



A STUDY ON KNOWLEDGE, ATTITUDE, PRACTICE ABOUT TUBERCULOSIS DISEASE GUIDELINES AMONG PHARMACY STUDENTS

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Abstract:

Background: Tuberculosis disease guidelines among Pharm.D and M.Pharm students how much knowledge both have about guidelines so we conducted a Knowledge, Attitude, Practice about tuberculosis disease guidelines among pharmacy students. With the primary objective to evaluate to compare & assess knowledge, attitude, practice about tuberculosis disease guidelines.

Methods: Knowledge, attitude, practice study was conducted for a period for six months. 109 students patients were enrolled in the study, inclusion criteria: Pharm.D students (3rd to 6th) from vistas are included for the study, M.Pharm students from VISTAS are included for the study, Age above 18 included for the study, Both genders are involved in this study. Exclusion criteria: Pharmacy students not from VISTAS are excluded for this study, B.Pharm and D.Pharm students are excluded from this study. Other than Pharmacy students are excluded from the study. General population are excluded from this study. Who are not willing to given concern to the study. Responders who fail to complete the questionnaire are rejected from the study.

Results: Students were responders from Pharm.D and M.Pharm In that Pharm.D as more knowledge than M.Pharm so M.Pharm need more knowledge about TB guidelines.

Conclusion: According to the findings, the study participants have a good understanding, fair attitude, and practice of tuberculosis disease guidelines. yet there is still a considerable disparity in knowledge, attitude, and practice regarding tuberculosis disease guidelines among pharmacist students. As per study the level of awareness towards tuberculosis disease guidelines among M.Pharm and Pharm.D is found to be moderate. Limitation of the sample size are limited; a larger study with a larger sample size could better predict the knowledge, attitudes, and practices of tuberculosis disease guidelines among pharmacist students.

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INTRODUCTION

The overall journey The National Tuberculosis Programme of India (NTP), which was established in 1962, was initially created to provide domiciliary care utilising conventional medical procedures. [1,2] A comprehensive review of the programme in 1992 found that the NTP couldn't accomplish its goals for TB control; as a result, a revised TB control strategy was airman-tested in 1993 based on the suggestions of an expert commission. [3,5] In 1997, a full-fledged programme was launched, and it quickly grew with great success. [4] On March 24, 2006, World TB Day, this Revised National Tuberculosis Control Program (RNTCP), which employs the Blotches (Directly Observed Treatment, Short-course Chemotherapy) strategy, achieved country content. [6-8] Since 2006, the programme has made progress in a number of areas, including perceptions about and access to TB treatment services. [9] More than 19 million cases have started receiving treatment since the programme began in 1997, and more than 3.5 million more lives have been saved. A "National frame of common TB/HIV cooperative conditioning" has been designed by the National AIDS Control Program and RNTCP. [11,12,14] In March 2013, the goal of the nation's services for the programmatic operation of drug-resistant tuberculosis, which started in 2007, was reached. [13] In order to improve the announcement of TB cases, the government is also aggressively collaborating with private interpreters, numerous private organisations, NGOs, and professional bodies like the Indian Medical Association. [15] In 2012, the Central TB Division and Nationwide Informatics Center created the case-based web platform "Nikshay," which is now being evaluated on a national scale. [16] The National AIDS Control Organization (NACO) and the RNTCP have improved HIV-TB coordination; the majority of TB cases registered by the RNTCP now include HIV webbing, and 90 percent of HIV-infected TB cases now include antiretroviral treatment (ART). [17] On June 7, 2012, the Government of India's Ministry of Health and Family Welfare issued a notification prohibiting the import of sero-individual test equipment for tuberculosis as well as the production, sale, distribution, and use of comparable equipment. [18] Another government directive released by the Government of India in May 2012 permits all healthcare professionals to notify the appropriate authorities of every case of tuberculosis that is identified and/or treated. The prohibition of serological tests for the diagnosis of active TB

spared many people from incorrect test results and unnecessary money. More than 0.7 million additional TB cases have been reported by private providers countrywide since TB became a reportable complaint in 2012. [19,20] This was also made possible by the government's decision to renounce uniform "Norms for TB Care in India" that applied to both the public and private sectors. With multiple new businesses and regulatory reforms in RNTCP, 2014 saw significant progress. [21] From the introduction of the first civil anti-TB medicine resistance check of India, guidelines being developed on DST-guided treatment for medicine-resistant TB cases, molecular methods like CBNAAT being stationed at ART spots in 5 high TB/HIV burden states to reveal MTB in plausible TB cases among people living with HIV, screening all TB cases for diabetes under programme settings, and the release of norms for TB Care in India, a thorough text easing patient centred care [22-24] In addition, the public programme introduced a new and forward-thinking electronic recording and reporting system (Nikshay) in 2012, with 98 reporting units engaging in case-based reporting of TB cases, including announcements from private providers. [25] The health system's numerous gaps contribute to the program's poor capacity for implementation. An examination of the environment in which the TB programme operates Analysis of the economic, political, and social context in which the TB programme functions has helped people understand the need of swiftly addressing the many issues necessary to stop the unrelenting TB pandemic. [26]

METHODOLOGY:

Knowledge, attitude, practice the study was carried out for a period of 6 months. The duration is between the months of August (2021) to March (2022). Data collection was done for a period of six months. This study involves curating a questionnaire after reviewing various journal papers that have similar aims and objectives. Based on this study, questions are prepared and entered in a google form then circulated to pharmacy students. The study participants who are eligible as per the inclusion criteria and willing to participate in the study are included. The study participants were requested to complete a questionnaire regarding their personal characteristics and other questions related to the Knowledge, Attitude, Practice about 'tuberculosis disease guidelines' among pharmacy students. The completed questionnaire with responses are collected from the study participants. The

Responses of participants are pharmacy students who belong to Vels University Chennai are analysed, which gives the idea regarding the Knowledge, Attitude, Practice about 'tuberculosis disease guidelines' among pharmacy students. The study instrument was developed and carried out with the use of self-developed questionnaire after a thorough literature analysis which is assessed and validated by a general physician.

INCLUSION CRITERIA:

- 1) Pharm.D students (3rd to 6th) from VISTAS are included for the study.
- 2) M.Pharm students from VISTAS are included for the study
- 3) Age above 18 included for the study.
- 4) Both genders included for the study.

EXCLUSION CRITERIA:

- 1) Pharmacy students not from VISTAS are excluded for the study.
- 2) B.Pharm and D. Pharm students are excluded from the study.
- 3) Other than pharmacy students are excluded from the study.

- 4) General population are excluded from the study
- 5) who are not willing to give concern to the study
- 6) Responders who fail to complete the questionnaire are rejected from the study

Completed questionnaires were coded, reviewed for accuracy, the data were entered into Epidata 3.1 and exported to SPSS version 24, and analyzed using descriptive statistics and logistic regression. It is expected that most of the pharmacy students would be aware of Knowledge, Attitude, and Practice about tuberculosis disease guidelines

RESULTS:

In our study, a total of 109 pharmacist students has participated and all the 109 participants gave their consent to participate in this study. The study contains different sections with different questions under each sections.

Table 1: Demographic characteristics of the students

S.NO	CHARACTERISTICS	M.PHARM		PHARM.D	
		N	%	N	%
1	Age				
	20	-	-	3	5.5%
	22	-	-	13	23.6%
	23	12	22.2%	15	27.3%
	24	10	18.5%	14	25.5%
	25	23	42.6%	7	12.7%
	26	9	16.7%	3	5.5%
2	Gender				
	Male	32	59.3%	32	58.2%
	Female	22	40.7%	23	41.8%
3	YEAR				
	1	27	50.0%	0	0.00%
	2	27	50.0%	0	0.00%
	4	-	-	13	23.6%
	5	-	-	19	34.5%
	6	-	-	23	41.8%

Table 2: Knowledge questions of tuberculosis guidelines

S.NO	KNOWLEDGE QUESTIONS	M.Pharm		Pharm.D		CHI-SQUARE TEST A- Symptomatic Significance(2-Sided)
		N	%	N	%	
4	Which year were the latest Tb guidelines?					
	1962	9	16.7%	11	20.0%	.001 .129
	1990	3	5.6%	3	5.5%	
	2016	12	22.2%	8	14.5%	
	2020	30	55.5%	33	52.4%	
5	What is MDR TB?					

	Multidose resistant tuberculosis	15	27.8%	7	12.7%	.001 .012
	Multidrug resistant tuberculosis	36	66.7%	41	74.5%	
	None of the above	3	5.6%	7	12.7%	
6	Abbreviation of NTEP?					
	National Treatment elimination program	21	38.9%	15	27.3%	.000 .064
	National Tuberculosis elimination program	27	50.0%	34	61.8%	
	New Tuberculosis elimination program	3	5.6%	1	1.8%	
	None of the above	3	5.6%	5	9.1%	
7	Which guidelines consists of a daily regimen?					
	NTEP	24	44.4%	31	56.4%	.000 .036
	OPTIONS A and B	18	33.3%	12	21.8%	
	RNTCP	12	22.2%	12	21.8%	
8.	What is causing tuberculosis to become a serious public health problem?					
	Inhaling the bacteria	27	50.0%	36	65.5%	.000 .020
	Inhaling the fungus	9	16.7%	9	16.4%	
	Inhaling the virus	18	33.3%	10	18.2%	

Table 3: Attitude questions of tuberculosis guidelines

S.NO	Attitude questions	M.Pharm		Pharm.D		CHI-SQUARE TEST A- Symptomatic Significance(2-Sided)
		N	%	N	%	
9	Do you follow the national tuberculosis regimen?					
	Disagree	15	27.8%	17	30.9%	.000 .021
	Agree	39	72.2%	38	69.1%	
10	Dots treatments is short course therapy					
	Disagree	9	16.7%	13	23.6%	.000 .016
	Agree	45	83.3%	42	76.2%	
11	RNTCP was changed to NETP in 2016					
	Disagree	32	59.3%	20	36.4%	<.002
	Agree	22	40.7%	35	63.6%	
12	RNTCP consists of a daily regimen					
	Disagree	40	74.1%	39	70.9%	.000 .021
	Agree	14	25.9%	16	29.1%	
13	RNTCP consists of a limited weight band					
	Disagree	25	46.3%	16	29.1%	<.005
	Agree	29	53.7%	39	70.9%	
14	Patients on immunosuppressive therapy are more vulnerable to have tuberculosis					
	Disagree	15	27.8%	15	27.3%	.000 .022
	Agree	39	72.2%	40	72.7%	

Table 4: Practice questions of tuberculosis guidelines

S.NO	Practice questions	M.Pharm		Pharm.D		CHI-SQUARE TEST A- Symptomatic Significance(2-Sided)
		N	%	N	%	
15	Will you explain the symptoms of TB to the patients?					
	Yes	45	16.7%	46	16.4%	.000 .022
	No	9	83.3%	9	83.6%	
16	If you manage TB when you have a suspected TB patient?					
	Yes	9	16.7%	7	12.7%	.000 .019
	No	45	83.3%	48	87.3%	
17	Will you provide counselling to improve the medication use and to prevent drug resistance for TB patients?					
	Yes	42	77.9%	43	78.2%	.000 .022
	No	12	22.2%	12	21.8%	
18	Do you advise the TB patients to drink plenty of water and to have healthy food for weight gain?					
	Yes	39	72.2%	38	69.1%	.000

	No	15	27.8%	17	30.9%	.021
19	Will you advise the TB patients to stop alcohol and smoking while on medication?					
	Yes	33	61.1%	38	69.1%	.000
	No	21	38.9%	17	30.9%	.016
20.	Will you advise the TB patients to isolate himself and to isolate his belongings?					
	Yes	39	72.2%	42	76.4%	.000
	No	15	27.8%	13	23.6%	.020
21	Do you follow the national treatment guidelines?					
	Yes	33	61.1%	36	65.5%	.000
	No	21	38.9%	19	34.5%	.020

DISCUSSION:

Knowledge and understanding of subjects towards tuberculosis disease guidelines

The knowledge of participants towards tuberculosis disease guidelines is assessed and the results are following (55.5%) of M.Pharm and (52.4%) of Pharm.D latest Tb guidelines, the chi-square test result showed not significant result, between M.Pharm and Pharm.D. the (MDR TB) Multidrug resistant tuberculosis (66.7%) of M.Pharm and (74.5%) of Pharm.D, the chi square test result showed not significant result, between Pharm.D and M.Pharm. the abbreviation of (NTEP) national tuberculosis elimination program (50.0%) of M.Pharm and (61.8%) of Pharm.D, the chi square test result showed not significant result, between M.Pharm and Pharm.D. the NTEP guidelines consists of a daily regimen (44.45%) of M.Pharm and (56.4%) of Pharm.D, the chi-square test result showed not significant result, between M.Pharm and Pharm.D. Inhaling the bacteria in serious public health problem (50.0%) of M.Pharm and (65.5%) of Pharm.D, the chi-square test result showed not significant result, between Pharm.D and M.Pharm.

Attitude and understanding of subjects towards tuberculosis disease guidelines

The attitude of participants towards tuberculosis disease guidelines is assessed and the results are following (72.2%) of M.Pharm and (69.1%) of Pharm.D the national tuberculosis regimen, the chi square test result showed not significant result, between M.Pharm and Pharm.D. the dots treatment is short therapy which (83.3%) of M.Pharm and (76.2%) of Pharm.D, the chi square test result showed not significant result, between M.Pharm and Pharm.D. the RNTCP changed to NTEP IN 2016 (59.3%) of M.Pharm and (36.4%) of Pharm.D, the chi square test result showed that significant result, between M.Pharm and Pharm.D. the RNTCP is daily regimen (74.1%) of M.Pharm and (70.9%) of Pharm.D, the chi square

test result showed not significant result, between M.Pharm and Pharm.D. the RNTCP is limited weight band (53.7%) of M.Pharm and (70.9%) of Pharm.D, the chi square test result showed that significant result, between M.Pharm and Pharm.D. patients on immunosuppressive therapy are more vulnerable to have tuberculosis (72.2%) of M.Pharm and (72.7%) of Pharm.D, the chi square test result showed not significant result, between M.Pharm and Pharm.D.

Practice and understanding of subjects towards tuberculosis disease guidelines

The practice among the symptoms of TB to the patients (83.3%) of M.pharm and (83.6%) of Pharm.D, the chi square test showed not significant result, between M.Pharm and Pharm.D. the manage of Tb when pharmacist suspected TB patient (83.3%) of M.Pharm and (83.6%) of Pharm.D, the chi square test result showed not significant result, between M.Pharm and Pharm.D. provide counselling to improve the medication to prevent drug resistance for TB patient (77.9%) of M.Pharm and (78.2%) of Pharm.D, the chi square test result showed not significant result, between M.Pharm and Pharm.D. the Tb patients to drink plenty of water and to have food foe weight gain (72.2%) of M.Pharm and (69.1%) of Pharm.D, the chi square test showed not significant result, between M.pharm and Pharm.D. the Tb patient to stop alcohol and smoking on medication (61.1%) of M.Pharm and (69.1%) of Pharm.D, the chi square test result showed not significant result, between M.Pharm and Pharm.D. the Tb patient to isolate himself and to isolate his belongings (72.2%) of M.Pharm and (76.4%) of Pharm.D, the chi square test result showed not significant result, between M.Pharm and Pharm.D. the national treatment guidelines that (61.1%) of M.Pharm and (65.5%) of Pharm.D, the chi square test result showed not significant result, between M.Pharm and Pharm.D.

This is the result that compared with other article which was compared in RNTCP among government and private practitioners in Gwalior district. Government practitioners had a higher mean score (9.8) for understanding of tuberculosis and RNTCP than did private practitioners (6.1). Statistically significant variations were found on topics relating to the management of TB patients in accordance with RNTCP standards, despite the fact that all practitioners had a good attitude toward routine knowledge up-gradation. In comparison to sputum examination among government practitioners, X-ray was the most chosen modality for diagnosis and follow-up among private practitioners. Private practitioners also made extremely few referrals of serious and underprivileged patients.^{[27][28]}

CONCLUSION:

According to the findings, the study participants have a good understanding, fair attitude, and practice of tuberculosis disease guidelines. yet there is still a considerable disparity in knowledge, attitude, and practice regarding tuberculosis disease guidelines among pharmacist students. As per study the level of awareness towards tuberculosis disease guidelines among M.Pharm and Pharm.D is found to be moderate. Can we improve knowledge, attitude, and practice regarding tuberculosis disease guidelines among pharmacist students by workshop. Limitation of the study in this topic, the sample size is limited; a larger study with a larger sample size could better predict the knowledge, attitudes, and practices of tuberculosis disease guidelines among pharmacist students.

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