant difference between the pre-test and post-test Knowledge score among Undergraduate students regarding Sexually Transmitted Diseases.

n= 100

Knowledge	Median	Mean	S.D	Mean Difference	Paired “t” test and p- Value
Pretest	12.0	12.12	1.41	3.44	t = 17.924 p=0.0001, S***
Post Test	15.0	15.56	1.58		

***p<0.001, S – Significant

The table 4 shows that the pretest mean score of Knowledge was 12.12 with standard deviation 1.41. In post-test mean score of Knowledge was 15.56 with standard deviation 1.58. The mean difference score was 3.44. The calculated paired “t” test value of t=17.924 was statistically significant at p<0.001 level. Hence, research hypothesis (**H₁**) is accepted and null hypothesis (**H₀₁**) is rejected. This clearly infers that the administration of Structured Teaching Programme on Knowledge regarding Sexually Transmitted Diseases among Undergraduate students was found to be effective in improving the level of Knowledge in the post test.

Table 5: Effectiveness of STP on Attitude regarding Sexually Transmitted Diseases among the Undergraduate students

H₀₂: There is no significant difference between the pre-test and post-test Attitude score among Undergraduate students regarding Sexually Transmitted Diseases.

H₂: There is significant difference between the pre-test and post-test Attitude score among Undergraduate students regarding Sexually Transmitted Diseases.

n = 100

Attitude	Mean	S.D	Mean Difference	Paired “t” test and p- Value
Pretest	41.88	1.89	3.87	t =26.242
Post Test	45.75	1.17		p=0.0001, S***

***p<0.001, S – Significant

The table 5 shows that the pretest mean score of Attitude was 41.88 with standard deviation 1.89. In post-test mean score of Knowledge was 45.75 with standard deviation 1.17. The mean difference score was 3.87. The calculated paired “t” test value of value of t=26.242 was statistically significant at p<0.001 level. Hence, research hypothesis (**H₂**) is accepted and null hypothesis (**H₀₂**) is rejected. This clearly infers that the administration of Structured Teaching Programme on attitude towards Sexually Transmitted Diseases among Undergraduate students was found to be effective in improving the level of attitude in the post test.

Section-IV

- **Correlation between Knowledge and Attitude regarding Sexually Transmitted Diseases among Undergraduate students before and after administration of the Structured Teaching Programme.**

Table 6: Correlation between pre-test Knowledge and pre-test Attitude of students regarding Sexually Transmitted Diseases.

H₀₃: There is no significant correlation between Knowledge and Attitude score regarding Sexually Transmitted Diseases among Undergraduate students.

H₃: There is significant correlation between Knowledge and Attitude score regarding Sexually Transmitted Diseases among Undergraduate students.

n= 100

VARIABLES	MEAN	SD	KARL PEARSON'S CORRELATION "r" AND p- VALUE
Pre test Knowledge	12.12	1.41	r =-0.100 p=0.321,
Pre test Attitude	41.88	1.89	N.S

***p<0.001, S – Significant

The data presented in Table 6 shows the correlation between the pretest Knowledge and pretest Attitude of students regarding Sexually Transmitted Diseases. The correlation was statistically calculated by using Karl Pearson correlation coefficient (r). the calculated 'r' value was found to be, r= -0.100, showed there was poor negative correlation between pretest Knowledge and pretest Attitude. Hence, research hypothesis (H₃) is rejected and null hypothesis (H₀₃) is accepted.

Table 7: Correlation between post-test Knowledge and post-test Attitude of students regarding Sexually Transmitted Diseases.

H₀₃: There is no significant correlation between Knowledge and Attitude score regarding Sexually Transmitted Diseases among Undergraduate students.

H₃: There is significant correlation between Knowledge and Attitude score regarding Sexually Transmitted Diseases among Undergraduate students.

n= 100

VARIBLES	MEAN	SD	KARL PEARSON'S CORRELATION "r" AND p- VALUE
Post test Knowledge	15.56	1.58	r =0.452 p=0.0001 S***
Post test Attitude	45.75	1.17	

***p<0.001, S – Significant

The data presented in Table 7 shows the correlation between the post-test Knowledge and post-test Attitude of students regarding Sexually Transmitted Diseases. The correlation was statistically calculated by using Karl Pearson correlation coefficient (r). the calculated 'r' value was found to be, $r = 0.452$, showed there was fair positive correlation between post-test Knowledge and post-test Attitude. Hence, research hypothesis (H_3) is accepted and null hypothesis (H_{03}) is rejected. It clearly infers that increased Knowledge, there is gradually increased in positive Attitude.

Section-V

- Association between the pretest Knowledge and Attitude with the selected demographic variables such as age, gender, educational qualification, stream, heard about STD, source of getting information, religion, family history of STD.

Table 8: Association between pre-test Knowledge score regarding Sexually Transmitted diseases with selected demographic variables.

H₀₄: There is no significant association between pre-test Knowledge score regarding Sexually Transmitted diseases with selected demographic variables.

H₄: There is significant association between pre-test Knowledge score regarding Sexually Transmitted Diseases with selected demographic variables.

n = 100

Demographic Variables	Inadequate		Moderately Adequate		Fisher Exact test p-value
	f	%	f	%	
Age (in years)					p=1.000 N.S
<18	15	15.0	0	0	
18 – 19	69	69.0	3	3.0	
20 – 21	13	13.0	0	0	
>21	-	-	-	-	
Gender					p=1.000 N.S
Male	51	51.0	2	2.0	
Female	46	46.0	1	1.0	
Transgender	-	-	-	-	
Educational qualification					p=0.062 N.S
1 st semester	27	27.0	0	0	
2 nd semester	-	-	-	-	
3 rd semester	37	37.0	0	0	
4 th semester	-	-	-	-	
5 th semester	33	33.0	3	3.0	
6 th semester	-	-	-	-	
Stream					p=0.047 S*
Humanities	42	42.0	0	0	
Science	29	29.0	3	3.0	

Demographic Variables	Inadequate		Moderately Adequate		Fisher Exact test p-value
	f	%	f	%	
Commerce	26	26.0	0	0	
Have you heard regarding Sexually Transmitted Diseases?					
Yes	97	97.0	3	3.0	-
No	-	-	-	-	
If yes, specify source					
Parents	-	-	-	-	p=1.000 N.S
Relatives	-	-	-	-	
Mass media	44	44.0	1	1.0	
Friends	53	53.0	2	2.0	
Medical professionals	-	-	-	-	
Others	-	-	-	-	
Religion					
Hindu	77	77.0	3	3.0	p=1.000 N.S
Islam	20	20.0	0	0	
Christian	-	-	-	-	
Others	-	-	-	-	
Do you have any family history of STD?					
Yes	-	-	-	-	-
No	97	97.0	3	3.0	

*p<0.05, S – Significant, p>0.05

N.S – Not Significant, p>0.05

INTERPRETATION

The table 8 illustrated the pretest level of knowledge regarding Sexually Transmitted Diseases among Undergraduate students with their selected demographic variables. It was observed that the demographic variable stream ($p=0.047$) had statistically significant association with pretest level of Knowledge regarding Sexually Transmitted Diseases at $p<0.05$ level and the other demographic variables did not show statistically significant association with pretest level of Knowledge regarding Sexually Transmitted Diseases among Undergraduate students at $p<0.05$ level.

Hence the research hypothesis (H_4) is accepted and null hypothesis (H_{04}) rejected and infers that there is an association of knowledge with selected demographic variable like stream. The null hypothesis (H_{04}) is accepted and research hypothesis (H_4) is rejected with selected demographic variables like age, gender, educational qualification, heard about STD, sources, religion and family history.

- **AGE:** The table shows that the obtained Fisher exact p-value was $p=1.000$ since p-value is greater than 0.05, there was no association between level of Knowledge and age of the respondents.
- **GENDER:** The table shows that the obtained Fisher exact p-value was $p=1.000$ since p-value is greater than 0.05, there was no association between level of Knowledge and gender of the respondents.
- **EDUCATIONAL QUALIFICATION:** The table shows that the obtained Fisher exact p-value was $p=0.062$ since p-value is greater than 0.05, there was no association between level of Knowledge and educational qualification of the respondents.
- **STREAM:** The table shows that the obtained Fisher exact p-value was $p=0.047$ since p-value is lesser than 0.05, there was association between level of Knowledge and stream of the respondents.
- **SOURCE OF HEARD REGARDING STD:** The table shows that the obtained Fisher exact p-value was $p=1.000$ since p-value is greater than 0.05, there was no association between level of Knowledge and source of heard regarding STD of the respondents.
- **RELIGION:** The table shows that the obtained Fisher exact p-value was $p=1.000$ since p-value is greater than 0.05, there was no association between level of Knowledge and religion of the respondents.

Table 9: Association between pre-test Attitude score regarding Sexually Transmitted diseases with selected demographic variables.

H₀₄: There is no significant association between pre-test Attitude score regarding Sexually Transmitted diseases with selected demographic variables.

H₄: There is significant association between pre-test Attitude score regarding Sexually Transmitted Diseases with selected demographic variables.

n = 100

Demographic Variables	Moderately desirable		Desirable		Fisher Exact test p-value
	f	%	f	%	
Age (in years)					p=0.824 N.S
<18	1	1.0	14	14.0	
18 – 19	4	4.0	68	68.0	
20 – 21	1	1.0	12	12.0	
>21	-	-	-	-	
Gender					p=0.210 N.S
Male	5	5.0	48	48.0	
Female	1	1.0	46	46.0	
Transgender	-	-	-	-	
Educational qualification					p=0.382 N.S
1 st semester	1	1.0	26	26.0	
2 nd semester	-	-	-	-	
3 rd semester	4	4.0	33	33.0	
4 th semester	-	-	-	-	
5 th semester	1	1.0	35	35.0	
6 th semester	-	-	-	-	
Stream					p=0.277
Humanities	1	1.0	41	41.0	N.S

Demographic Variables	Moderately desirable		Desirable		Fisher Exact test p-value
	f	%	f	%	
Science	2	2.0	30	30.0	
Commerce	3	3.0	23	23.0	
Have you heard regarding Sexually Transmitted Diseases?					
Yes	6	6.0	94	94.0	-
No	-	-	-	-	
If yes, specify source					
Parents	-	-	-	-	p=1.000 N.S
Relatives	-	-	-	-	
Mass media	3	3.0	42	42.0	
Friends	3	3.0	52	52.0	
Medical professionals	-	-	-	-	
Others	-	-	-	-	
Religion					p=1.000 N.S
Hindu	5	5.0	75	75.0	
Islam	1	1.0	19	19.0	
Christian	-	-	-	-	
Others	-	-	-	-	
Do you have any family history of STD?					-
Yes	-	-	-	-	
No	6	6.0	94	94.0	

N.S – Not Significant, $p > 0.05$

INTERPRETATION

The table 9 illustrated the pretest level of Attitude regarding Sexually Transmitted Diseases among Undergraduate students with their selected demographic variables.

It was indicated that the demographic variables did not show statistically significant association with pretest level of Attitude regarding Sexually Transmitted Diseases among Undergraduate students at $p < 0.05$ level. Thus, the research hypothesis (H_5) is rejected and null hypothesis (H_{05}) is accepted.

- **AGE:** The table shows that the obtained Fisher exact p-value was $p = 0.824$ since p-value is greater than 0.05, there was no association between level of Attitude and age of the respondents.
- **GENDER:** The table shows that the obtained Fisher exact p-value was $p = 0.210$ since p-value is greater than 0.05, there was no association between level of Attitude and gender of the respondents.
- **EDUCATIONAL QUALIFICATION:** The table shows that the obtained Fisher exact p-value was $p = 0.382$ since p-value is greater than 0.05, there was no association between level of Attitude and educational qualification of the respondents.
- **STREAM:** The table shows that the obtained Fisher exact p-value was $p = 0.277$ since p-value is lesser than 0.05, there was no association between level of Attitude and stream of the respondents.
- **SOURCE OF HEARD REGARDING STD:** The table shows that the obtained Fisher exact p-value was $p = 1.000$ since p-value is greater than 0.05, there was no association between level of Attitude and source of heard regarding STD of the respondents.
- **RELIGION:** The table shows that the obtained Fisher exact p-value was $p = 1.000$ since p-value is greater than 0.05, there was no association between level of Attitude and religion of the respondents.

8. CONCLUSION:

Based on the analysis of the findings of the study, the following inferences were drawn: Out of 100 participants, majority i.e. 72 (72%) of students belongs to 18-19 years of age, 15 (15%) of students belongs to <18 years and the rest 13 (13%) of students belongs to 20-21 years of age, 53 (53%) of the students were male, 47 (47%) of the students were female, 37 (37%) of the students belongs to 3rd semester, 36 (36%) of the students belongs to 5th semester and 27 (27%) of the students belongs to 1st semester, 42 (42%) of the students belongs to humanities stream, 32 (32%) of the students belongs to science stream and 26 (26%) of the students belongs to commerce stream, 100 (100%) of the students have heard about STD, 55 (55%) of the students got their information about STD through friends, 45 (45%) through mass media, 80 (80%) of the students were Hindu, 20 (20%) were Islam, 100 (100%) of the students have no family history of STD.

In pre-test, majority i.e. 97 (97%) had inadequate Knowledge, 3 (3%) had moderately adequate Knowledge regarding STD and 60 (60%) had moderately adequate Knowledge, 40 (40%) had adequate

Knowledge regarding STD in post-test. In pretest Attitude 94(94%) had desirable Attitude, 6(6%) had moderately desirable regarding STD and in post-test 100(100%) had desirable Attitude regarding STD.

The calculated paired “t” test value of $t=17.924$ was statistically significant at $p<0.001$ level. This clearly infers that the administration of STP regarding STD among undergraduate students was found to be effective in improving the level of knowledge in the post test.

The calculated paired “t” test value of value of $t=26.242$ was statistically significant at $p<0.001$ level. This clearly infers that the administration of STP regarding STD among undergraduate students was found to be effective in improving the level of attitude in the post test.

The calculated Karl Pearson correlation value $r= -0.100$, showed there was poor negative correlation between pretest Knowledge and Attitude.

In post-test $r= 0.452$, showed there was fair positive correlation between post-test Knowledge and Attitude which was found statistically significant $p<0,001$ level which clearly infers that increased Knowledge, there is gradually increased in positive Attitude.

The analysis depicted that the demographic variable stream ($p=0.047$) had statistically significant association with pretest level of Knowledge regarding STD at $p<0.05$ level and the other demographic variables such as age, gender, educational qualification, heard about STD, source of getting information, religion, family history of STD did not show statistically significant association. And there was no significant association between pretest Attitude regarding STD and selected demographic variables such as age, gender, educational qualification, stream, heard about STD, source of getting information, religion, family history of STD.

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