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Original Article:

An Assessment of Knowledge and Practices Regarding Tuberculosis in the Context of RNTCP Among Non Allopathic Practitioners in Gwalior District

Dhiraj Kumar Srivastava, Lecturer, Department of Community Medicine, UP Rural Institute of Medical Sciences& Research, Saifai, Etawah, Uttar Pradesh,
Ashok Mishra, Associate Professor, Department of Community Medicine, GR Medical College, Gwalior, Madhya Pradesh,
Subodh Mishra, Associate Professor, Department of Community Medicine, GR Medical College, Gwalior, Madhya Pradesh,
Neeraj Gour, Assistant Professor, Department of Community Medicine, College of Medicine & JNM Hospital, Kalyani, West Bengal,
Manoj Bansal, Assistant Professor, Department of Community Medicine, Bundelkhand Medical College, Sagar, Madhya Pradesh,
Shraddha Mishra, Post Graduate student, Department of Community Medicine, GR Medical College, Gwalior, Madhya Pradesh,
Parharam Adhikari, Post Graduate Student, Department of Community Medicine, GR Medical College, Gwalior, Madhya Pradesh

Address for Correspondence:
Dr. Dhiraj Kumar Srivastava,
H.No1532, Near Ebnezer School,
Bhagat Singh Gola ka Mandir,
Gwalior (MP)-474005, India.
E-mail: dhirajk78sri@yahoo.co.in

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Abstract: Introduction: India has the highest TB burden accounting for one-fifth of the global incidence with an estimated 1.98 million cases. Non- allopathic practitioners are the major service providers especially in rural and peri-urban areas, treating not just patients of diarrhea, respiratory infections and abdominal Pain but also of tuberculosis. **Objectives:** To assess the knowledge of sign and symptoms of TB and its management as per the RNTCP guidelines and to assess the practicing pattern regarding tuberculosis. **Material & Methods:** The present was carried out among the registered non allopathic practitioners providing their services in Gwalior District during the study period. A total of 150 non allopathic practitioners of various methods from both government and private sectors were interviewed using a pre-designed, pre-tested semi-structured questionnaire. The information was collected on the General profile of the participant, knowledge about signs and symptoms of TB and its management, practices commonly adopted in the management and their views on involvement of non allopathic practitioners in RNTCP programme. **Result:** The average score of government practitioners was 7.3 compared to 4.6 by private practitioners. There was a statistically significant difference between the two group on issue related to the management of TB patients as per the RNTCP guidelines. Government practitioners relied mostly on sputum examination for diagnosis and follow up compared to private practitioners who chose other modalities like X-ray, blood examination for this work. **Conclusion:** There is a gap in knowledge and practices of practitioners of both the sectors. Some serious efforts were required to upgrade the knowledge of non allopathic practitioners if the government is serious about controlling tuberculosis in India.

Key Words: Non allopathic Practitioners; RNTCP; KAP

Introduction:

India has the highest TB burden accounting for one-fifth of the global incidence with an estimated 1.98 million cases. Even though the treatment success rate has tripled from 25% to 87% and death rate has declined from 29% to 5%, it is still a major cause of morbidity and mortality in India.[1]

Non- allopathic practitioners are the major service providers especially in rural and peri-urban areas. They just not only get patients of Diarrhea, ARI and Abdominal Pain but they also receive patients of TB and other Chest Infection. Their awareness about the signs and symptoms and guidelines of RNTCP for the management of TB is also crucial. This will not only increase the early case detection rate but it also increases the treatment success rate.

Although various studies has been carried out to assess the involvement of allopathic practitioners in RNTCP and TB control.[2-5] There are limited studies showing the role of non allopathic practitioners in TB Control. Thus the present study was designed to:

- To assess the knowledge of sign and symptoms of TB and its management as per the RNTCP guidelines
- To assess the practicing pattern regarding tuberculosis.

Materials and Methods:

Study Design: The present study was a field based Cross Sectional study carried out in both rural and urban areas of Gwalior District from July 2008 to Dec 2008.

Study Participants: The present study was carried out among the registered non allopathic practitioners providing their services in Gwalior District during the study period. A total of 150 non allopathic practitioners of various pathies from both Government and Private Sectors were interviewed using a pre-designed, pre-tested semi-structured questionnaire. The numbered was kept limited to 150 keeping in mind the availability of government practitioners and the resources available. All the participant were selected using purposive sampling technique.

A list of practitioners was prepared using the help of District Authorities, District Tuberculosis office and various professional bodies of different pathies. The list was sorted to locate the practitioners. A prior contact was made with them to get verbal consent and suitable time for interview.

In depth Interview: A semi structured questionnaire was used to guide the interview. The information was collected on the General profile of the participant, knowledge about signs and symptoms of TB and its management, practices commonly adopted in the management and their views on involvement of non allopathic practitioners in RNTCP programme.

The performa has three parts. First part was related to the general profile of the participants. The second part was associated with the assessment of knowledge on TB and its management. All the correct responses were given one point and all incorrect and non responses were zero point. The third part of the performa was related to the practices adopted in the management of TB patients.

Statistical analysis: Descriptive statistic using suitable statistical software was used for the analysis and interpretation of the result. Chi square test was used as the test of significance between two groups. 5% level of significance was used as the cut off for the statistical significance and all the test were two sided.

Results:

Of the 150 practitioners interviewed 75 were from government sectors and 75 were from private sector. Majority of the practitioners were Aurvedic practitioners followed by Homeopathy. On sex wise distribution 104 were male and 46 were female. (Table 1)

The average score of government practitioners was 7.3 compared to 4.6 by private practitioners. On detail analysis of question related to the knowledge about signs, symptoms and management of TB patients. It was noted that there was a statistically significant difference between the two group on issue related to the management of TB patients as per the RNTCP guidelines but there was no difference on questions related to the awareness about the current status of TB in India. (Table 2)

Table 1: Showing the General Profile of the study Participants

S. No	General Profile	Government Practitioners(75)	Private Practitioners(75)	Total(150)
1	**Type of Pathy**			
	Ayurvedic	41	39	80
	Homeopathy	26	31	57
	Others (Unani, Siddha etc.)	8	5	13
2	**Sex wise**			
	Male	48	56	104
	Female	27	19	46
3	**Education Qualification**			
	Graduate	42	52	94
	Post Graduate	33	23	56
4	**Years of Practice**			
	<5 year	28	31	59
	>5 year	47	44	91
5	**Place of practice**			
	Rural	26	35	61
	Periurban	18	21	39
	Urban	31	19	50
6	**Any Training received**			
	Yes	58	31	89
	No	17	44	61

Table 2: Showing the distribution according to the Knowledge on TB

S. No	Knowledge on TB	Correct response		No Response		Incorrect response		P value
		No.	%	No	%	No.	%	
1	**A person with cough of 3 week duration should have sputum examination**							χ^2 =11.57; df=2; p =0.003
	Government Practitioners	41	54.6	18	24	16	21.4	
	Private Practitioners	21	28	24	32	30	40	
2	**X rays have only supportive role in the diagnosis of TB**							χ^2 =1.83; df=2; p=0.401
	Government Practitioners	21	28	16	21.3	38	50.7	
	Private Practitioners	14	18.6	18	24	43	57.4	
3	**Pulmonary TB is the most common TB in India.**							χ^2 =0.62; df=2; p=0.732
	Government Practitioners	53	70.6	9	12	13	17.4	
	Private Practitioners	49	65.3	12	16	14	18.7	
4	**A new pulmonary TB case requires treatment for 6-7 months**							χ^2 =15.58; df=2; p=0.0004
	Government Practitioners	53	70.6	8	10.6	14	18.8	
	Private Practitioners	29	38.6	15	20	31	41.4	
5	**INH prophylaxis should be given to breast feeding babies whose mother have active tuberculosis**							χ^2 =7.46; df=2; p=0.023
	Government Practitioners	45	60	9	12	21	28	
	Private Practitioners	29	38.6	18	24	28	37.4	
6	**TB is common in the age group of 15-60 years**							χ^2 =1.49; df=2; p=0.475
	Government Practitioners	53	70.6	8	10.6	14	18.8	
	Private Practitioners	51	68	5	6.6	19	25.4	
7	**X- ray findings persist for many years**							χ^2 =1.80; df=2; p=0.406
	Government Practitioners	44	58.6	13	17.4	18	24	
	Private Practitioners	36	48	15	20	24	32	
8	**In RNTCP there are three treatment categories**							χ^2 =23.56; df=2; p<0.0001
	Government Practitioners	53	70.6	10	13.4	12	16	
	Private Practitioners	24	32	16	21.3	35	46.7	
9	**Resistance to INH and Rifampacin is required to label a patient as having MDR TB.**							χ^2 =3.39; df=2; p=0.139
	Government Practitioners	17	22.6	24	32	34	45.4	
	Private Practitioners	13	17.3	16	21.3	46	61.4	
10	**HIV infection do not worsen the prognosis of TB**							χ^2 =1.51; df=2; p=0.470
	Government Practitioners	21	28	13	17.3	41	54.7	
	Private Practitioners	18	24	9	12	48	64	

(Government Practitioners N=75; Private Practitioners N=75)

On detail analysis of question related to the practices adopted in the management of TB patients by non allopathic practitioners. It was noted that government practitioners relied mostly on sputum examination for diagnosis and follow up compared to private practitioners who chose other modalities like X-ray, blood examination or this work. (Table 3)

Table 3: showing the distribution of participant according to the practices adopted in the management of TB Patients.

S.No	Practices adopted in the management	Government Practitioners	Private Practitioners	P Value
1	**Modality used for the diagnosis of TB patients**			χ^2 =30.00; df=3; p<0.0001
	Sputum examination	56	24	
	X-ray	9	36	
	Elisa/blood Examination.	6	9	
	Others	4	6	
2	**Modality used for follow up of TB patients**			χ^2 =18.59; df=3; p=0.0003
	Sputum examination	49	23	
	X-ray	15	31	
	Elisa/blood Examination.	7	16	
	Others	4	5	
3	**Do you refer poor patients suffering from TB to the nearest DOTs centre**			χ^2 =8.31; df=1; p =0.00394
	Yes	71	59	
	No	4	16	
4	**Do you refer serious patients to the nearest DOTs centre**			χ^2 =4.81; df=1; p =0.0283
	Yes	73	66	
	No	2	9	
5	Places to get investigation done			χ^2 =68.13; df=1; p<0.0001
	Govt./Pvt. accredited labs	68	18	
	Private labs	7	57	
6	**Do you have records of TB patients**			χ^2 =138.2; df=1; p<0.0001
	Yes	73	1	
	No	2	74	
7	**Type of regime prescribed by you**			χ^2 =81.60; df=1; p <0.0001
	Alternate day regime	69	18	
	Daily regime	6	57	
8	**Average duration of treatment required to treat a new smear positive cases**			χ^2 =1.68; df=3; p =0.6419
	<4 months	5	8	
	4-6 months	36	29	
	6-8 months	22	25	
	> 8 months	12	13	
9	**Do you treat TB patients suffering from HIV**			χ^2 =1.01; df=1; p =0.3156
	Yes	0	1	
	No	75	74	
10	**Do you have material to spread awareness about TB in community**			χ^2 =2.11; df=1; p =0.146
	Yes	73	69	
	No	2	6	

In the present study there was near unanimous consensus on the view that RNTCP training should be given to all the practitioners irrespective of the sector under which he/she providing its services (93.34%). Similarly, CMEs were the most preferred modality used for creating awareness regarding the recent advances in TB management (Table 4)

Table 4: Showing the distribution according to the view regarding RNTCP

S. No	Views	Government	Private
1	**RNTCP training should be given to all non allopathic practitioners also**		
	Yes	71	69
	No	4	6
2	**The most effective ways of upgrading the knowledge of practitioners on recent advances in the field of TB is by**		
	CME	69	65
	Books	52	36
	Journals	36	24
	Pamplets/ hand-note	24	18
	Newspapers	12	16
	Others	20	24
3	**Most effective ways of creating awareness on TB in community**		
	TV	71	69
	Radio	61	62
	Newspapers	42	49
	Wall paintings	33	39
	Street shows	12	19
	Others	22	21

(Participants gave multiple responses for question 2 & 3)

Discussion:

It is noted in the present study that government practitioners are more knowledgeable on tuberculosis and its management as per Revised National Tuberculosis Control Programme (RNTCP) guidelines as compared to private practitioners. The mean score of government practitioners was 7.3 compared to 4.6 of private practitioners. This is similar to the finding of Vandana et al [4] who compared the knowledge of allopathic practitioners of both the sector. This difference in knowledge of both the group can be attributed to the fact that government practitioners had received more in depth training and regular updates from programme managers.

On question by question analysis, it was noted that practitioner of both the sector were aware of the current situation of tuberculosis in India. However, statistically significant differences were noted on question related to assessment of knowledge regarding management of tuberculosis as per RNTCP guidelines.

Practitioners of both the sector were unaware of the role of X-ray in the management of tuberculosis. Only 28% of government and 18.6% of private practitioners were aware that X-ray has only supportive role in the tuberculosis diagnosis. Similarly, only 58.6% of government and 48% of private practitioners were aware that X-ray finding persists for many years even after the treatment.[6]

It was noted in the present study that there were statistically significant differences in the knowledge of the two groups on issues related to sputum examination, prophylaxis, duration of treatment and categories under RNTCP programme. While 58% of government practitioners were aware of the fact that a person with a history of cough for three weeks should undergo sputum examination compared to 28% of private practitioners.[6] Similarly, 70.1% of government was aware that new pulmonary tuberculosis requires a treatment for 6-7 months compared to 38.7% of private practitioners.[6] This is a dangerous situation as unawareness regarding the exact duration of treatment among private practitioners lead to inadequate or prolonged treatment of tuberculosis case both of which is detrimental to patients and the programme.

It was observed in the present study that 60% of government and 38.7% of private practitioners were aware of the fact that INH prophylaxis should be given to the infants whose mother develops active tuberculosis as per RNTCP guidelines. [6] Simil-

arly it was observed that only 32% of private practitioners were aware that there are three treatment categories under RNTCP.

It was observed in the present study that the awareness regarding HIV-TB and MDR-TB were low among the participants of both the group. Only 22.6% of government and 17.3% of private practitioners were aware of the exact definition of MDR-TB. Similarly, only 28% of government and 24% of private practitioners were aware that HIV does not affect the prognosis of TB.[6]

Practices common among Non Allopathic Practitioners

It was observed that there was a statistically significant differences in the practices adopted in the management of TB patients by participants of both the group with the practices of government practitioners more in line with the guidelines of RNTCP. However, the researchers would like to say that the respondent what they believe to be accepted, instead of what they actually practices in their clinic.

It was observed in the present study, that while the government practitioners mostly relied on sputum examination for diagnosis and follow-up, X-ray was the most preferred modality for private practitioners for both diagnosis and follow-up. This is similar to the finding of Anandhi CL et al[7] who also noted that majority of non-allopathic practitioners relied on X-ray and blood examination for diagnosis and follow-up. Studies carried out by other researchers on private allopathic practitioners both in India and around the globe have also noted the similar importance of X-ray in the diagnosis and follow-up of TB patients.[2,3,8,9]

On question of referral to nearest DOTs centre, government practitioners do frequent referral of poor and serious patients to nearest DOTs centre compared to private practitioners. This difference in approach of two group can be attributed to the fact that there can be huge monetary loss of private practitioners if frequent referral is made by them. Besides these some patients reporting to private practitioners do not want to be referred to a government hospital.

It was noted in the present study that most of the private practitioners (76%) refer their patients to private labs for investigation compared to 9% of government practitioners. This approach of private practitioners can be assign to either the lack of awareness about the government accredited labs in the area or to the monetary gain received from these labs on referring of such patients. However, would like to express their sincere views that there can be other causes also for this differential approach.

It was noted in the present study that practically none of the private practitioners were having records of the patients they have treated or are under their treatment. This is because of lack of awareness about the public health dimensions of tuberculosis or that they find RNTCP recording stipulations too time consuming and burdensome? Studies carried out by Aryay SO[10] among the allopathic practitioners had also noted similar results. Similarly majority of the private practitioners prefer daily regime over the alternate day regime for the treatment of TB patients.

It was also noted in the present study that majority of the practitioners both of government and private sectors(48% & 38.7% respectively) prescribe ATT to a new smear positive pulmonary TB patients for a period of 6-8 months as describe under the national programme.

On question of treatment of HIV-TB patients, it was noted that practically none of the participants want to treat such patients. This could probably due to lack of knowledge about the management of HIV-TB co-infection. This is similar to the findings of Kermode m et al [11] on health care workers in rural India.

Views to strength RNTCP:

Practitioners of both the group believed that RNTCP training should be given to all the non allopathic practitioners also if the government is sincere in making serious attempt to control tuberculosis in India. Similar views are also reported by Anandhi CL et al[7] in their study on non allopathic practitioners.

The present study has also reported similar consensus on question related to ways of upgrading the knowledge of practitioners and the most effective ways of spreading awareness on TB in the community. Most of the participants of both the group were of opinion that CMEs is the most effective way of upgrading the knowledge of practitioners on recent advances in the field of TB in India. Similarly, television and radio were rated as the most effective ways of creating awareness in community by participants of both the group.

Conclusion:

The present study hereby concludes that there is a gap in knowledge and practices of practitioners of both the sectors. Some serious efforts were required to upgrade the knowledge of non allopathic practitioners if the government is serious about controlling tuberculosis in India. The programme managers should think of ways to motivates private practitioners to get involve in RNTCP.

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References:

1. TB India 2010. RNTCP Status Report. Central TB Division, Ministry of Health & Family Welfare, Nirman Bhavan, New Delhi.
2. Singla N, Sharma PP, Singla R, Jain RC. Survey of knowledge, attitude and practices for tuberculosis among general practitioners in Delhi, India. I*nt J Tuberc Lung Dis.* 1998;2(5):384-389.
3. Uplekar M, Juvekar S, Morankar S, Rangan S, Nunn P. Tuberculosis patients and practitioners in private clinics in India. *Int J Tuberc Lung Dis.* 1998;2(4):324-329.
4. Vandan N, Ali M, Prasad R, Kuroiwa C. Assessment of doctors' knowledge regarding tuberculosis management in Lucknow, India: a public private sector comparison. *Public Health.* 2009;123(7):489-499.
5. Dosumu EA. Survey of knowledge, attitudes and practices regarding tuberculosis among general and private practitioners in Nigeria. Mera. *African Journal of Respiratory Medicine*. 2008;3:17-19.
6. Managing the Revised National Tuberculosis Control Programme in your area. A training course Module 1-4. Central TB Division, Director General of Health Services, Ministry of Health and Family welfare, New Delhi, 2005
7. Anandhi CL, Nagaraj VK, Kumar R. Knowledge and practice pattern of non-allopathic indigenous medical practitioners regarding tuberculosis in a rural area of India. *Int J Tuberc Lung Dis.* 2002;6(6):553-555.
8. Auer C, Lagahid JY, Tanner M, Weiss MG. Diagnosis and Management of Tuberculosis by private practitioners in Manila, Philippines. *Health Policy.* 2006;77(2):172-181.
9. Rajpal S, Mittal A Dhingra VK, Malhotra R, Gupta R, Malhotra C, Taneja DK. Knowledge, attitude and practices regarding tuberculosis and DOTs among interns in Delhi, India. *J Coll Physicians Surg Pak.* 2007;17(8):457-461.
10. Ayaya SO, Sitienei J, Odero W, Rotich J. Knowledge, attitude and practices of private medical practitioners on tuberculosis among HIV/AIDS in Eldoret, Kenya. *East African Medical Journal*. 2003;80(2):83-90.
11. Kermode M, Holmes W, Langkham B, Thomas MS, Gifford S. HIV- related knowledge, attitude and risk perception amongst nurses, doctors and health care workers in rural India. *Indian J Med Res*. 2005;122:258-264.