

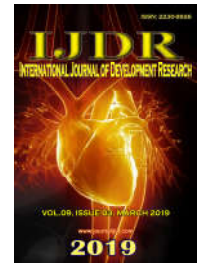


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EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON PREVENTION OF SPREAD OF INFECTION AMONG THE CLIENTS WITH TUBERCULOSIS

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ABSTRACT

Background: A quasi experimental study was used to Evaluate the Effectiveness of Structured teaching Programme on knowledge regarding pulmonary tuberculosis and its management among clients with pulmonary tuberculosis in Gov Hospital, chrompet at Chennai was under taken.

The objectives of the study:

- To assess the knowledge regarding pulmonary tuberculosis among clients with pulmonary tuberculosis.
- To determine the effect of structured teaching programme regarding pulmonary tuberculosis in gain of knowledge.
- To determine the association between gain in knowledge score with selected demographic variables.

Method: Simple random sampling technique was used to select the sample. The sample selected for data collection were those who fulfilled the criteria laid down for the selection of the sample and who were available during the period of data collection. Data was collected by structured interview schedule. The tool consists of two parts. First part consists of demographic data of the sample and second part consists of data related to the knowledge of subjects regarding pulmonary tuberculosis.

Results: The level of knowledge regarding disease and prevention of tuberculosis was assessed, out of 60- clients 8.33% had adequate knowledge and 15% had moderately adequate knowledge in pre-test. The mean value for the knowledge regarding the disease was 3.27 with standard deviation of 2.06 whereas the mean value for prevention was only 5.33 with the standard deviation of 2.6%. In post-test 71.66% had adequate knowledge and 28.33% had moderately adequate knowledge regarding tuberculosis. Regarding prevention 15% were adequate knowledge and 87% were moderately adequate knowledge. The correlation with level of knowledge between pre & post among clients with tuberculosis shows positive correlation between two scores (P=0.05)

Interpretation and Conclusion: The study findings revealed that tuberculosis clients had adequate knowledge on preventive aspects of the disease. The above conclusion were drawn on the basis of the finding of the study, that the mean post-test score was higher than mean pre-test score so it indicates that STP was effective.

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INTRODUCTION

Tuberculosis is an ubiquitous infectious disease known to have existed from ancient times. The disease has been perpetuated and maintained in the human population. It represents a dynamic balance between man and mycobacterium tuberculosis.

It has left its traces on stone age skeletons in the Egyptian Mummies. In India the total number of cases is estimated to be about 15-18 million out of which four million are infectious and about 5 lakh deaths occur every year due to tuberculosis.

Who facts on TB

- Tuberculosis (TB) is one of the top 10 causes of death worldwide.

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- In 2017, 10 million people fell ill and 1.6 million died from the disease (including 0.3 million among people with HIV)
- In 2017, an estimated 1 million children became ill with TB and 230,000 children died of TB (including children with HIV associated TB)
- An estimated 54 million lives were saved through TB diagnosis and treatment between 2000 and 2017.
- Ending the TB epidemic by 2030 is among the health targets of the sustainable development goals.

Assumptions of the Study

- Tuberculosis is a highly infectious disease and there is a chance of spreading the disease to immediate contacts.
- Knowledge of the people have got a strong influence on the adoption of healthy behaviors.
- Patients who have a higher level of knowledge of the disease and who practice preventive methods have less chance of spreading the disease.

Limitations

- Patients who were sputum positive cases and getting treatment.
- Sixty patients who met the inclusion criteria were selected.

Hypotheses

HO: There is no significant difference in the knowledge levels of the clients with pulmonary tuberculosis.

H1: There will be significant difference in prevention of spread of infection among clients with pulmonary.

H2: There will be a significant association between pre-test and post-test score with selected demographic variables.

Setting of the Study: The present study was conducted at Government General Hospital, Tambaram, Chrompet, Chennai, Tamilnadu.

Population: The largest population of the study were clients with pulmonary tuberculosis and getting treatment in Government General Hospital, Tambaram, Chennai, Tamilnadu.

Sample Size: The sample consisted of 60 both male and female in the age group of 20-70 yrs, who are willing to participate in the study.

Sampling Technique: Simple random sampling technique was used to select the sample. The sample selected for data collection were those who fulfilled the criteria laid down for the selection of the sample and who were available during the period of data collection.

Research Tool & Technique: The structured questionnaire was used to collect the relevant data. In this study the questionnaire was formulated after discussion with the experts in the related field and on the basis of review of literature, it was modified in consultation with the experts in the field.

Description of the Tool: The structured questionnaire designed for the study consisted of demographic data and client's knowledge regarding prevention of spread of infection.

Validity: Content validity of the tool was obtained by giving the tool to a total of seven experts. The experts suggested some modifications in the questionnaire. These suggestions were incorporated in the final preparation of the tool.

Reliability: The reliability of the tool was established by using test-retest method. Karl Pearson 'r' was computed for finding out the reliability, the 'r' was found to be 0.76 which indicated that the tool was highly reliable.

Pilot Study: In order to test the reliability, relevance and practicability of the tool, a pilot study was conducted on 10 clients who fulfilled the criteria for sample selection. It was conducted in the manner in which the final study had to be conducted. These subjects were excluded from the main study.

Data Collection: On day one the purpose of study was explained to the sample and an informed consent was taken before starting the study. A pre-test was conducted by administering a structured interview schedule to the selected 60 TB Clients. On the same day the STP was administered to the samples. The post test was conducted by using the same structured interview after 7th day of the administration of STP.

Data Analysis: The data analysis was planned according to the objective of the study. As this was a quasi-experimental study, analysis was done by description and inferential statistics (frequency, percentage, mean and standard deviation) Chi-square value was computed to find the relationship between the knowledge on prevention of spread of infection and selected variables.

SECTION - I : DATA ON DEMOGRAPHIC FACTORS OF CLIENTS Frequency and percentage distribution of demographic variables among Pulmonary TB clients

N=60

Table 1. Distribution of subjects by age and groups

Age	Experimental Group		Control Group	
	No.	%	No.	%
15-29	8	26.7	10	33.3
30-44	10	33.3	9	9.30
45-59	10	33.3	9	9.30
60 & above	2	6.7	2	6.7
Total	30	100	30	100

The data presented in table - 1 shows that majority of the clients 33.3%, 33.3% belongs to 30 - 44yrs, 45 - 59 yrs of the age group and 26.7% of the clients belong to 15 - 29 yrs of age group and only 6.7% of the clients belong to 60 and above yrs of age group in experimental group. In control group majority of clients 33.3% belongs to 15-29 yrs of age group, 30% of the clients 30 - 44 yrs, 45 - 59 yrs of age group and only 6.7% of the clients belongs to 60 and above yrs of age group.

Table 2. Distribution of subjects by sex and group

Sex	Experimental Group		Control Group	
	No.	%	No.	%
Male	21	70	21	70
Female	9	30	9	30
Total	30	100	30	100

The data presented in table - 2 shows that majority of clients 70% were males and 30% of clients were females in both experimental and control groups.

Table 3. Distribution of subjects by Educational Status and groups

Educational status	Experimental Group		Control Group	
	No.	%	No.	%
Primary	6	20	10	33.3
Middle school	12	40	13	43.3
High school	11	36.7	7	23.3
Degree and above	1	3.3		
Total	30	100	30	100

The data presented in Table - 3 shows that majority of the clients 40% were middle schools. 36.7% of the clients were high school, 20% of the clients were primary school and only 3.3% of the clients were degree and above in experimental group. In control group majority of the clients, 43.3% were middle school, 33.3% of the clients were primary school and only 23.3% of the clients were high school.

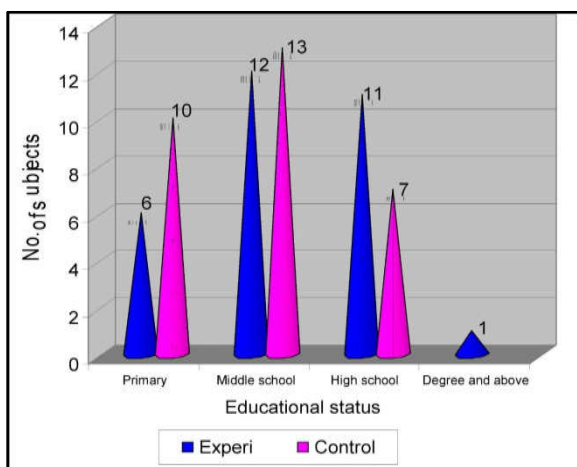
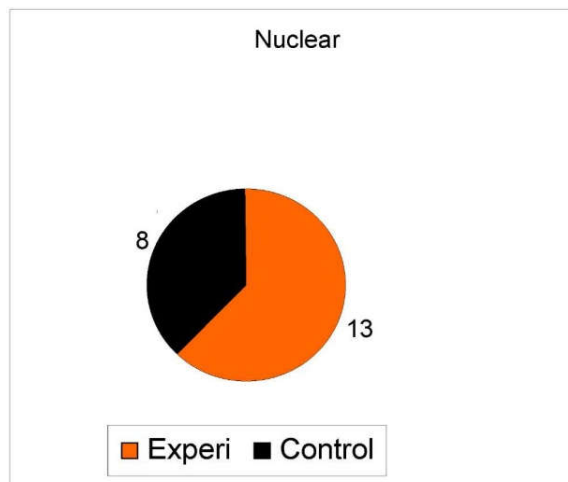
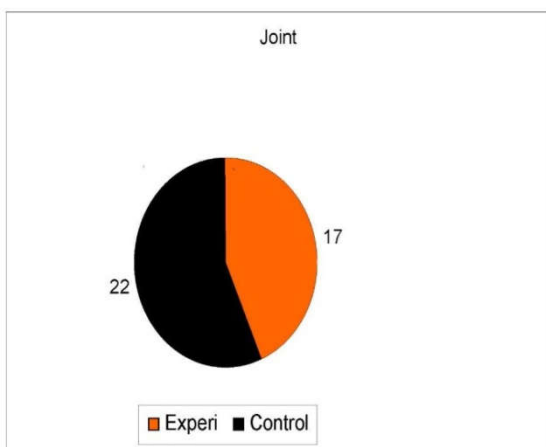


Table 4. Distribution of subjects by type of family and groups

Type of family	Experimental Group		Control Group	
	No.	%	No.	%
Nuclear	13	43.3	8	26.7
Joint	17	56.7	22	73.3
Total	30	100	30	100

The data presented in table - 4 shows that majority of 56.7% of the clients belongs to joint family and only 13% of the clients belongs to nuclear family in experimental group. In control group majority of 73.3% of the clients belongs to joint family and only 26.7% of the clients belongs to nuclear family.

Distribution of subjects by type of family and groups



Analysis of Knowledge Scores

Table 5. Analysis of Knowledge scores in experimental group

Group	Minimum	Maximum	Mean	SD	't' value	'p' value
Pre test	3	19	8.23	3.9	25.96	P<0.001
Post test	21	30	26.53	2.11		

DF = 29

Table 5 shows that in the experimental group pre - test score was minimum 3 and maximum 19, and mean was 8.23 and median was 7 and SD was 3.9 . In experimental group post - test score was minimum 21 and maximum 30 and mean was 26.53 and median was 26.5 and SD was 2.11. The obtained 't' value 26.96 statistically was significant at 0.001 level. So null hypothesis rejected and research hypothesis was accepted. So there was significant gain in knowledge score regarding Pulmonary TB among the experimental group.

Table 6. Analysis of knowledge scores in control group

Group	Minimum	Maximum	Mean	SD	't' value	'p' value
Pre test	8	15	11.53	1.83	3.25	P<0.004
Post test	8	15	11.27	1.74		

DF = 29

Table 6 shows, In the control group Pre - test score minimum was 8 and maximum was 15 and mean was 11.53, and median was 11 and SD was 1.83. respectively. In control group post test score minimum was 8 and maximum was 15 and mean was 11.27, and median was 11 and SD was 1.74. The obtained 't' value is 3.5 statistically was not significant at 0.05 level, therefore null hypothesis was rejected and research hypothesis was accepted. So there was significant gain in knowledge score regarding pulmonary TB among the control group.

Table 7. Comparison of mean score of experimental pre- test and control pre – test

Group	't' test	'p' value.
Experimental and control group	4.20	P<0.001

D.F = 58

Table 7 explains that the 't' value of knowledge score among the experimental and control group in pre - test. The obtained 't' value is 4.20 statistically significant at 0.001 level therefore null hypothesis was rejected and research hypothesis was accepted. So there was no significant in the knowledge scores among the experimental group and control group in pre - test.

Table 8. Comparison of mean score of experimental post-test and control post- test

Group	't' test	'p' value.
Experimental and control group D.F = 58	30.55	P<0.001

Table 8 explained that the obtained 't' value of knowledge scores among experimental and control group in post-test. the obtained 't' value was 30.55 statistically was significant at 0.001 level, therefore null hypothesis was rejected and research hypothesis was accepted. So there was no significant in the knowledge scores among the experimental group and control group in post - test.

Association between selected demographic variables and knowledge scores

Table 9. Distribution of subjects by educational status and knowledgescores

Educational status	Experimental Group		Control Group	
	No.	%	No.	%
Primary	6	20	10	33.3
Middle school	12	40	13	43.3
High school	11	36.7	7	23.3
Degree and above	1	3.3		
Total	30	100	30	100
$X^2 = 2.36, d.f = 1, p = 0.31$				

The data presented in table 9 shows that majority of children 53.3% belongs to rural and 46.7% belongs to urban. In control group majority of children is 70% of children belongs to rural and 30% of children belongs to urban. The obtained X^2 value was 1.76 and 'p' value was 0.18 so statistically was no significant so the null hypothesis was accepted and research hypothesis was rejected which implies that there was no relation between age of the child and anxiety.

DISCUSSION

Tuberculosis is an ancient disease that has left its traces in stone age skeletons and Egyptian mummies. Now TB epidemic is worse than at any other time in human history. It is a terribly debilitating disease killing three million people in 1995, more than at the peak of epidemics in the late 19th century when modern antibiotics were not available. Therefore, the present study was intended to assess the effectiveness of structured teaching programme regarding pulmonary tuberculosis is selected hospitals at Bangalore. In order to achieve the objectives of the study a evaluate approach was adopted. Convenient Sampling technique was used to select the sample. The data was collected from 60 clients (experimental group 30 and control group) selected hospital at Bangalore. The findings of the study were discussed as per the objectives and hypotheses.

Demographic Data: The findings of the study demonstrated that among all the respondents, the majority numbers of respondents were Males, Hindu's and belonged to joint family with is the age group of 15 to 60 yrs.

Knowledge Score: These findings are supported by Asha S. Kumar (2002), that majority(83.33%) had only average knowledge regarding pulmonary tuberculosis. The data also support the findings of ali SS et al. (2003), Guian, Jude PMD, et al. (200), Bhat S, et al. (2001). Liam CK, et al. (1999),

which indicated an inadequate knowledge among the subjects regarding Pulmonary Tuberculosis. Which shows health education is useful to improve knowledge of pulmonary Tuberculosis clients regarding pulmonary tuberculosis and managements.

Analysis of knowledge scores in experimental group: In the experimental group pre - test score was minimum 3 and maximum 19, and mean was 8.23 and median was 7 and SD was 3.9. In experimental group post -test score was minimum 21 and maximum 30 and mean was 26.53 and median was 26.5 and SD was 2.11. The obtained 't' value is 25.96 statistically was significant at 0.05 level, so null hypothesis was rejected and research hypothesis was accepted. So there was significant gain in knowledge score regarding pulmonary TB among the experimental group and control group in pre - test.

Analysis of knowledge score in control group: In control group pre - test minimum score was 8 and maximum was 15 and mean was 11.53 and median was 11 and SD was 1.83. In control group post test minimum score was 8 and maximum was 15, and mean was 11.27, and median was 11 and SD was 1.74. The obtained 't' value is 3.5 statistically was significant at 0.05 level, so null hypothesis was rejected and research hypothesis was accepted. So there was significant gain in knowledge score regarding pulmonary TB among the control group.

Comparison of mean score of experimental pre-test and control pre-test: The obtained 't' value is 4.20 statistically significant at 0.05 level, therefore null hypothesis was rejected and research hypothesis was accepted. So there is significant gain in knowledge score regarding pulmonary TB among the control group in pre - test. The obtained 't' value is 30.55 statistically significant at 0.05 level, therefore null hypothesis was rejected and research hypothesis was accepted. So there is significant gain in knowledge score experimental group and control group in post - test.

Comparison of mean score of experimental pre-test and control post-test: The obtained 't' value is 3.897 statistically significant at 0.05 level, therefore null hypothesis was rejected and research hypothesis was accepted. So there is significant gain in knowledge score experimental group pre-test and control group in post - test.

Comparison of mean score of experimental post-test and control pre-test: The obtained 't' value is 29.37 statistically significant at 0.05 level, therefore null hypothesis was rejected and research hypothesis was accepted. So there is significant gain in knowledge score experimental group post-test and control group in pre - test.

Conclusion

The study findings revealed that tuberculosis clients had adequate knowledge on preventive aspects of the disease. The above conclusion were drawn on the basis of the finding of the study, that the mean post-test score was higher than mean pre-test score so it indicates that STP was effective.

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