

A STUDY TO ASSESS THE KNOWLEDGE REGARDING THE PREVENTIVE OF PULMONARY TUBERCULOSIS AMONG THE CARE GIVER OF PULMONARY TUBERCULOSIS PATIENTS IN SELECTED TUBERCULOSIS & CHEST CLINIC, AGARTALA, TRIPURA

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Abstract

The study is conducted to assess the knowledge of prevention of pulmonary tuberculosis among the care giver of pulmonary tuberculosis patients in selected tuberculosis & chest clinic, Agartala, Tripura. Objectives of the study include to assess the level of knowledge regarding the prevention of pulmonary tuberculosis among the care giver of pulmonary tuberculosis patients, to find out the association between the knowledge of care giver of pulmonary tuberculosis patients with their selected demographic variables. The research design selected was one descriptive survey research design. The study was conducted on 50 care givers of pulmonary tuberculosis patients in selected tuberculosis & chest clinic, Agartala, Tripura. Non probability convenient sampling technique was used to select the samples. The tool included demographic data, structured knowledge questionnaire on knowledge regarding prevention pulmonary tuberculosis. The data was analyzed by using descriptive and inferential statistics. Findings revealed that 44% of care giver of pulmonary tuberculosis patients had good level of knowledge, 26% of care giver of pulmonary tuberculosis patients had average level of knowledge, 10% of care giver of pulmonary tuberculosis patients had poor level of knowledge, 6% of care giver of pulmonary tuberculosis patients had very poor level of knowledge. The statistical findings revealed that the mean, median and the standard deviation of the knowledge questionnaires were 12.76, 12.45 and 3.6. Chi-square analysis showed that there was significant association between levels of knowledge score and selected demographic variables. Hence the care giver of pulmonary tuberculosis patients were having less knowledge on prevention of pulmonary tuberculosis.

Keywords: Assess, knowledge, pulmonary tuberculosis patients, prevention of pulmonary tuberculosis, care giver, tuberculosis & chest clinic.

INTRODUCTION

“Infectious diseases will last as long as humanity itself”.¹ Infectious disease is a major public health issue for both developed and developing countries like Africa and India, both suffer from significant population losses each year.² Tuberculosis is a curable and preventable disease. World Health Organization reported that tuberculosis is one of the most important public health problems in all the regions of the world. It has been estimated that 3 million people die from tuberculosis in the world each year. Deaths due to pulmonary tuberculosis occur largely in the older age groups.² Pulmonary tuberculosis is a contagious bacterial that involves the lungs caused by Mycobacterium Tuberculosis. India accounts of nearly one-third of global burden of tuberculosis, every year approximately 1.8 million persons develops tuberculosis, of which 0.8 million are new smear positive, about 4.17 lakhs of people dies of tuberculosis every year, one person die every minute and

above 1000 people die every day.² In India highest incidence of tuberculosis is reported in Uttar Pradesh (22,369/1,00,000), Karnataka (11,005/1,00,000) and lowest in Jammu Kashmir (172/1,00,000)³. Factors favouring the development of tuberculosis are poor environmental sanitation, poor nutrition, prolonged physical and mental strain, anxiety, poor quality of life, poor housing, overcrowding, population explosion, lack of education and lack of awareness about the rapid spread of diseases.⁴ Many of the population are unaware about the spread of diseases, signs and symptoms of tuberculosis such as unexplained weight loss, fever, chills, night sweats, weakness or fatigue, loss of appetite etc. Most specific symptoms may include cough that last for three weeks or longer, pain in the chest, cough with blood or sputum. Every awareness about tuberculosis symptoms helps for early diagnosis and early treatment.⁵ Controlling tuberculosis in India is a tremendous challenge. The tuberculosis burden in India is still staggering.³

OBJECTIVES OF THE STUDY

- To assess the level of knowledge regarding the prevention of pulmonary tuberculosis among the care giver of pulmonary tuberculosis patients.
- To find out the association between the knowledge of care giver of pulmonary tuberculosis patients with their selected demographic variables.

OPERATIONAL DEFINITION

ASSESS

It refers to the statistical measurement of knowledge of the care giver of pulmonary tuberculosis patients on prevention of pulmonary tuberculosis as elicited through structured knowledge questionnaire.

KNOWLEDGE

It refers to the correct response of the care giver of pulmonary tuberculosis patients to the items in the structured knowledge questionnaire on prevention of pulmonary tuberculosis.

PULMONARY TUBERCULOSIS PATIENTS

The person who is clinically diagnosed from pulmonary tuberculosis and attending tuberculosis & chest clinic for their treatment.

PREVENTION OF PULMONARY TUBERCULOSIS

It refers the steps or measures taken to protect the spread of pulmonary tuberculosis by their care givers.

CARE GIVER

Person that is family members, relatives who are caring of pulmonary tuberculosis patients and also accompanied them in tuberculosis & chest clinic.

TUBERCULOSIS AND CHEST CLINIC

It is a private or government clinic in Agartala, Tripura, when the pulmonary tuberculosis patients are visiting for their treatment.

HYPOTHESIS

H₁ :- There is significant association between the knowledge of care giver of pulmonary tuberculosis patients with their selected demographic variables.

DELIMITATION

The study is delimited-

- To the care giver of pulmonary tuberculosis patients.

- In selected tuberculosis & chest clinic, Agartala, Tripura.

RESEARCH METHODOLOGY

RESEARCH APPROACH

A descriptive research approach was adopted for this study.

RESEARCH DESIGN

Descriptive survey research design was used for the study.

SETTING OF THE STUDY

The present study was conducted in the Tuberculosis & Chest Clinic, Agartala, Tripura, India.

POPULATION

The population of this study includes the care giver of pulmonary tuberculosis patients.

SAMPLE

In this study, the care giver of pulmonary tuberculosis patients of Tuberculosis & Chest Clinic, Agartala, Tripura, India, who had fulfilled the inclusion criteria were taken as sample for the study.

SAMPLE SIZ

For the current study 50 nos. of samples were chosen.

SAMPLING TECHNIQUE

In this study non probability convenient sampling technique was used to select the samples.

SAMPLING CRITERIA

a) Inclusion criteria

The care giver of pulmonary tuberculosis patients and who were---

- Present during the period of data collection.
- Willing to participate in the study.

b) Exclusion criteria

The care giver of pulmonary tuberculosis patients and who were---

- Not able to speak and understand Bengali.

IDENTIFICATION VARIABLE

a) RESEARCH VARIABLE Knowledge regarding the prevention of pulmonary tuberculosis among the care giver of pulmonary tuberculosis patients

b) EXTRANEIOUS VARIABLE Age, sex, area of residence, educational status, total income of the family, type of family, family history of pulmonary tuberculosis, habits.

DEVELOPMENT AND DESCRIPTION OF THE TOOL

The tool was developed based on-

- Literature review
- Discussion with the experts

Preparation of blue print

A blue print of the tool was prepared by the researchers, which includes sections, number of questions, number of statements and weightage in percentage for each section.

Components of the tool

The tool consists of two sections-

SECTION A

Structured questionnaire to assess the demographic data of the care giver of pulmonary tuberculosis patients. It consists of demographic characteristics of the care giver of pulmonary tuberculosis patients. This includes age, sex, area of residence, educational status, occupation, total income of the family, type of family and habits.

SECTION B

It consists of structured knowledge questionnaire to assess the knowledge of the care giver of pulmonary tuberculosis patients regarding prevention of pulmonary tuberculosis. It consists of 26 multiple choice questions.

The questionnaire is subdivided into the following areas-

| | |
|-------------------------------------|-----------|
| 1. Disease condition and its causes | 6 |
| 2. Clinical manifestations | 4 |
| 3. Diagnosis and treatment | 8 |
| 4. Prevention | 8 |
| Total | 26 |

Each question had four options from which the samples have to choose one option. Every correct answer is scored as one and incorrect, unanswered question is scored as zero.

DATA COLLECTION PROCEDURE

Prior to collection of data, permission was obtained from The State Tuberculosis Officer, Agartala, Tripura and The Medical Superintendent of Tripura Medical Hospital, Hapania, Agartala, Tripura. After obtaining the informed consent from the samples, the researchers collected the data.

PLAN FOR DATA ANALYSIS

The data obtained were analyzed in terms of objectives of the study using descriptive and inferential statistics. The plan for data analysis was as follows-

- Organization of data in master sheet/computer
- Background information analyzed in terms of frequency and percentage
- Knowledge scores analyzed in terms of frequency, percentage, mean, median and standard deviation.
- Chi square to measure the association between the knowledge of care giver of pulmonary tuberculosis patients with their selected demographic variables.

ORGANIZATION AND PRESENTATION OF THE DATA

The data was organized and presented under the following sections-

SECTION I

Demographic characteristics of the care giver of pulmonary tuberculosis patients.

SECTION II

Knowledge on prevention of pulmonary tuberculosis.

SECTION III

Association between the knowledge of the care giver of pulmonary tuberculosis patients with their selected demographic variables.

RESULTS

SECTION I

Demographic characteristics of the care giver of pulmonary tuberculosis patients.

TABLE:1
FREQUENCY & PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC CHARACTERISTICS OF THE CARE GIVER OF PULMONARY TUBERCULOSIS PATIENTS

| n = 50 | | | |
|--------|--|---------------|----------------|
| SL NO | CHARACTERISTICS | FREQUENCY (f) | PERCENTAGE (%) |
| 1 | Age (in years) | | |
| | a. 13 – 30 | 11 | 22 |
| | b. 31 – 45 | 21 | 42 |
| | c. 46 – 60 | 16 | 32 |
| | d. 61 and above | 02 | 04 |
| 2 | Sex | | |
| | a. Male | 29 | 58 |
| | b. Female | 21 | 42 |
| 3 | Area of residence | | |
| | a. Rural | 23 | 46 |
| | b. Urban | 27 | 54 |
| 4 | Educational status | | |
| | a. Illiterate | 06 | 12 |
| | b. Upto middle school level | 22 | 44 |
| | c. Higher secondary level | 18 | 36 |
| | d. Under graduate degree and above | 04 | 08 |
| 5 | Occupation | | |
| | a. Unemployed | 14 | 28 |
| | b. Sedentary worker | 11 | 22 |
| | c. Moderate worker | 24 | 48 |
| | d. Heavy worker | 01 | 02 |
| 6 | Total income of family (Rs. Per month) | | |
| | a. 500 – 2000 | 04 | 08 |
| | b. 2001 – 3000 | 13 | 26 |
| | c. 3001 – 5000 | 15 | 30 |
| | d. Above 5000 | 18 | 36 |
| 7 | Type of family | | |
| | a. Nuclear | 28 | 56 |
| | b. Joint | 22 | 44 |
| 8 | Family history of pulmonary tuberculosis | | |
| | a. No | 24 | 48 |
| | b. Family members | 10 | 20 |
| | c. Neighbours | 11 | 22 |
| | d. Others, specify | 05 | 10 |
| 9 | Habits | | |
| | a. Smoking | 20 | 40 |
| | b. Using alcohol | 06 | 12 |
| | c. Tobacco chewing and pans | 07 | 14 |
| | d. None | 17 | 34 |

SECTION II

Knowledge on prevention of pulmonary tuberculosis.

TABLE: 2
FREQUENCY AND PERCENTAGE DISTRIBUTION OF KNOWLEDGE SCORES ON PREVENTION OF PULMONARY TUBERCULOSIS

n = 50

| CLASS INTERVAL | FREQUENCY | PERCENTAGE (%) |
|----------------|-----------|----------------|
| 0 – 2 | 00 | 0 |
| 3 – 5 | 00 | 0 |
| 6 – 8 | 05 | 10 |
| 9 – 11 | 13 | 26 |
| 12 – 14 | 22 | 44 |
| 15 – 17 | 04 | 8 |
| 18 – 20 | 03 | 6 |
| 21 – 23 | 03 | 6 |
| 24 – 25 | 00 | 0 |

TABLE: 3
COMPARISON OF RANGE, MEAN, MEDIUM, STANDARD DEVIATION OF KNOWLEDGE SCORES

n = 50

| SCORES | RANGE | MEAN | MEDIAN | STANDARD DEVIATION |
|-----------------|--------|-------|--------|--------------------|
| Knowledge score | (6-23) | 12.76 | 12.45 | 3.6 |

SECTION III

Association between the knowledge of the care giver of pulmonary tuberculosis patients with their selected demographic variables.

TABLE: 4
CHI SQUARE ON PRETEST KNOWLDEGE SCORES WITH SELECTED DEMOGRAPHIC VARIABLES

| SL NO | CHARACTERISTICS | BELOW MEDIAN | ABOVE MEDIAN | Df | X ² | TABLE VALUE | SIGNIFICANT AT 0.05 LEVEL |
|-------|--------------------|--------------|--------------|----|----------------|-------------|---------------------------|
| 1 | Age (in years) | | | 3 | 3.440 | 7.815 | Not significant |
| | a. 13 – 30 | 06 | 05 | | | | |
| | b. 31 – 45 | 08 | 13 | | | | |
| | c. 46 – 60 | 11 | 04 | | | | |
| | d. 61 and above | 02 | 01 | | | | |
| 2 | Sex | | | 1 | 0.192 | 3.841 | Not significant |
| | a. Male | 17 | 12 | | | | |
| | b. Female | 11 | 10 | | | | |
| 3 | Area of residence | | | 1 | 0.409 | 3.841 | Not significant |
| | a. Rural | 14 | 09 | | | | |
| | b. Urban | 14 | 13 | | | | |
| 4 | Educational status | | | 3 | 6.686 | 7.815 | Not significant |

| | | | | | | | |
|---|--|----|----|---|--------|-------|-----------------|
| | a. Illiterate | 04 | 02 | | | | |
| | b. Upto middle school level | 15 | 07 | | | | |
| | c. Higher secondary level | 10 | 08 | | | | |
| | d. Under graduate degree and above | 00 | 04 | | | | |
| 5 | Occupation | | | 3 | 2.505 | 7.815 | Not significant |
| | a. Unemployed | 08 | 06 | | | | |
| | b. Sedentary worker | 08 | 03 | | | | |
| | c. Moderate worker | 13 | 11 | | | | |
| | d. Heavy worker | 00 | 01 | | | | |
| 6 | Total income of family (Rs. Per month) | | | 3 | 2.815 | 7.815 | Not significant |
| | a. 500 – 2000 | 03 | 01 | | | | |
| | b. 2001 – 3000 | 09 | 04 | | | | |
| | c. 3001 – 5000 | 07 | 08 | | | | |
| | d. Above 5000 | 08 | 10 | | | | |
| 7 | Type of family | | | 1 | 0.512 | 3.841 | Not significant |
| | a. Nuclear | 15 | 13 | | | | |
| | b. Joint | 14 | 08 | | | | |
| 8 | Family history of pulmonary tuberculosis | | | 3 | 14.414 | 7.815 | * Significant |
| | a. No | 07 | 17 | | | | |
| | b. Family members | 07 | 03 | | | | |
| | c. Neighbours | 10 | 01 | | | | |
| | d. Others, specify | 04 | 01 | | | | |
| 9 | Habits | | | 3 | 0.817 | 7.815 | Not significant |
| | a. Smoking | 12 | 08 | | | | |
| | b. Using alcohol | 02 | 03 | | | | |
| | c. Tobacco chewing and pans | 04 | 04 | | | | |
| | d. None | 10 | 07 | | | | |

MAJOR FINDINGS OF THE STUDY:-

The findings of the analysis were summarized as-

Section I

Demographic characteristics of the care giver of pulmonary tuberculosis patients.

- Out of the 50 care givers highest percentage, 42% of the care givers were in the age group of 31-45years, 32% were in the age group of 46-60years, 22% were in the age group of 13-30years and 04% of them were above 61years of age & above.
- 58% of the care givers are male & 48% of them are female.
- Considering the area of residence, highest 54% were from urban areas & 46% of samples were residing in rural area.
- Regarding the educational status highest 44% were studied upto middle school, 36% of them were studied upto higher secondary, 12% of them were illiterate, 08% have under graduate degree and above & none of the care giver was undergraduate.

- Considering socio-economic status of the family, majority 73.33% of samples belonged to middle class family, 23.33% belonged to lower class family & 3.33% belonged to higher class family.
- Regarding occupation highest 48% of the care giver of pulmonary tuberculosis patients were moderate workers, 28% of them were unemployed & 22% of them were sedentary workers & 2% were heavy workers.
- Considering their total income of family (Rs. Per month) highest 36% of samples were earning above Rs 5000/month, 30% were earning Rs 3001-5000/month, 26% were earning Rs 2001-3000/month and 08% were earning Rs 500 to 2000/month.
- 56% of the care givers belong to nuclear family & 44% belongs to joint family.
- Regarding family history of pulmonary tuberculosis highest 48% of the care giver families did not have the history of pulmonary tuberculosis, 22% samples revealed that their neighbours were suffered from pulmonary tuberculosis patients, 20% of their family members were affected from pulmonary tuberculosis & 10% specified others were suffering from pulmonary tuberculosis.
- 40% of care giver were smokers, 34% were not having bad habits like smoking, chewing tobacco, drinking alcohol, 14% habited with tobacco & pan chewing & 12% were consuming alcohol.

Section II

Knowledge on prevention of pulmonary tuberculosis.

Frequency and percentage distribution of structured knowledge questionnaire on prevention of pulmonary tuberculosis scores showed that knowledge score range start from (6-23). It is also evident that structured knowledge questionnaires highest scores were 22 (44%) in the range of (12-14), followed by 13 (26%) scores in the range of (9-11), 5 (10%) scores in the range of (6-8), 4 (8%) in the range of (15-17) and 3 (6%) in the range of (18-20, 21-23). Hence it shows that the care givers of pulmonary tuberculosis patients were having inadequate knowledge regarding prevention of pulmonary tuberculosis.

Distribution on scores, range, mean, median, standard deviation on structured knowledge questionnaire on prevention of pulmonary tuberculosis were started from the range of 6-33. The mean, median and the standard deviation of the knowledge questionnaires were 12.76, 12.45 and 3.6. So it is recommended that the care giver were having inadequate knowledge regarding prevention of pulmonary tuberculosis.

Section III

Association between the knowledge of the care giver of pulmonary tuberculosis patients with their selected demographic variables.

Chi square was computed to find association between the knowledge scores of the care giver of pulmonary tuberculosis patients with their selected demographic variables. Significant association was found between knowledge score of the care giver of pulmonary tuberculosis patients with their selected demographic variable, family history of pulmonary tuberculosis. However no significant association was found between age, sex, area of residence, educational status, occupation, total income of family (Rs./month), type of family and habits and pretest knowledge score.

Hence the research hypothesis H_1 stating that there will be significant association between the knowledge of care giver of pulmonary tuberculosis patients with their selected demographic variables is accepted for demographic variable of family history of pulmonary tuberculosis.

DISCUSSION

The research is to explore or discover new things and concepts.

The findings of the study discussed in this chapter were based on the objectives and hypotheses of study.

FIRST OBJECTIVE

To assess the level of knowledge regarding the prevention of pulmonary tuberculosis among the care giver of pulmonary tuberculosis patients.

Frequency and percentage distribution of structured knowledge questionnaire on prevention of pulmonary tuberculosis scores showed that knowledge score range start from (6-23). It is also evident that structured knowledge questionnaires highest scores were 22 (44%) in the range of (12-14), followed by 13 (26%) scores in the range of (9-11), 5 (10%) scores in the range of (6-8), 4 (8%) in the range of (15-17) and 3 (6%) in the range of (18-20). The mean, median and the standard deviation of the knowledge questionnaires were 12.76, 12.45 and 3.6. So it is recommended that the care giver were having inadequate knowledge regarding prevention of pulmonary tuberculosis.

The present study was supported by the finding of the following study:

Mangesho¹⁶, PE, (2007), did a study to assess the knowledge, attitude and practice regards to tuberculosis and its treatment. Focus group discussions involving men and women were conducted in six villages. Results show that tuberculosis was an important public health problem. However, community knowledge regarding tuberculosis cause was poor. Friends and relatives were the main source of tuberculosis information in the community. In conclusion, rural communities of Mawapwa District have a low knowledge on the causes and the transmission of tuberculosis which is a likely cause of the delay in seeking treatment. An intensive appropriate community health education is required for a positive behavioural change in tuberculosis control.

SECOND OBJECTIVE

To find out the association between the knowledge of care giver of pulmonary tuberculosis patients with their selected demographic variables.

Chi square was computed to find association between the knowledge scores of the care giver of pulmonary tuberculosis patients with their selected demographic variables. Significant association was found between knowledge score of the care giver of pulmonary tuberculosis patients with their selected demographic variable, family history of pulmonary tuberculosis. However no significant association was found between age, sex, area of residence, educational status, occupation, total income of family (Rs./month), type of family and habits and knowledge score.

Hence the research hypothesis H_1 stating that there will be significant association between the knowledge of care giver of pulmonary tuberculosis patients with their selected demographic variables is accepted for demographic variable of family history of pulmonary tuberculosis.

The present study was supported by the finding of the following study

C. Lienhardt, K. Fielding¹², JS. Sillah, B. Bah, P. Gustafson, D. Warndorff (1999-2001) conducted a case-control study to identify the risk factors for tuberculosis among 687 newly detected smear positive tuberculosis patients in West Africa. The result shows that tuberculosis was associated with male sex, family history, absence of Bacille Calmette Guerin scar, smoking, alcohol, anaemia, HIV infection, history and treatment of worm infestation. Conclusion enlists tuberculosis is a multi factorial disorder in which environmental reaction with host related factors have high influence for the improvement of tuberculosis control activities in developing countries.

CONCLUSION

From the findings of the present study it can be concluded that the care givers of pulmonary tuberculosis patient does not have good knowledge regarding the prevention of pulmonary tuberculosis. The study findings also revealed that significant association was found between knowledge score of the care giver of pulmonary tuberculosis patients with their selected demographic variable, family history of pulmonary tuberculosis. However no significant association was found between age, sex, area of residence, educational status, occupation, total income of family (Rs./month), type of family, habits and knowledge score.

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