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Effectiveness of structured teaching program on knowledge and attitude of sailors regarding prevention of HIV/ AIDS at selected sea port, Mangalore

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Abstract

Methods: An evaluatory approach with one group pretest- posttest design was used in this study. The sample of 60 sailors was drawn using purposive sampling technique. Pretest was conducted by administering knowledge questionnaire and attitude scale, followed that STP was administered to the study subjects. Post test was conducted on 8th day, by administering the same tool on the study participants.

The objectives of the study are: To determine the level of knowledge of the sailors before and after STP on prevention of HIV/AIDS using structured knowledge questionnaire, To assess the level of attitude of the sailors before and after STP on prevention of HIV/AIDS using attitude scale, To find out the relationship between knowledge and attitude of sailors regarding prevention of HIV/AIDS. To find out the association between knowledge and selected demographic variables (age, sex, religion, marital status, year of experience, educational status, family influence, exposure to mass media, etc.), To find out the association between attitude and selected demographic variables (age, sex, religion, marital status, family influence, exposure to mass media, etc.)

Results: The study findings revealed that before STP 51.7% of the subjects had an average knowledge and mean knowledge score of 12.62%. Sixty three percent of the subjects had average/moderate attitude before administration of STP. The STP facilitated them to update their knowledge related to HIV/AIDS. The posttest knowledge scores of the subjects (70%) were very good. The significant increase of knowledge changed the attitude significantly, where no subject had poor attitude. The correlation computed for knowledge and attitude showed that there was positive relationship between knowledge and attitude. There was no association found with regard to knowledge and selected variables (age, sex, religion, marital status, exposure to mass media and family influence), except for educational status there was significant association with regard to knowledge. There was no association found with regard to attitude and selected variables.

Keywords: HIV/AIDS; Sailors; Knowledge; Attitude; Effectiveness; Structured teaching programme

1. Introduction

Until quite recently there was a wide spread feeling that the struggle against infectious disease was almost won. The means of controlling most of them seemed either available or discoverable without undue difficulty"1". But tragically a false sense of security, which came with optimism, has helped many diseases to spread with alarming rapidity. In the past 20 years, more than thirty new and highly infectious diseases have been identified"2".

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AIDS is a serious illness and public health crisis that merits the concern of everyone. HIV/AIDS, which is one of the most dreaded diseases of the humanity, has spread to every part of the world, threatening people from all spheres of life. HIV/AIDS can be called our modern pandemic, affecting both industrialized and developing countries. The whole globe is affected"3".

HIV/AIDS is one of those, which spread throughout the country in a very ferocious way. It has indeed shaken the confidence of healers and health care providers in other parts of the world as well as in India. Nearly 25 years in to the epidemic HIV/AIDS, By and large, though, efforts have been small scale, halfhearted and haphazard, major opportunities to stem the global AIDS epidemic have been missed"4".

An exploratory survey was conducted on knowledge, attitude, and behavior related to HIV/AIDS among transport workers in Georgia, Europe, and Central Asia. Both qualitative and quantitative methods were used. The key finding from this study is that the significant proportion of transport sector workers engage in unsafe sex with sector workers and this calls for specific provision of information and prevention services for highly mobile section of the population"5".

A behavioral surveillance Survey was conducted on knowledge of HIV/AIDS/STIs among sailors, truckers and public transport drivers, and the prevalence of STI in six cities in Indonesia. A cluster sample of 6,400 adult men, were personally interviewed in their sentinel site. The different trend was measured by 't' test at 95% confidence interval. The analysis of variance was performed to measure variance differences among male groups. The prevalence of respondents reported, ever had STI symptom in the past year was beyond 22% to 41%. There was marked increase of knowledge to HIV/AIDS/STIs among male respondents with the average of 10% increase, and followed by the increase of STI prevalence with the average of 5% increase. It was found that there was no evidence supported the increasing of HIV/AIDS/STIs knowledge in reducing the risk of sexual behavior among adult male respondents.

This study suggests that the persons who have a good knowledge of HIV/AIDS/STIs were more likely having STI symptom, and needs better targeted interventions like health education on prevention and promotion to maintain behavioral changes"6".

2. Material and method

2.1. Research Approach

In the present study, the researcher aims to determine the effectiveness of STP on HIV/AIDS in terms of gain in knowledge and attitude scores using evaluative approach.

2.2. Research Design

The Quasi –experimental, one group pre-test-post-test design was adopted for this study.

2.3. Setting of the study

The study was conducted in selected sea port in Mangalore. The researcher selected the setting for the following reasons.

- The availability of the sample.
- Feasibility for conducting study.

2.4. Population

Population includes all possible elements that could be included in the study. In the present study, the population consisted of all the sailors.

2.5. Sample

Sample is a small portion of the population selected for observation and analysis. the population for the present study comprised of 60 sailors at the selected sea Port in Mangalore.

2.6. Sampling technique

Sampling technique is the procedure, which the researcher adopts in selecting the samples for the study. The sample for the present study was selected using purposive sampling technique.

2.7. Sampling criteria

2.7.1. Inclusion criteria

- Sailors from selected sea Port are included in this study.
- Sailors who, know to read, write and understand English and Hindi, or Kannada.
- Sailors who are willing to participate in the study.

2.7.2. Exclusion criteria

Sailors who are not on-board during data collection period.

2.8. Data collection instrument

To carry out any type of research investigation, data must be gathered with which to test the hypothesis. Many different methods and procedures are developed to aid in the acquisition of this data are called tools.

These tools employ distinctive ways of describing and quantifying the data. Each is particularly appropriate for certain sources of data, yielding information of the kind and the form that can be most effectively used.

The instruments used for this study were:

- Structured knowledge questionnaire on prevention of HIV/AIDS.
- Attitude scale on HIV/AIDS
- Structured teaching program me on prevention of HIV/AIDS.

3. Results and discussion

The description of results is the heart of research project. It is the communication of facts, measurements, and observations gathered by the researcher. The term analysis refers to the computation of certain measures along with searching for patterns of relationship that exist among data groups. Analysis of data in general way involves a number of closely related operations which are performed with the purpose of summarizing the collected data and organizing these in such a manner that they answer the research question.⁷ This chapter deals with analysis and interpretation of the information collected through a knowledge questionnaire and an attitude scale from sixty sailors at selected sea port at Mangalore. The present study was designed to assess the effectiveness of STP on prevention of HIV/AIDS. Collected data were coded, tabulated, analyzed and interpreted using descriptive and inferential statistics. The data has been analyzed and interpreted in the light of objectives and hypothesis of the study.

3.1. Organization of the findings

The data analyzed have been presented under the following sections:

- Section I: Description of sample characteristics
- Section II: Knowledge of sailors on prevention of HIV/AIDS
 - Frequency and cumulative frequency distribution of pre- and post-test knowledge scores of sailors.
 - Distribution of sailors according to the grading of pre- and post-test knowledge scores of sailors.
 - Range, median, mean and standard deviation of pre- and post-test knowledge scores of sailors.
 - $\circ~$ Mean, mean difference, standard deviation difference, standard error and 't' value of pre- and post-test knowledge score.
 - Area-wise mean knowledge score, mean difference, standard deviation of difference with 't' value of preand post-test knowledge score.
- Section III: Attitude of sailors on prevention of HIV/AIDS
 - Frequency and cumulative frequency distribution of pre- and post-test attitude scores of sailors.
 - Distribution of sailors according to the grading of pre- and post-test attitude scores of sailors.
 - Range, median, mean and standard deviation of pre- and post-test attitude scores of sailors.
 - $\circ~$ Mean, mean difference, standard deviation difference. Standard error and 't' value of pre- and post-test attitude score.
- Section IV: Relationship between knowledge and attitude of the subjects on prevention of HIV/AIDS

• Section V: Associations

- Association between the levels of knowledge with selected demographic variables
- $\circ~$ Association between attitude and selected demographic variables

3.2. Section I

3.2.1. Sample characteristics

This section deals with analysis of data related to sample characteristics comprising age, sex, religion, marital status, year of experience, educational status, family influence, exposure to mass media, and information about HIV/AIDS. The data obtained from 60 sailors on sample characteristics was analysed using descriptive statistics and explained in frequency and percentage, and represented in Table 1.

Table 1 Frequency and Percentage distribution of sample characteristics N=60

Sl. No.	Variable	Frequency (f)	Percentage (%)
1	Age (in years)		
	20-30	31	51.7
	31-40	16	26.7
	41-50	6	10.0
	>51	7	11.7
2	Sex		
	Male	59	98.3
	Female	1	1.7
3	Religion		
	Hindu	34	56.7
	Christian	6	10.0
	Muslim	19	31.7
	Any other	1	1.7
4	Marital status		
	Single	30	50.0
	Married	30	50.0
	Widowed	0	0.0
	Divorce/Separated	0	0.0
5	Year of work experience		
	Below 1 year	9	15.0
	1-5 years	16	26.7
	5-10 years	8	13.3
	10-15 years	12	20.0
	15-20 years	9	15.0
	>20 years	6	10.0
6	Educational Status		
	>S.S.L.C	14	23.3

	S.S.L.C	7	11.7		
	P.U.C	11	18.3		
	Diploma	5	8.3		
	Graduate	23	38.3		
	Post Graduate	0	0.0		
6	Family influence on information about prevention of HIV/AIDS				
	Yes	10	83.3		
	No	50	16.7		
7	Exposure to information	about prevention	of HIV/AIDS		
	Yes	56	93.3		
	No	4	6.7		
8	If yes, different sources	of Information abou	ut HIV/AIDS		
	Mass media	29	48.3		
	Colleagues	19	31.7		
	In-service Education	8	13.3		
	Any other	0	0.0		

3.3. Section II

3.3.1. Knowledge of sailors before and after STP on prevention of HIV/AIDS

Frequency and cumulative frequency percentage of pre- and post-test Knowledge score of study subjects on prevention of HIV/AIDS

The pre-test level of knowledge was assessed before the administration of STP. The knowledge scores obtained by the respondents weretabulated in the master sheet. The data was analyzed in terms of frequency and percentage. The findings are presented in Table 2.

Table 2 Representing Difference between pre-test and post-test mean knowledge scores of subjects on prevention ofHIV/AIDS N=60

Knowledge score	Pre-test			Pos	t-test	
	F	cf	cf%	F	cf	cf%
6-7	4	6.7	6.7			
8-9	5	8.3	15.0			
10-11	13	21.7	36.7			
12-13	12	20.7	56.7			
14-15	13	21.7	78.3			
16-17	11	18.3	96.7	5	8.3	8.3
18-19	2	3.3	100.0	7	11.7	20.0
20-21				16	26.7	46.7
22-23				23	38.3	85.0
24-25				9	15.0	100.0

Maximum possible Score=25

Data in Table 2 indicates the pre-test and post-test knowledge scores of sailors. In the pre-test all subjects scored in range of 6-19, with highest frequency (21.7%) scoring in the range of 10-11 and 14-15. In the post-test all the subjects were in the range of 16-25, with highest frequency (38.3%) for the class 22-23.

3.3.2. Distribution of sailors according to the grading of pre- and post-test knowledge scores

The scores of pre-tests and post-test were arbitrarily graded based on the knowledge level and data are presented in Table 3 and Figure 9.

Table 3 Distribution of pre-test knowledge scores of the subjects on HIV/AIDS N=60

Grading of knowledge	Pre-test		Post-test		
score (%)	Frequency	Percentage	Frequency	Percentage	
Very good (81-100)	-	-	42	70.0	
Good (61-80)	13	21.7	18	30.0	
Average (41-60)	31	51.7	-	-	
Poor (<40)	16	26.7	-	-	

The data presented in Table 3, displays the frequency distribution of subjects according to their pre-test and post-test knowledge scores. In the pre-test 51.7% of the subjects showed average knowledge, 26.7% showed poor knowledge, and 21.7% showed good knowledge. In the post-test 70% of subjects showed very good knowledge and 30% showed good knowledge.

3.3.3. Range, median, mean and standard deviation of pre- and post-test knowledge scores

 Table 4 Range, Mean, Median, and Standard Deviation of Pre- and Post-Test Knowledge Scores N = 60

Knowledge score	Range	Mean	Median	Standard deviation
Pre-test	13-31	12.62	13.00	3.087
Post-test	18-42	21.42	22.00	2.316

The data in Table 4 shows that the post-test knowledge score (18-42) was higher than the pre-test knowledge scores (13-31). The data also depict that the mean post-test knowledge score was (21.42) was apparently higher than the mean pre-test knowledge score (12.62).

3.3.4. Mean, mean difference, standard deviation difference, standard error and 't' value of pre- and post-test knowledge score

In order to determine the effectiveness of STP, the significance of difference between the mean of pre-test and post-test knowledge scores of subjects were computed using a paired 't test.

To test the statistical significance of difference between the mean pre-test and post-test knowledge scores of subjects, the following hypotheses was stated at 0.05 level of significance.

- H₀: There will be no significant difference between the mean pre-test and post-test knowledge scores of the subjects on prevention of HIV/AIDS.
- H₁: There will be significant difference between the mean pre-test and post-test knowledge scores of the subjects on prevention of HIV/AIDS.

Table 5 Mean, Mean difference, Standard deviation difference, Standard 't' value of pre- and post-test knowledge score N = 60

Mean knowledge scores		Mean	Standard	Standard	't' value
Pre-test	Post-test	difference	deviation	Error	
12.62	21.42	8.80	3.677	3.087	18.54*

t59=1.670p<0.05 (* sig, one tailed)

The computed 't' value (t_{59} =18.54, p<0.05) shows that there is significant difference between the mean pre-test and post-test knowledge scores as it is greater than the table value (t_{59} =1.670 at 5% level). Hence the null hypothesis H₀ was rejected and research hypothesis was accepted indicating that the STP on prevention of HIV/AIDS had been the effective in increasing the knowledge of the subjects.

3.3.5. Area-wise mean knowledge score, mean difference, standard deviation of difference with 't' value of pre- and posttest knowledge score

In order to find out the area-wise significant difference between the pre-test and post-test knowledge scores paired 't' test was computed and presented in Table _.

To test the statistical difference between the pre- and post-test knowledge scores on different areas of prevention of HIV/AIDS, the following null hypothesis was formulated:

 H_{02} : The mean post-test knowledge scores of sailors on meaning, causes, and prevalence of HIV/AIDS, mode of transmission, clinical manifestations, and diagnostic tests, management of HIV/AIDS infection, prevention and precaution will not be significantly higher than the mean pre-test knowledge scores at 0.05 level

Table 6 Area-wise paired 't' test showing significant difference between pre-test and post-test knowledge scores N = 60

SI.	Areas	Mean knowledge score		Mean Diff	SED	t value
No.		Pre-test	Post-test			
1	Meaning causes and prevalence	1.67	2.95	1.28	0.904	11.00*
2	Mode of transmission and effects of virus	3.20	5.05	1.85	1.388	10.32*
3	Clinical manifestation	1.47	2.45	0.98	0.930	8.19*
4	Diagnostic tests	1.05	1.67	0.62	0.904	5.29*
5	Management of HIV/AIDS infection	0.97	1.65	0.68	0.73	6.06*
6	Prevention and precaution	4.27	7.65	3.38	1.708	15.34*

't' (59)=1.670 p<0.05 (* sig ,one tailed)

The data presented in Table 6 shows that the computed 't' value in all areassuch as meaning, causes and prevalence ('t'₍₅₉₎₌ 11.00), mode of transmission('t'₍₅₉₎₌ 10.32.), clinical manifestations ('t'₍₅₉₎₌ 8.19), diagnostic tests, management of HIV infection ('t'₍₅₉₎₌ 5.29), prevention and precaution ('t'₍₅₉₎₌ 15.34) were greater thanthe table value ('t'₍₅₉₎₌ 1.670) at 5% level. Hence the null hypothesis was rejected and research hypothesis was accepted. This shows that the STP was effective in increasing knowledge of sailors in all the areas.

3.4. Section III: Attitude of sailors on prevention of HIV/AIDS

3.4.1. Frequency and cumulative frequency distribution of pre and post attitude scores of sailors

Table 7 Frequency and cumulative frequency distribution of pre and post attitude scores of sailorsN = 60

Attitude score	Pre-test			Pos	t-test	
	f	cf	cf%	f	cf	cf%
15-17	6	10.0	10.0			
18-20	7	11.7	21.7			
21-23	12	20.0	41.7	1	1.7	1.7
24-26	17	28.3	70.0	13	21.7	23.3
27-29	8	13.3	83.3	32	53.3	76.7
30-32	8	13.3	96.7	12	20.0	96.7
33-35	2	3.3	100.0	2	3.3	100.0

Data presented in the table indicates pre-test and post-test attitude scores of the subjects. In the pre-test all the subjects scored in the range of 15-35 with highest frequency (28.3) scored in the range of 24-26. In the post-test all the subjects were in the range of 21-35, with the highest frequency (53.3%) for the class 27-29.

3.4.2. Distribution of the sailors according to the grading of pre- and post-test attitude scores

Table 8 Grading of pre- and post-test attitude scores of sailorsN = 60

Sl. No.	Attitude score	Pre-test attitude		Post-test attitude	
		f	%	f	%
1	Very good (81-100%)				
2	Good (61-80%)	38	63.3	34	56.7
3	Average (41-60%)	15	25.0	26	43.3
4	Poor (<40%)	7	11.7		

Data in the Table 8 and Figure 1 shows that pre-test attitude level of 7(11.7% subjects on attitude of sailors regarding prevention of HIV/AIDS was less than 40, which was considered poor and 15(25%) of the subjects ranged between 41-60, that was considered average where has 38(63.3%) subjects attitude level was good.

3.4.3. Range, Median, Mean and standard deviation of pre- and post-test attitude score of sailors

Table 9 Range, Median, Mean and standard deviation of pre- and post-test attitude score of sailorsN = 60

Attitude score	Range	Mean	Median	SD
Pre-test	15-35	24.40	24.50	4.972
Post-test	21-35	27.98	28.00	2.542

The data in Table 9 shows that post-test attitude scores (21-35) were higher than pre-test knowledge scores (15-35). Data also depicts that the mean post-test attitude scores (27.98) were apparently higher than the mean pre-test attitude scores (24.40).

3.4.4. Mean, mean difference, standard deviation difference, standard Error and 't' value of pre- and post-test attitude score

Significant difference between mean pre-test and post-test attitude scores

In order to find out significant difference between mean pre-test and post-test attitude scores, paired "t" test was computed and data is presented in table.

To test the statistical difference following null hypothesis was stated:

H₀: There will be no significant relationship between the level of mean pre-test and post-test attitude score of the subjects on prevention of HIV/AIDS.

Table 10 Significant difference between mean pre-test and post-test attitude scoresN = 60

Mean attitude score		Mean difference	Standard deviation	't' value
Pre-test	Post-test			
22.40	27.98	3.58	5.222	5.32*
	'ť(59)=1.670 p<0.05	(*sig .one tailed)	

Data in Table 10 shows the significant difference between mean pre-test and post-test attitude scores. The calculated 't' value (' $t'_{(59)}$ = 5.32, p<0.05) is greater than the table value (' $t'_{(59)}$ =1.670) at 5% level. Hence the null hypothesis was rejected and research hypothesis was accepted, and inferred that STP was effective in improving attitude of sailors regarding the prevention of HIV/AIDS.

3.5. Section IV: Correlation between knowledge and attitude of the subjects on HIV/AIDS

As the objective of the study was to find out the relationship between the level of knowledge and attitude the following hypothesis was formulated:

- There will be no significant relationship between the level of knowledge and attitude of subjects on H٥٠ • prevention of HIV/AIDS.
- There will be significant relationship between the knowledge and attitude score of subjects on H₃: prevention of HIV/AIDS.

Table 11 Correlation between knowledge and attitude scores N = 60

	Selected Variables	Coefficient of correlation	df	LOS		
Post-test	Knowledge & Attitude	0.401	58	sig* (p>0.05)		
Sig*=Significant Critical value of r at .401						

The findings in the Table 11 show the coefficient of correlation computed to find the relationship between knowledge and attitude. The coefficient of correlation shows that there was positive relationship between increases in knowledge due to STP increase in attitude of subjects. Since the calculated r value was 0.401 (p>0.05) was less than table value. Hence research hypothesis was accepted and the null hypothesis was rejected.

3.6. Section V: Associations

3.6.1. Association between the levels of knowledge with selected demographic variables

In order to find an association between the level of knowledge and of the subjects variables, i.e., age, sex, religion. marital status, years of experience, educational status, family influence, family members, and information about HIV/AIDS, the following hypothesis was stated.

- H₀: There will be no significant association between the level of subjects with selected variables
- H4: There will be significant association between

- Knowledge and selected demographic variables.
- Attitude and selected demographic variables.

In order to determine the significance of association between the pre-test level of knowledge and selected variable, chisquare test and Fisher's Exact Test was computed for the available data.

Table 12 Association between knowledge and selected demographic variablesN=60

< median (13)	Variable	Pre-test knowledge score		χ²/Fisher Exact	Inference				
Age in years20-3015161947NS31-409711>409911>4031.000*NSSexMale28311.000*NSFemale0111Pethigon10100*NSMuslim61311Muslim61311Mushim161311Marriat status1101Single16141071NSMarried12181151 Spars1010151 Spars1010151 Spars6158148SFuctorional setter1011Full Caldinol1011Sub Spars61011Sub Spars161011Sub Spars161011Sub Spars61011Sub Spars161011Sub Spars161011Sub Spars161011Sub Spars161011Sub Spars161011Sub Spars161011Sub Spars161011Sub Spars16101<		< median (13)	\geq median (13)						
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5-15 years1010> 15 years69Educational statureup to S.S.L.C6158.148P.U.C & diploma6107Graduate16710Family member verking in health serviceYes460.214No242610	below 5 years	14	11	0.960	NS				
> 15 years69IEducational stateup to S.S.L.C6158.148SP.U.C & diploma610IIGraduate167IIIFamily member version beat version beat versionYes460.214NSNo2426III	5-15 years	10	10						
Educational statusup to S.S.L.C6158.148SP.U.C & diploma610Graduate167Family member working in health serviceYes460.214NSNo2426Exposure to Information	> 15 years	6	9						
up to S.S.L.C6158.148SP.U.C & diploma610Graduate167Family member working in health serviceYes460.214NSNo2426Exposure to Information	Educational status								
P.U.C & diploma610Graduate167Family member working in health serviceYes46No2426Exposure to Information	up to S.S.L.C	6	15	8.148	S				
Graduate167Image: Constraint of the serviceFamily member working in health serviceYes460.214No2426Image: Constraint of the serviceExposure to Information	P.U.C & diploma	6	10						
Family member working in health serviceYes460.214NSNo24261010Exposure to Information	Graduate	16	7						
Yes 4 6 0.214 NS No 24 26 Image: Comparison of the second seco	Family member	working in healt	th service						
No2426Exposure to Information	Yes	4	6	0.214	NS				
Exposure to Information	No	24	26						
Yes 25 31 1.382 NS	Yes	25	31	1.382	NS				
No 3 1	No	3	1						

NS=not significant, S=significant

* Fisher Exact test

The data in Table 12 shows that there was no significant association between the pre-test knowledge score and selected variables at 0.05 level of significance except educational status (χ^2 =8.148). Hence the null hypothesis was rejected for educational status and accepted for the rest.

3.6.2. Association between attitude and selected demographic variables

In order to determine the significance of association between the pre-test level of attitude and selected variable, Chisquare test and Fisher's Exact Test was computed for the available data.

 Table 13 Association between attitude and selected demographic variablesN=60

Variable	Pre-test attitude score		χ ²	Inference				
	< median (25)	\geq median (25)						
Age in years								
20-30	19	12	3.273	NS				
31-40	6	10						
> 40	5	8						
Sex								
Male	29	30	1.000*	NS				
Female	1	0						
Religion								
Hindu	19	15	4.335	NS				
Muslim	6	13						
Any other	5	2						
Marital status	•	•						
Single	17	13	1.067	NS				
Married	13	17						
Year of experience								
below 5 years	14	11	0.960	NS				
5-15 years	10	10						
> 15 years	6	9						
Educational status								
up to S.S.L.C	10	11	0.214	NS				
P.U.C & diploma	8	8						
Graduate	12	11						
Family member working in health service								
Yes	6	4	0.480	NS				
No	24	26						
Exposure to Information								
Yes	27	29	1.071	NS				
No	3	1						

NS=not significant, S=significant * Fisher Exact test

The data in Table 13 shows that there was no significant association between the pre-test attitude score and any of the selected variables at 0.05 level of significance. Hence the null hypothesis was rejected for research hypothesis was accepted.

4. Conclusion

The nursing management of people with HIV/AIDS involves continuum of care from identification to rehabilitation. The correct knowledge on HIV/AIDS and clarifying on misconception are the basic principles of the continuum. There is a need for health personnel to take active part in education of the community people regarding HIV/AIDS. Health education programme on HIV/AIDS helps sailors to take steps to protect themselves against the infection and develop positive attitude towards HIV/AIDS infected clients.

The following conclusions were drawn based on the findings of the study:

- The data showed that maximum number of (51.7%) of sailors had average knowledge.
- The mean pre-test score was 12.62, whereas maximum possible score was 25.
- The mean percentage score of the sailors were highest (55.56%) in the area of cause, meaning and prevalence.
- Highest post-test mean percentage score (98.3%) was in area of meaning, causes and prevalence.
- The correlation test computed between knowledge and attitude found that there was positive correlation.
- The chi square test and Fisher's Exact test was computed in order to determine the significance of association between knowledge and attitude with selected variables. There was no significant association between the knowledge score and the selected variables at 0.05 level of significance, except for educational status (χ^2 =8.148). There was no significant association between the attitude score and selected variables at 0.05 level of significance.

Compliance with ethical standards

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Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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