

Assess the knowledge of tuberculosis patients regarding prevention of tuberculosis at selected community areas.

Mr. Anand¹ DR. Achamma Varghese²

¹Ph.D Scholar, Shri Jagdish Prasad Jhabarmal Tibrewala University,
Vidyanagari, JHUNJHUNU, Rajasthan.

² Ph.D Guide, SJIT University, department of medical sciences (Nursing), Shri Jagdish Prasad
Jhabarmal Tibrewala University, Vidyanagari, JHUNJHUNU.

³Ph.D Scholar, Shri Jagdish Prasad Jhabarmal Tibrewala
University, Vidyanagari, JHUNJHUNU, Rajasthan.

emai-anandtalli024@gmail.com

Abstract

Background: Tuberculosis is a contagious, treatable illness that has two stages: latent infection and active disease. Only persons with active tuberculosis in the lungs or larynx can infect others, usually by coughing, sneezing, or otherwise expelling microscopic infected particles that someone else inhales. The current study aims to measure the general population's knowledge of tuberculosis in a specified urban region. The current study aims to measure the level of awareness about tuberculosis among chosen demographic variables.

Objective: To assess the knowledge of patients regarding prevention of tuberculosis.

Methods

The study was conducted in selected community areas by two data collectors and selected areas. The questionnaire were checked for completeness, cleaned manually and entered in to Epi- Data version 4.2. Then the data was transferred in to SPSS version 21.0 for further analysis. Descriptive statistics were carried out. Finally checked association between dependent and independent variables.

Result: showed that level of knowledge was done as follows: 28(46.7%) of the tuberculosis patients were good knowledge, 26(43.3%) Average knowledge and 6(10%) were poor knowledge regarding prevention of tuberculosis. Assessment of the level of knowledge of tuberculosis patients with demographic characteristics. Gender and education significantly association with knowledge level of patients with $p < 0.05$.

Conclusion

In this investigation, knowledge regarding tuberculosis and its treatment was shown to be at a poor level of perception. To avoid the problem for patients, health education and awareness creation must be implemented through various mobilisation techniques.

Keywords: Knowledge, Tuberculosis, patients, community



Introduction

Tuberculosis (TB) is a chronic infectious illness caused by the acid-fast bacillus *Mycobacterium tuberculosis*. From 2002 to 2020, the number of newly infected TB cases is estimated to reach over one billion. Every year, 8.4 million individuals develop active tuberculosis, and 2.3 million die from the disease. The disease has a high prevalence, notably among TB/HIV co-infected young women [1]. Immune competence and a well-balanced nutritional diet are necessary for TB prevention and therapy. According to studies, the prevalence of pulmonary tuberculosis patients was greater in the 15-24 and 25-34 age groups [2].

According to the World Health Organisation (WHO), the incidence and death rate of tuberculosis (TB) in 2015 were expected to be 10.4 and 1.4 million persons, respectively [3]. In addition to HIV/AIDS and malaria, WHO has designated tuberculosis (TB) a global public health emergency in order to prevent the spread of TB cases, and as a result, the organisation has devised a new strategic framework for efficient TB control and management [4]. The WHO-recommended TB control strategy is Directly Observed Treatment (DOT). According to WHO, the guiding technique of the DOTs programme is used to treat nearly 30 million patients. In terms of the DOTs programme, the default and curative rates of tuberculosis are predicted to be 10% and >80%, respectively [5]. It is critical for effective tuberculosis control or health personnel to treat within this framework.

The medications used in the DOTS system for therapy are not innovative. DOTs necessitate less hospitalisation for supervised ambulatory treatment [6]. At the start of the programme (1993), this approach was used to treat no more than 2% of active TB cases worldwide. According to the World Health Forum, the estimated percentage is nearly 12%, indicating a tremendous rate of expansion. Millions of TB patients continue to rely on the system's accessibility [7]. As a result, the goal of this study was to assess TB patients' knowledge, attitudes, and practises about DOTS regimens.

Methodology

Study area and period

Study was conducted selected community areas and study period one month.

Study design

A cross sectional study was conducted to attain the objectives of the study.

Population

Source and study population: All Tuberculosis patients selected areas

Inclusion criteria and Exclusion criteria

Inclusion criteria:

- All Tuberculosis patients
- Willing to participate in the study

Exclusion criteria:

- patients who are absent during data collection period

Sample size: Convenient sampling technique selected 60 Tuberculosis patients

Variables

Dependent variable: Knowledge regarding prevention of Tuberculosis.

Independent variables

Age, Gender, religion, educational status, family history of patients, aware about prevention of Tuberculosis, Source of information,

Operational definition

1. Knowledge: In this study knowledge refers to the understanding of patients regarding prevention of tuberculosis, as measured by a structured questionnaire

2. Tuberculosis: In this study, it refers to an infectious disease that may affect almost any tissue of the body especially the lungs caused by the organism mycobacterium tuberculosis, and characterized by tubercles.

3. Patients: In this study, it refers to a person who is receiving medical care, or who is cared for by a particular doctor

4. Community area: In this study, it refers to may share a sense of place situated in a given geographical area

Data quality control

The data collection questionnaires were pretested on 5% of the sample size one week before the actual data collection date and will be reviewed in areas other than the study area. Following the pretest, the tools will be edited and changed to meet the study's objectives. The consistency of the data was monitored during the collection process by closely monitoring the data collectors and the collection method, as well as reviewing the collected data on a regular basis. Any items missing from the questionnaire that the data collectors misunderstood were immediately checked by the supervisors and corrected for the next day of data collection with the principal investigators.

Data processing and analysis

The collected data was washed, coded, and entered into the SPSS program before the actual study began. The data will be entered and analyzed using the statistical kit for social sciences (SPSS) version 20; the findings will be presented in a detailed description using frequencies, proportions, and cross tabs. Association between dependent and independent variables with a P-value less than 0.05 were considered statistically significant.

Result

Table 1: Distribution of study subjects according to socio-demographic variables

N=60

Demographic profile	No of respondents	% of respondents
Age groups in Years		
>19	11	18.3
20-30	21	35

31-40	15	25
>41y	13	21.7
Gender		
Male	43	71.7
Female	17	28.3
Religion		
Hindu	34	56.7
Christian	22	36.7
Muslim	4	6.7
Educational status		
No formal education	15	25
Primary	31	51.7
Above secondary	14	23.3
Family history of tuberculosis patients		
Yes	41	68.3
No	19	31.7
Aware about prevention of tuberculosis		
Yes	23	38.3
No	37	61.7
Source of information		
Health personal	21	35
Mass media	19	31.7
Workshop	15	25
friends	5	8.3
Neighbour	0	0.0
Total	60	100.0

Table 1: represent that Most of the Patients (35%) were in the age group of 20-30 years and (25%) of Patients were in the age group of 31-49 years,(21.7%) of the Patients were more than 41 years and (18.3%) percent of them were in the age group of >19 years. (72%) of Patients were Males and remaining (28%) were Females. Majority of Patients (56.7%) were belonging to Hindu religion (36.7%) were Christians and (6.7%) were Muslim. Most (51.7%) of Patients had Primary education,(23.3%) are above secondary,(15%) of them are no formal education. (68%) of Patients were family history of tuberculosis and (32%) of were no family history of tuberculosis patients. (61.7%) of patients were Aware about prevention of tuberculosis and (38.3%) of were no



Aware about prevention of tuberculosis. (35%) of patients were know about prevention of tuberculosis from health person and (31.7%) of were know from mass media,(25%) were know from workshop,(8.3%) were know about friends and 0 percentage from nothing.

Table II : Knowledge levels of respondents

Levels of knowledge	Frequency	Percentage
Poor knowledge	6	10.0
Average knowledge	26	43.3
Good knowledge	28	46.7
Total	60	100.00

Above Table:2: Categorization of the tuberculosis patients on the basis of their level of knowledge was done as follows: 28(46.7%) of the tuberculosis patients were good knowledge, 26(43.3%) Average knowledge and 6(10%) were poor knowledge regarding prevention of tuberculosis

Table III: Association between knowledge levels with demographic characteristics

Characteristics	Knowledge level				Chi-square	df	p-value
	Good	Average	Poor	Total			
Age group (Years)							
Below 19yrs	6	4	1	11	10.087 ^a	6	0.121
20-30 yrs	14	5	2	21			
31-40 yrs	3	11	1	15			
Above 50 yrs	5	6	2	13			
Gender							
Male	25	13	5	43	10.694 ^a	2	0.005*S
Female	3	13	1	17			
Religion							
Hindu	18	13	3	34	6.096 ^a	4	0.192
Christian	10	9	3	22			
Muslim	0	4	0	4			
Family history of of tuberculosis patients							
Yes	17	21	3	41	3.541 ^a	2	0.170
no	11	5	3	19			
Aware about prevention of tuberculosis							



Yes	11	10	2	23	0.074 ^a	2	0.963
No	17	16	4	37			
Source of information regarding prevention of tuberculosis							
Health personal	12	7	2	21	8.550 ^a	6	0.200
Mass media	9	7	3	19			
Workshop	7	7	1	15			
Friend	0	5	0	5			
Neighbor	0	0	0	0			

*p<0.05

Above table 4 showed that Assessment of the level of knowledge of nursing students with demographic characteristics. Gender and course of study significantly association with knowledge level of students with p<0.05.

Discussion

Lawn & Zinnia, Latent TB is inactive, does not show any symptoms and is not contagious, whereas, active TB makes a person sick and is highly contagious. The infected individual becomes immunocompromised for any reasons including malnutrition or infection with HIV and the patients develops active TB disease. In 90% of the cases, M.tuberculosis mainly infects the lungs and causes pulmonary tuberculosis. The patient exhibit different symptoms, such as persistence of cough for 2-3 weeks and beyond , chest pain, blood tinged sputum, breathlessness, weight loss, loss of appetite, chills, fever and night sweating.[8].

Humphries, 2013 A biochemist, David Sherman, at Seattle Biomedical Research Institute, Washington, says that latency is not a well-defined biological problem. Latent TB is the one where individual tests positive for TB and does not have any clinical symptoms. It has been considered that latency may encompass a spectrum of states, from people who have completely controlled the disease, to those with untreated, sub clinical disease. M. tuberculosis can be contained within granuloma for years. This ability of M.tuberculosis to lie dormant may be an evolutionary strategy [9].

Conclusion:

The findings of this study to assess the knowledge of Tuberculosis among general population. The results of this present study show that general population women have inadequate knowledge of Tuberculosis .There is a need for emphasis on the national and global level on the importance of Tuberculosis.

References

- [1] 1.D. Sharma, J. Sharma, N. Deo, and D. Bisht. Tuberculosis prevalence and risk factors in developing nations as reported by health-care personnel. Microbiology Pathology. 2018;124:279-283. [PubMed] [Google Scholar] Formalised paraphrase
- [2] Perumal, R., Naidoo, K., and Padayatchi, N. Where are the young women in tuberculosis epidemiology? Know your tuberculosis pandemic and how to respond to it. BMC Public Health, 18(1), 1-6, 2018. [Free PMC article] [PubMed] [Google Scholar] Formalised paraphrase



- [3] G.B. Migliori, E. Nardell, A. Yedilbayev, L. D'Ambrosio, R. Centis, M. Tadolini, et al. Reducing tuberculosis transmission: a World Health Organisation Regional Office for Europe consensus document. *European Respiratory Journal*, 2019;53(6). [PubMed] [Google Scholar] Formalised paraphrase
- [4] Sisay S., Mengistu B., Erku W., Woldeyohannes D. A ten-year experience with the Directly Observed Treatment Short-course (DOTS) tuberculosis control programme in Gambella Regional State, Ethiopia. *BMC research notes*, 7(1):1-8, 2014.
- [5] 5.El-Kholy, M.M., Sadek, S.H., and Mahran, O. For pulmonary and extrapulmonary tuberculosis, fixed-dose combination versus separate medication formula. *Egyptian Journal of Bronchology*, 12(3):346-351, 2018. [Google Scholar] Formalised paraphrase
- [6] 6.Dara, M., de Colombani, P., Petrova-Benedict, R., Centis, J.-P. Zellweger, A. Sandgren, et al. A Wolfheze consensus declaration on a minimum package for cross-border tuberculosis control and care in the WHO European region. *European Respiratory Journal*. 2012;40(5):1081-1090. [Free PMC article] [PubMed] [Google Scholar] Formalised paraphrase
- [7] Frieden T.R., Sbarbaro J.A. Promoting tuberculosis treatment adherence: the importance of direct observation. *World Health Organisation Bulletin*, 2007;85:407-409. [Free PMC article] [PubMed] [Google Scholar] Formalised paraphrase
- [8] 8.K. Lönnroth, G.B. Migliori, I. Abubakar, L. D'Ambrosio, G. de Vries, R. Diel, et al. A strategy for tuberculosis elimination in low-incidence nations. *The European Respiratory Journal*, 45(4), 928-952, 2015. [Free PMC article] [PubMed] [Google Scholar] Formalised paraphrase
- [9] Falzon D., H.J. Schünemann, E. Harausz, L. González-Angulo, C. Lienhardt, E. Jaramillo, et al. Updated 2016 World Health Organisation treatment guidelines for drug-resistant TB. *European Respiratory Journal*, 2017;49(3):1602308. [Free PMC article] [PubMed] [Google Scholar] Formalised paraphrase
- [10] Kosgei, R.J., Sitienei, J.K., Kipruto, K., Gathara, D., Odawa, et al. Gender variations in treatment results in Kenyans aged 15 to 49 with smear-positive pulmonary TB. *International Journal of Tuberculosis and Lung Disease*. 2015;19(10):1176-1181.