Scholars Journal of Applied Medical Sciences
Abbreviated Key Title: Sch J App Med Sci
ISSN 2347-954X (Print) | ISSN 2320-6691 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Nursing

Impact of Health Education Package on Knowledge and Attitude Regarding Transmission of Tuberculosis and Factors Contributing to the Treatment Compliance among Tuberculosis Patients in Urban Community of Sikar City (Rajasthan)

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DOI: 10.36347/sjams.2022.v10i02.005 | **Received:** 29.12.2021 | **Accepted:** 06.02.2022 | **Published:** 10.02.2022

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Abstract **Original Research Article**

Wellbeing is a basic human right and an overall social objective. As understanding of wellbeing and infection alongside conveyance of value health awareness is premise though wellbeing couldn't care less organizations. Tuberculosis (TB) remains a major global health problem. The latest estimates showed that there were almost 9 million new cases in 2011 and 1.4 million TB deaths. This is despite the availability of treatment that will cure most cases of TB. India and China combined have almost 40% of the world's TB cases. 0.3 Million death in India in 2011, 3.1 million prevalence, 2.2 million incidences in India 2011. In India, tuberculosis is more prevalent in adults than in children. It affects 80% of adults at the age group (15-54 years).In India poor persons suffers with tuberculosis. The majority of its victims are migrant laborers, slum area, backward community areas and tribal area. Low living conditions, undernourished small housing and overcrowding are the main reasons for the spread of the disease. Hence Since the researcher sought to Assess The Impact of health education package on Knowledge and Attitude regarding transmission of Tuberculosis and factors contributing to the treatment compliance. A pre-experimental design was adopted for present study. A pre-experimental design was prepared to develop a plan or strategy that would guide the collation and analysis of data. Final study was conducted from 25/10/2020 to 15/01/2021, to assess the knowledge regarding transmission of Tuberculosis and factors contributing to the treatment. Sample were selected from RNTCP department of hospital, Pretest was conducted on 600 sample from 25/10/2020 to 15/11/2020 with a detailed scheduled plan by using a structured knowledge questionnaire. Final results shows that pretest mean percentage knowledge score found to be 44.71% with mean and SD of 21.91 ± 2.27. In the post test mean percentage knowledge score was 80.06% with mean and SD of 39.23±2.23. The mean percentage difference was 35.35% with mean and SD of 17.32±0.04.Statistical paired't' test value was 92.84 at 0.05 level shows a marked improvement in the information level regarding transmission of Tuberculosis and factors contributing to the treatment compliance.

Keywords: Tuberculosis, Health Education Package, Treatment Compliance.

NEED FOR THE STUDY

Tuberculosis (TB) is the single largest infectious cause of death among adults in the world, accounting for nearly two million deaths per year. The economic impact of TB comes from the size of the problem and from the fact that in developing countries the majority of those affected are in the economically active segment of the population. TB has historically been associated with high levels of poverty, as TB has traditionally been a disease of the poor. But how the poverty may directly cause TB still remains unclear, as poverty is multifaceted. India ranks number 14 among the words 22 high burden tuberculosis (TB) counters. Nearly 38% of all age's people are infected with the TB disease and approximately 30% of TB cases in the world along with the HIV epidemics diseases. While infection 70% are more among males age group above 40 years. Two million people in India develop the disease annually.

REVIEW OF LITERATURE

Berisha M, Zheki V *et al*., (2009), Study was conducted on level of knowledge regarding tuberculosis and stigma toward the illness. The Special questionnaire

was composed and patients were interviewed. The result showed that level of knowledge regarding tuberculosis was satisfactory. The meaning of directly observed therapy was known to only 51% of patients. Stigma was obviously present in patients. They concluded health education must be designed depending on target population for achievement of success in fighting and preventing tuberculosis.

Shetty N, Shemko *et al*., (2006), study was on epidemiological evaluation of risk factors for tuberculosis at st John's Medical College Hospital, Rajasthan, India. Objective was to search for aftereffect of conceivable socio-demographic danger condition for TB. The conceivable circumstances were low instruction level (OR 0.30; 95%ci 0.11-0.82), who are not having a different kitchen (OR 3.26; 95%ci 1.25-8.46) and incessant ailment like essentially diabetes (OR 2.44; 95%ci 1.17-5.09). There were no noteworthy multivariate examination with respect to more pay gathering, cooking with biomass fills, history of smoking and liquor consumption

Vineet K. Chadha, Prahlad Kumar *et al*., (2012), Prevalence of Pulmonary Tuberculosis among Adults in a Rural Sub-District of South India. The purpose was to point out wide spread of TB in a rural area of south India. They selected samples by simple random sampling technique. Two sputum samples were collected by each eligible person. They labeled person suffering from PTB with one or both sputum get positive result. Registered persons also screened by x-ray chest result shows out of 71,874 clients of prevalence of smear culture and bacteriologic ally positive PTB in persons 83 was present. They concluded study further strengthening of TB control programme is necessary.

MATERIALS AND METHODS

RESEARCH APPROACH

The main aim of this study is to The Impact of health education package on Knowledge and Attitude regarding transmission of Tuberculosis and factors contributing to the treatment compliance at Sikar City (Rajasthan). The Samples were selected by Non probability convenient sampling and a pre-experimental, one group pre-test, post-test design was used without a control group on 600 Tuberculosis Patients in urban community of Sikar city Rajasthan.

DATA ANALYSIS & RESULTS

The collected data is tabulated, analyzed, organized and presented under the following headings:

Section -A: Description of sample characteristics in frequency and percentage allocation of Demographic variables.

Section - B: Comparative mean of pre-test & post-test knowledge scores of tuberculosis patients regarding transmission of Tuberculosis and factors contributing to the treatment compliance.

Section C: Comparative mean of pre-test & post-test knowledge scores on various aspects about tuberculosis and factors contributing to the treatment compliance of tuberculosis patients.

Section D: Categorized level of Knowledge regarding transmission of Tuberculosis and factors contributing to the treatment compliance among Tuberculosis patients.

Section - E: Comparative mean of pre-test & post-test attitude scores of tuberculosis patients regarding transmission of Tuberculosis and factors contributing to the treatment compliance.

Section -F: Categorized level of Attitude score regarding transmission of Tuberculosis and factors contributing to the treatment compliance among Tuberculosis patients

Section - G: Evaluate the Impact of health education package on Knowledge and Attitude regarding transmission of Tuberculosis and factors contributing to the treatment compliance among Tuberculosis Patients.

Section H: Assess the relationship between pre-test and post-test Knowledge and Attitude score regarding transmission of Tuberculosis and factors contributing to the treatment compliance.

Section I: To find out the Relationship of Knowledge and Attitude regarding transmission of Tuberculosis and factors contributing to the treatment compliance with demographic variables of the subjects.

Section - J: Relationship of demographic variables with Pre test & Post test attitude score regarding transmission of Tuberculosis and factors contributing to the treatment compliance**.**

MAJOR FINDINGS AND DISCUSSION, CONCLUSION

MAJOR FINDINGS AND DISCUSSION

1. DISCUSSION RELATED TO DEMOGRAPHIC CHARACTERISTIC OF RESPONDENTS

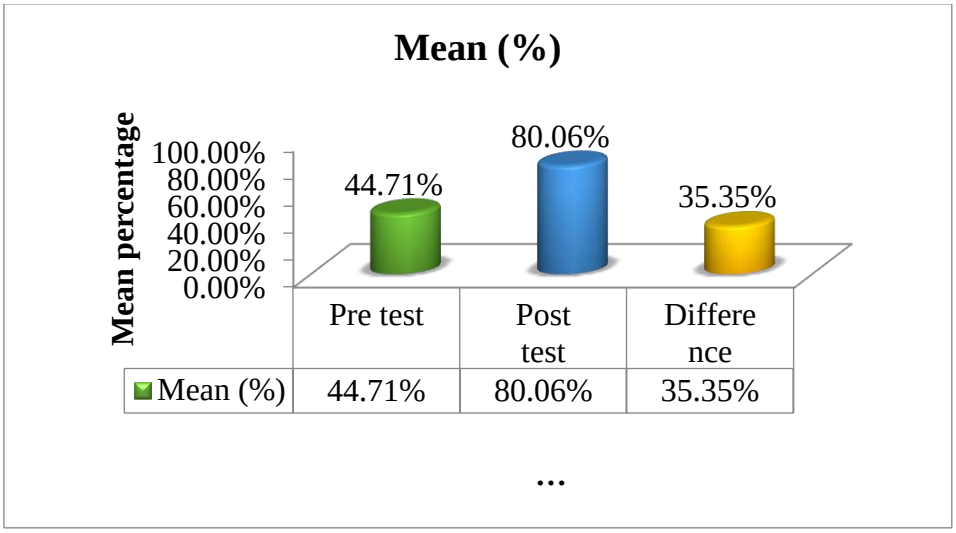
- Among the selected Tuberculosis patients highest percentage 218(36.3%) of patients were belonged to the age group 30-39 years, 214 (35.7%) were falling under the age group of 40-49 years,104(17.3%) were above 50 years and 64(10.7%) were from 20-29 years of age.
- Majority of the patients 336(56%) were males and 264 (44%) were females.
- Majority of the patients education, 212(35.33%) were had high school education, 134(22.3%) were had primary education, 98(16.3%) were had middle school education, 96(16%) were graduates, 60(10%) of the samples had P.U.C education.
- In relation to the occupation, 100(16.6%) were unemployed, 108(18%) were had other occupation, 24(4%) were agriculture, 100(16.6%) were private employees 100(16.6%) were business or self employed, 132(22%) were house wives and 36(6%) were Govt. employees.

- Most of the Tuberculosis patients, 434(72.33%) were married, 130(21.66%) were single, 20(3.33%) were divorce/separated and 16(2.7%) were widow/widower.
- In relation to the education of spouse, 130(21.66%) had high school education, 96(16%) had P.U.C, 104(17.33%) had middle school, 100(16.6%) had primary education, 70(11.6%) had graduate and 04(0.66%) were post graduate education.
- In relation to the distribution of subjects by family income (Rs.) per month, 280(46.7%) were having monthly income of Rs.3001 – 5000 / month, 180(30%) were having income of Rs.7001 and above per month, 122(20.3%) were having Rs.5001-7000./month and 18(3%) were having Rs. 1000 -3000/month.

1. Pre-test & Post-test knowledge scores of study subject regarding transmission of Tuberculosis and factors contributing to the treatment

Aspects	Max score	knowledge scores of tuberculosis patients				Paired' 't' Test
		Range	Mean	Mean (%)	SD	
Pre test	49	12-28	21.91	44.71	2.27	92.84* df=599, S*
Post test	49	32-44	39.23	80.06	2.23	
Diffe Rence	49	13-21	17.32	35.35	0.04	

Table represents that pre test mean percentage knowledge score found to be 44.71% with mean and SD of 21.91 ± 2.27. In the post test mean percentage knowledge score was 80.06% with mean and SD of 39.23±2.23. The mean percentage difference was 35.35% with mean and SD of 17.32±0.04. Statistical paired't' test value was 92.84 at 0.05 level shows a marked improvement in the information level regarding transmission of Tuberculosis and factors contributing to the treatment compliance. There for the null hypothesis is rejected and research hypothesis is accepted.



Cylindrical diagram showing Pre test and Post test mean knowledge scores of of the study subject patients on Tuberculosis

Graph represents that the pre test mean percentage knowledge score found to be 44.71% with mean and SD of 21.91 ± 2.27. In the post test mean percentage knowledge score was 80.06% with mean and SD of 39.23±2.23. The mean percentage difference was 35.35% with mean and SD of 17.32±0.04. Hence the stated research Hypothesis clearly shows that the post test mean knowledge score will be significantly higher than the pre test mean knowledge scoreregarding transmission of Tuberculosis and factors contributing to the treatment complianceas measured at P<0.05 level is accepted because the mean post test score was higher than pre test score. There for the null hypothesis is rejected and research hypothesis is accepted.

2. Categorized level of Knowledge regarding transmission of Tuberculosis and factors contributing to the treatment compliance among Tuberculosis patients N=600

Knowledge Level	Category	Tuberculosis patients			
		Pre test		Post test	
		Number	Percent	Number	Percent
Poor	< 50 % Score	532	88.6 %	00	00%
Average	51-75 % Score	68	11.33%	38	12.66%
Good	> 75 % Score	00	00%	262	87.83%

The table shows that out of 600 patients in pretest, 532 (88.66%) had Poor knowledge, only 68(11.33%) had Average knowledge and none of the Tuberculosis patients were having Good knowledge in pretest. Post test knowledge score shows that 262(87.33%) Tuberculosis patients had Good knowledge on treatment and 38 (12.66%) samples had Average knowledge and None of them having Poor knowledge. This may clearly indicate the Impact of health education package on Knowledge level regarding transmission of Tuberculosis and factors contributing to the treatment compliance among Tuberculosis Patients.

3. Discussion Related To Pretest and Post-Test Information Scores of Tuberculosis Patients on Various Aspects

About Treatment with Enhancement in Knowledge

- The maximum modified gain mean of enhancement (41% &39.81%) was in the meaning and control and prevention aspect and minimum mean 95% at enhancement was in the aspect of signs and symptoms factors But the overall enhancement of knowledge was 35.35% and + value was 92.94%.
- The actual gain in Knowledge scores in all the aspects and indicated the effectiveness of Health education programme. This finding is supported from other studies and similar findings were observed by others.
- The study was directed by This lakasvathi to assess The study was led in 1999 to assess the viability of wellbeing instruction among pneumonic tuberculosis patients .The group was then instructed about vital parts of tuberculosis by method for handouts, movies shows, show, pretends and bunch's talk following 2 years, the respondents were surveyed with the post test. The discovering demonstrated that there was a general increment of learning on different parts of tuberculosis going from 18% to 58%.[33]
- Another study was conducted by Sing MM in Delhi among 208 TB pages on Knowledge and attitude towards Tuberculosis. The result revealed that 174(83.6%) heart of TB mainly from height only 2-3% Know That TB was caused by a germ and factors favoring TB over crowing (56%) pour diet(45.4%) only 12.6% Knew about preventive role of BCG. This study was conclude after extensive health education direction towards aspects of attitudinal change among TB patients.
- But after introduction of HEP Health education programme knowledge aspect was significantly higher than pretest. The above mentioned studies related to the findings of this aspect reveals that aspect wise knowledge of tuberculoses patients significantly increased in overall aspects of tuberculosis treatment.

4. Discussion Related To Impact of Health Education Package On Knowledge And Attitude On Tuberculosis Treatments Between Tuberculoses Patients

- Health Education package as a useful material for learning for tuberculosis patients regarding TB disease, treatment, prevention of self-care, etc. This findings has its support in prior studies conducted by others researchers which reported a significant gain in knowledge of Tuberculosis patients after the administration of the HEP. All these findings revealed the usefulness of HEP as a guide the patients to increase their knowledge.
- The discoveries of the study uncovered that the larger part of tuberculosis patients had acknowledged the Health Education Package programme as far as substance ampleness and usefulness. The discoveries are predictable with the findings of different studies.
- Ghana was led study to review the viability of Step on information and demeanor organized showing program on learning in regards to aspiratory tuberculosis led in Rajasthan and its management among clients with pulmonary tuberculosis was conducted in, Rajasthan. Using convenient sampling technique 60 samples were selected. Results showed that the mean knowledge score was 44.71 with SD of 2.27 in experimental group (pretest) and mean knowledge score was 80.06 with the SD of 2.23 in experimental group (posttest). Paired‘t’ valve was 92.84which was huge at 0.05 level. Study inferred that there was noteworthy addition in learning after wellbeing instruction.
- An alternate study was led by Asha S Kumar to assess the viability of the arranged showing program on self consideration of patients with pulmonary tuberculosis (PTB). 88.6% had poor knowledge and 00% had good knowledge. Total mean percentage of the knowledge score was 44.71% in pretest with of 21.91 ± 2.27 as mean and S.D. The total mean percentage of the knowledge

score was 80.06% in post test with mean and 39.23±2.23 showing there was a high noteworthy distinction in the middle of pre-and post test information scores.

- The discoveries of this study support the findings of earlier researchers. Other researchers also a various groups observed similar findings. A study conducted on Tuberculosis patients proved that educational programme was useful in term of increasing their knowledge to understand the disease condition, prevention, management, treatment and self-care.
- The above mentioned studies and discoveries of the present study plainly demonstrates that the HEP was powerful in enhancing the learning and demeanor of the tuberculosis patients

CONCLUSIONS

Tuberculosis stays among the world's incredible general wellbeing difficulties. The 131 year since the recognizing confirmation of M. tuberculosis by Robert Koch have seen remarkable advances in our comprehension of an expansive number of the key events in illness pathogenesis, however tuberculosis is no place close annihilation or even control in numerous regions of the globe. It is justified regardless of reviewing the expressions of Rene and Jean Dubos in their keen book, The White Plague "Tuberculosis, it has been said, is an infection of deficient development. Dubious as this announcement shows up right away, it underlines the way that the opposition to tuberculosis development can't be appropriately comprehended if seen in its therapeutic point of view, for the authentic and social foundations pose a potential threat in the picture. However an alluring objective, the complete disposal of tubercle bacilli is rendered unthinkable by financial and social components".

This study proved that Tuberculosis patients had poor knowledge (inadequate level) regarding Tuberculosis treatment and self-care before administration of HEP and their knowledge improved to a remarkable extent after HEP. The findings of this study show that the HEP were effective in terms of gain in knowledge score which will help to know the importance of prevention of spread of disease etc.

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