

ORIGINAL ARTICLE

Knowledge, Attitude, Practice and Stigma of Tuberculosis among Healthcare Providers in Hospital Ampang

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ABSTRACT

Introduction: Malaysia is an intermediate tuberculosis burdened country as classified by WHO. There was a recent rise in TB incidence. Healthcare providers, especially in secondary or tertiary centers, were constantly exposed to TB infected patients, which is a hazard source for TB infection. Thus, assessment of behavior towards TB is paramount through knowledge, attitude, health-seeking practice, and stigma domains. **Method:** A cross-sectional survey was carried out between November 2014 and February 2015 among healthcare providers in Medical Department, Hospital Ampang. Data were analyzed using SPSS ver 21. **Results:** Despite overall good knowledge on TB, only 20% of the correspondence knew which patient's population is at risk of TB infection. Almost all perceived TB as a health threat and willing to seek medical care if they developed TB symptoms. However, a small proportion (5.3%) will keep it a secret if they contracted TB. This is contrasted by the majority that perceived TB patients will not be accepted by the community. **Conclusion:** Knowledge and attitude towards TB was adequate within the healthcare providers in Medical Department, Hospital Ampang despite the presence of some knowledge gaps. However, there was high perceived stigma that needed to be addressed in order for them to deliver the best medical care.

Keywords: Healthcare providers, KAPS, TB, Tuberculosis

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INTRODUCTION

Tuberculosis (TB) is an infectious air-borne disease caused by *Mycobacterium tuberculosis*. South East Asia accounts for 41% of the global TB burden in term of incidence (1). Long time ago in the early of 1940s and 1950s, the number one cause of death in Malaysia is tuberculosis (2). Thanks to the initiative done by Malaysia Government. National TB Control Programme which was launched in 1962, the mortality rate started to decline together with incidence (3). There was a massive reduction in number of reported cases of childhood tuberculosis and tuberculous meningitis admission in government hospitals after 1969, and up to 5 million primary vaccinations had been performed by the end of 1975 due to the initiative. Unfortunately, current increase in incidence of tuberculosis is worrying (4).

TB can be categorized into pulmonary and extrapulmonary. Pulmonary is the commonest form in Malaysia, and patients came with productive cough,

haemoptysis, chest pain as well as non-specific constitutional symptoms such as loss of appetite, unexplained weight loss, fever, night sweat and fatigue. In extrapulmonary cases, the symptoms and signs vary according to the organ affected. Since Malaysia was categorized as intermediate TB burden country by World Health Organization (WHO), health care providers in all area of practices were exposed to high risk contact with TB. Selangor was ranked second behind Sabah as the highest TB burden in Malaysia (5). TB case detection in Selangor relies heavily on passive case detection. Despite marked improvement in our health care setting, the major infection risk to the health care providers is mainly through undiagnosed or unsuspected patient or staff member with infectious TB disease (6).

There was an increasing pattern of TB among Ministry of Health worker that was deemed work-related (7). Furthermore, prevalence of latent TB among healthcare providers in Malaysia was 10.6%. Coupled with no specific measures for prevention of TB transmission in healthcare setting, there is a need to explore the awareness and health-seeking behaviour among healthcare providers.

This study was designed to explore TB-related knowledge, attitudes, stigma and health seeking practices among

the health care providers in Hospital Ampang, and to determine the association of socio-demography, duration of working and position in medical department towards TB health-seeking practice.

MATERIALS AND METHODS

Self-administered questionnaire was administered throughout the General Medical ward in Hospital Ampang over the duration of 4 months. 1 trained interviewer collected all the data. Written informed consent were obtained before administration of questionnaire. No confidence information was obtained for the questionnaire.

The questionnaire was adopted from the WHO sample which underwent 2 pilot studies yielding good reliability (Principal Component Analysis >6) and with Cronbach’s alpha of <0.01.

There were few assumptions made for this study:

- The sample selected was a representative of the staffs in General Medical wards in Hospital Ampang.
- All respondents in this study participated voluntarily and truthfully.

Data measurement

Knowledge towards TB: Overall knowledge of TB was assessed using 7 questions. 1- Ever heard of TB. 2- Able to list mode of transmission of TB. 3- Know TB is curable. 4- Know TB patients can receive modern treatment at government health facilities. 5- Know that cost of treatment for TB is free under governmental services. 6- Know the right signs and symptoms of TB infection. 7- Know people at risk of being infected with TB.

Attitude towards TB: Healthcare providers’ attitude towards TB was assessed using 4 questions. 1- Perceived TB as a serious/somewhat serious disease. 2- Perceived TB as a widespread disease in Malaysia. 3- Perceived self was at risk of TB infection. 4- Mentioning positive feelings towards the disease.

Healthcare seeking-behavior of healthcare providers: This domain was assessed using 2 questions. 1- Will seek modern treatment if developing signs and symptoms of TB. 2- Will express worries towards medical carer if being diagnosed with TB.

Perceived stigma towards TB: This was assessed using 4 questions. 1- Know anyone who had TB. 2- Mentioning positivity and a need to help someone who has TB. 3- Community perception about patients with TB infection. 4- Whether will severed relationship with someone who has TB.

Sources of TB information: The sample population’s sources of TB information were assessed by asking 3 questions. 1- What is their seminal source hearing

about TB for the first time. 2- Are they adequately well-informed about TB. 3- Whether radio, television, and internet help in spreading information about TB.

Data analysis

The data collected was analyzed using Statistical Program for Social Sciences (SPSS) application version 21.0. The sociodemographic variables of the study population were summarized using appropriate descriptive statistics. The association between knowledge, attitude, stigma and practice among the respondents was analyzed using Chi-square test. All hypothesis tests were tested on p value of < 0.05 and 95% confidence interval to be considered as statistically significant, and correlation coefficient was used to describe the strength and direction between two variables.

RESULTS

A total of 75 correspondents from Medical Department Hospital Ampang were gathered throughout the study duration. Eighty-one percent of the healthcare providers were aged less than 30-year old. Seventy-six percent of the respondents were female. Fifty-two percent were at least a university degree holder. Majority of the correspondents were the staff nurses at forty percent. Seventy-eight percent worked in the Medical Department at least more than -months duration. Table I list the details of the study population’s demographic.

Table I: Demographic of the study population

Variables		Freq	Percentage %
Age	<30	61	81.3
	31-40	10	13.3
	41-50	3	4.0
	>50	1	1.3
Gender	Male	18	24
	Female	57	76
Education	SPM	4	5.3
	Certificate	32	42.7
	Degree	39	52.0
Position	PPK	4	5.3
	Nurse	30	40.0
	Matron	5	6.7
	House officer	23	30.7
	Medical officer	13	17.3
Duration of working in medical department	<3 months	16	21.3
	3 to 6 months	12	16.0
	6 to 12 months	15	20.0
	>1 year	32	42.7

Knowledge on TB

Out of 75 correspondents, 75 (100%) know where to seek treatment for TB and 74 (98%) have heard about TB. 72 (94%) know TB is curable and 59 (78%) know TB is an airborne disease. Next, only 49 (65%) know the symptoms and signs of Tb and only 15 (20%) know which population is at risk of getting TB. Table II list the details on knowledge of TB.

Table II: Knowledge on TB

Variables	Frequency (%)
Have heard about TB	74(98%)
Know mode of transmission of TB	59(78)
Know TB is curable	72(94%)
Know where to get treatment of TB	75(100%)
Know TB cure is free	60(80%)
Know signs and symptoms of TB	49(65%)
Know which population is at risk of getting TB	15(20%)

Attitude on TB

74 (98%) of the respondents think that TB is dangerous and 73(97%) think TB is endemic in Malaysia and felt vulnerable to TB. Table III list the details on attitude on TB of the study population. There was no correlation between length of practice in Medical Department or position within the Medical Department with attitude on TB infection.

Table III: Attitude on TB

Attitude	Frequency (%)
Think TB is dangerous	74 (98)
Think Tb is endemic in Malaysia	73(97)
Felt vulnerable to TB	73(97)

Practice on TB

66 (88%) of the correspondents will seek appropriate treatment when they develop TB symptoms. and 4 (5.3%) will not tell anyone if they have TB (Table IV). There was no correlation between length of practice in Medical Department or position within the Medical Department with practice on TB infection, except for seeking appropriate treatment in the doctor group.

Table IV: Practice on healthcare seeking-behaviour

Practice	Frequency (%)
Would seek appropriate treatment when they develop the TB symptoms	66 (88)
Would keep a secret	4(5.)

Stigma on TB

66 Out of 75 respondents, 62(82%) felt the community will not accept TB patients well and 56(76%) felt needed to help TB patient. 55(73%) claimed they know someone with TB and 9(12%) will change relationship if found out that person has TB (Table V).

Sources of TB infection

Out of 75 respondents, 66(88%) heard about TB through educational institution. 48(64%) of them felt adequately well-informed about TB and only 5(6%) felt radio, television and internet help in spreading TB information (Table VI).

Table V: Stigma on TB

Variables	Frequency (%)
Felt needed to help TB patient	57(76)
Felt the community will not accept TB patients well	62(82)
Will change relationship if found out that person has TB	9(12)

Table VI: Sources of TB information for the study population

Variables	Frequency (%)
Heard TB through educational institution	66(88)
Felt adequately well-informed about TB	48(64)
Felt radio, TV and internet help to spread TB information	5(6)

DISCUSSION**Knowledge on TB**

65% of our study population managed to answer on symptoms of TB correctly, in contrast to a similar study conducted in 5 TB care facilities which yield 80% of their study population answered correctly (8) This highlighted a knowledge gap on healthcare worker. However, 94% of respondents agree that TB is curable which is almost as same like the similar study conducted by D.S Hashim et al in Iraq (9).

100% respondents know where to get the TB treatment and only 20% of them know which population is at high risk of getting TB. 40% of non-doctors doesn't know that drug abusers, HIV patients and ex-prisoners are at higher of having tuberculosis even though there are studies revealed that they are more vulnerable to get TB infection (10,11,12). In contrast to study done by Lesley et al among healthcare workers at Lesotho, 96% of them know that HIV patients predispose to contracting TB (13). It showed that there were certain important issues that we forget to address like the high-risk group to get TB.

Attitude on TB

In general, the attitude of health seeking providers in Hospital Ampang are good as evidence by more than 97% believe they are vulnerable to TB, think TB is endemic and dangerous.

In addition, there is significant association between duration in medical wards and feeling of adequate TB information. Half of the medical ward staffs who have less than 3 months experiences in there admit they are still inadequately well-informed about TB. Half of the non-degree holders and non-doctors staff also admitted the same thing. This is important as they have direct dealing with TB patient example like giving medication, bed-changing, tepid sponging and so on.

It may reflect from the study done at South Africa by Z Kanjee et al whereby 49% of healthcare providers there felt that the hospital administration did not care about them and was not working hard to prevent nosocomial TB infections among staff (14). Almost 98% of healthcare workers in Lesotho practice hand hygiene in order to prevent TB spread towards them (19). This justify the study done by A.D Harries et al that personal protective equipment proved to be important in controlling TB spread among health care providers (15).

Practice on TB

88% of the respondents have a good health seeking practice in that they will seek appropriate treatment if symptoms of TB 5% respondents will not tell anyone if they have TB and all of them are female. This may relate to the feeling of being rejected by the families or marital breakdown (16).

Nevertheless, there is significant association between education level and practice of seeking appropriate treatment if he or she develop the symptoms of TB. 36 % of non- degree holders will seek another option rather than hospital for TB treatment. The result is also significant for health seeking practice among doctors and other staffs whereby only 48 % and 40% of them respectively opted to get hospital treatment. This coincided with the study in Pakistan whereby more than 50% patients practice self-treatment, and 42% first searched a pharmacy for their symptoms (17). Delayed seeking treatment can increase the risk of transmission, morbidity and mortality rate for tuberculosis which was in line with the study done by Oladayo et al (18).

Stigma on TB

Overall, 82.7% felt that community will not accept TB patients well and 12% will change relationship if found out that his or her contacts have TB. 69% of medical staffs who have more than 3 months experiences in medical department believe that community will not accept the TB patients well. Study done by Samuel et al at Ghana showed that 50% of patients are prevented from mixing with other people in the community (19). This is correlate to the study done by Muhammad Atif et al that more than 23% of TB patients were at risk of depression at the end of their TB treatment (20).

41 % of non-degree holders claimed that they know someone with TB and only 32% of degree holders claimed the same way. The same pattern also showed among non- doctors and doctors whereby 44% and 29% respectively claimed they know someone with TB. This may prove that TB misconception is still there to be improve like stated by K. Zaman (21).

Source of TB information

88% of the respondents have heard about TB through educational institution and only 6% of respondents felt that radio, television and internet help to spread TB information. This is in line with the study done by Anamarija at Croatia showing there is no media-based health education on TB, which can be powerful tool to provide basic information of TB knowledge (22).

CONCLUSION

We found that TB is uniformly familiar to the healthcare providers in Medical Department, Hospital Ampang despite some knowledge gap about TB. Attitude and health seeking practice towards TB were good, however,

there were high overall perceived stigma towards TB. Healthcare providers are the main manpower to combat TB in secondary and tertiary healthcare facilities. Utilising mass media, including social media, and consolidating pre-existing strength such as health education intervention via multiple units could pave ways to overcome these challenges. More interventional studies are needed to ensure the right knowledge was given, to avoid negative attitude, and stigma avoidance in order for the healthcare providers to deliver the best care, especially when TB incidence is on the rise.

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