



Knowledge, Attitude and Practices on Tuberculosis Infection Control among Health Workers in Shivamogga

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ABSTRACT

Background: Tuberculosis (TB) remains a major cause of ill health and with the raise in incidence of drug resistance TB control efforts have now become even more challenging Which has led to a greater concern towards TB infection control (IC). Institutional settings, and also the health care facilities, have been identified to be at very high risk of TB transmission². Studies conducted in low and middle income countries have reported high nosocomial transmission of TB among health care workers.

The study was conducted to determine the level of knowledge, attitude and practices of HCWs towards the TB infection control.

Methods: A hospital based, cross-sectional study was conducted in Mc gann hospital attached to Shimoga institute of medical sciences, Shivamogga. A total of 210 nursing staff, lab technicians and others were assessed for knowledge, attitude, and practices on TB infection control using a structured, self administered questionnaire. The data were then analyzed using SPSS software.

Results: In this study it was found that the level of knowledge on TB infection control was good among more than half of the respondents.

Conclusion: The knowledge, attitude and practice regarding TB infection control was not satisfactory. So there is a need for development and implementation of TB infection control plan in all centers providing TB care.

Key Words: Tuberculosis, Infection control, Health care settings, Knowledge, attitude and practices

INTRODUCTION

Tuberculosis (TB) remains a major cause of ill health affecting 10 millions of people in the year 2018 globally¹. With the raise in incidence of drug resistance TB control efforts have now become even more challenging, Which has led to a greater concern towards TB infection control (IC). Institutional settings, and also the health care facilities, have been identified to be at very high risk of TB transmission². Studies conducted in low and middle income countries have reported high nosocomial transmission of TB among health care workers⁴⁻⁸.

Infection control is one the key strategies for TB control and TB infection control guidelines are available for all settings (9). But the implementation of guidelines is inadequate as reported by previous studies^{3,4,10-12}. The health care workers with inadequate knowledge are likely to contribute to increased risk of nosocomial transmission of TB^{14,15}.

In India there were estimated 26,90,000 incident TB cases (199per100000) and TB deaths in the year 2018¹.drug resistance level is high with 46% of new cases resistant to at least one drug.

The national tuberculosis control programme do not emphasis much on TB infection control. Information about KAP among health workers would provide important basis for national tuberculosis control programme to take initiatives for TB infection control especially in the hospital settings.

OBJECTIVE

The study was conducted to determine the level of knowledge, attitude and practices of HCWs towards the TB infection control.

METHODOLOGY

This cross sectional study was conducted from January to April 2018 in Mc gann hospital attached to Shimoga institute of medical sciences shivamogga. Karnataka. All health professionals who had been working in Mc gann hospital were the source population. A total of 210 nursing staff, lab technicians and others were assessed for knowledge, attitude, and practices on TB infection control using a structured, self administered questionnaire. A structured questionnaire was developed for data collection which included the specific components of TB IC questions relating to KAP and was based on tools used in similar studies^{13,14}. The tool was pretested and revised appropriately after the pilot study. The completed questionnaires were checked before data entry to ensure data consistency and completeness.

Statistics: The data were then analyzed using SPSS software.

RESULTS

The socio-demographic profile of the respondents is as shown in table 1. The majority of the respondents belonged to age group 30-39 yrs. Respondents' knowledge of TB transmission and protective measures is as shown in Table 2. Most of the questions were correctly answered by many participants.

The lowest number of correct answers was to the questions "How long is a TB patient infectious after starting treatment? For which many did not know the answer more than 95% of the participants knew that TB spreads by air and so TB suspects should be separated from the rest of the patients. Only 27% of respondents knew that sputum microscopy is the most effective tool for diagnosis of TB.

Table 1: Socio-demographic profile of respondents

Variables	Frequency (%)
Age	
20-29yrs	36 (17.14)
30-39yrs	101 (48.09)
40-49yrs	47 (22.38)
50-59yrs	26 (12.38)
Gender	
Female	174 (82.85)
Male	33 (17.15)
Job title	
Staff nurses	189 (90)
Lab technicians	18 (8.5)
Others	3 (1.5)
TB infection control	
Received	26 (12.38)
Training	
Not received	184 (87.61)

Table 2: Knowledge about TB infection control

Questions	Right answer	Wrong answer
1. How long is a TB patient infectious after starting treatment?	6(2.8%)	204(97.2%)
2. TB is often spread from person to person through the air?	206(98.09%)	4(1.90%)
3. Patients with active TB disease can infect people by talking	167(79.52%)	43(20.47%)
4. Surgical masks protect HCWs & visitor from TB particles that can be breathed in	34(16.19%)	176(83.80%)
5. Keeping doors & windows open helps to reduce the spread of TB	197(93.80%)	13(6.2%)
6. TB suspected should be separated from the rest of the patient.	205(97.6%)	5(2.4%)
7. TB patient have to be educated to cover their mouth with a handkerchief.	191(90.95%)	19(9.05%)
8. Sputum microscopy is the most effective tools for the diagnosis of TB	57(27.14%)	153(72.86%)

Table 3: Attitude on TB infection control

Statements	Agree	Neutral	Disagree
There is a need for guidelines regarding TB IC in a health care facility.	199(94.76%)	11(5.23%)	0(0%)
HCWs should wear respirators while caring for TB patients	165(78.57%)	40(19.04%)	5(2.3%)
Most HCWs are already infected so there is no need of IC measures	37(17.6%)	45(21.4%)	128(60.9%)
I do not wear respirator because patients do not like me to wear it	32(15.2%)	20(9.5%)	158(75.2%)
If I were to develop symptoms of TB, I would feel comfortable requesting TB diagnosis.	136(64.76%)	49(23.34%)	25(11.90%)
I am concerned about being infected with TB	168(80%)	25(11.90%)	17(8.09%)
It is very important to prevent the spread of TB in the hospital	157(74.76%)	19(9.04%)	34(16.19%)

Table 4: Practice of TB infection control

Infection control practice	Always	Sometimes	Never
Frequency of wearing a mask when around TB patients or suspects	140(66.66%)	28(13.33%)	42(20%)
Frequency of cough hygiene procedures use by patients	168(80%)	22(10.4%)	20(9.5%)
Frequency of separating coughing patients from other patients attending clinic	149(70.9%)	45(21.42%)	16(7.6%)
Frequency of offering surgical masks to visitors to centre?	111(52.85%)	69(32.85%)	30(14.28%)
Frequency of keeping windows open in the wards to maintain crossventilation.	110(52.38%)	70(33.33%)	30(14.28%)

Self-reported attitudes of respondents are shown in Table III. There was a common agreement that it was important to prevent the spread of TB in the hospital and there is a need for guidelines regarding TB IC in a health care facility (94.76%). 64.76% of respondents agreed they would be comfortable seeking diagnosis if they developed any symptoms of TB. 80% of the respondents were concerned about being infected with TB.

The respondents self-reported practice showed a quite good practice of infection control activities, with the majority stating that they carried out all the five activities assessed. However, 20% reported that they never wear masks when around TB patients or suspect TB patients, 14.25% replied they never offer surgical masks to visitors.

DISCUSSION

This study brings out the information on the knowledge and self-reported attitudes and practices of TB infection control measures among health care workers of Mc gann hospital Shivamogga. In this study it was found that the level of knowledge on TB infection control was good among more than half of the respondents. Similar results were found in a study conducted by Shrestha et al to assess Health care workers' knowledge, attitudes and practices on tuberculosis infection control, Nepal. Which showed almost half of the HCWs did not have good knowledge³. A study by Ekuma et al on Knowledge, attitude and tuberculosis infection control practice among healthcare workers in DOTS centers in Lagos, Nigeria. Showed similar results¹⁶. A study by Gizaw et al also showed that the knowledge regarding TB infection control was poor among 36% of the HCWs¹⁷.

In this study it was found that, most of the HCWs had positive attitude towards TB infection control. Similar findings were found in other studies^{3,16,17}. In this study 66.6% of HCWs reported that they wore mask when around TB patients or suspects. 70.9% of them reported that they kept coughing patients separated from that of others. 52.85% of them offered surgical masks to visitors always, of which 52% of them used them. Similar findings were found in the other studies^{3,16,17}.

CONCLUSION

SDGs target at ending TB by 2030, it is possible only when further transmission of TB is controlled. As seen in this study the knowledge, attitude and practice regarding TB infection control was not satisfactory. So there is a need for development and implementation of TB infection control plan in all centers providing TB care.

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