

The Descriptive Study of Knowledge and Awareness of Tuberculosis Among Students in Universiti Tun Hussein Onn Malaysia

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Abstract : Despite the disease management and controls introduced by Ministry of Health Malaysia, tuberculosis remains the major public threats among Malaysian. Enhancing the awareness among community is one of the strategy outlined by WHO in the Global Plan to Stop TB 2006-2015 program. Due to this, many programs have been introduced to increase awareness among the community. Universiti Tun Hussein Onn Malaysia is situated in the industrial radius area. The rate of migration is higher from neighboring countries such as Indonesia, Myanmar, Bangladesh, Vietnam, Filipina and India which known to have high burden tuberculosis cases. Therefore, the anxious of the disease to spread is significant. This study employs a quantitative research approach by using semi structured questionnaires which have close ended questions. The questionnaire focused on tuberculosis knowledge on risk factors, clinical symptoms and treatments. About 270 questionnaires were randomly distributed amongst students at Universiti Tun Hussein Onn Malaysia and the results were analyzed using the Statistical Package of Social Sciences (SPSS) 20.0. The results demonstrated that, the majority of the respondents were aware of the infection, symptoms and curability of the disease. However, almost 90% of the respondents did not know the duration of treatments. The lack of awareness is associated with delays in seeking professional treatment. The study shows that awareness among students about TB is fairly good, but extensive survey is required especially on the risk factors.

Keywords: Tuberculosis, Awareness, knowledge, Students

1. Introduction

Tuberculosis (TB) is still a public health problem in many developing countries including Malaysia [1]. There were 8.8 million incident cases of TB in 2010 globally. With the rising number of HIV/AIDS cases there is a threat of a resurgence of TB as this is the most common opportunistic infection in them [2]. WHO in 1993 declared that TB as a global public health emergency [3, 4], and it is the only disease ever declared as a global emergency by WHO [5]. It has been identified as one of the six infectious diseases that pose a threat to the global population [6]. The worldwide burden of TB mainly lies in the 22 high burden countries and about 50% of prevalence occur infive countries of South East Asia [7], namely; India, Indonesia, Bangladesh, Thailand and Myanmar [2]. It causes more adult deaths in the world than any other communicable diseases in developing countries where 95% of all TB cases occur [8]. It was the second most common notifiable communicable diseases in Malaysia in 2001 [9]. Apart from being a deadly disease, TB is also an expensive disease which can give a great economic problem to the country [10].

The trend of TB in the year 2010 in Malaysia showed a total of 18,517 people have been infected, which is an increase of 6% when compared to the previous year (17,341 cases in year 2009). The highest cases were found in that same year were in Sabah, 3278 cases, followed by Selangor (2829 cases), Johor (2058 cases), Sarawak (1991 cases) and Kuala Lumpur (1455 cases) [6]. The re-emergence of this predicament can be attributed to the high influx of foreign workers from high TB burden neighboring countries such as India and China into the community [1] and this became one of the reasons why TB could be called “a disease without borders” in Malaysia [11]. Awareness of TB is a significant impact on TB control [12]. Owing to the ease of infection, anybody can contract TB. Unfortunately, people are not aware of TB. This lack of knowledge and awareness is a global problem. Therefore, the study attempts to examine the level of student’s awareness concerning this disease by investigating the the levels of awareness of TB knowledge on risk factors, clinical symptoms and treatment.

2. Methods

This study employs a quantitative research approach. The data were collected using closed ended questionnaires which have close ended questions. The questionnaires were developed based on the previous studies [13, 14]. The questionnaire form was divided into two parts which were part A (profile of respondents) and part B (Awareness of TB on clinical symptoms, risk factors and treatments). This method is suitable for answering research questions of this study. Previous researches used the similar method to measure the level of public awareness on TB disease [15, 16, 17]. About 300 questionnaires were randomly distributed amongst students at Universiti Tun Hussein Onn Malaysia and 270 questionnaires were returned. The data obtained were analyzed using SPSS 20.0.

3. Results and Discussions

A total of 270 out of 300 students were responded to the study. Table 1 shows the data of socio-demographic profile that consisted of 59.3% male and 40.7% female respondents. Likewise, Malays represented the majority of the respondents (55.9%) followed by Chinese (20.7%), Indian (15.9%) and others which includes Nigerians, Yemenis, Iranians, Pakistanis and Somalian (7.4%). In addition, 62.6% of the respondents were first year students, then followed by 25.2% in the second year, 8.1% and 4.1% were third and fourth year students respectively. The study also found that 72% of all the respondents were single while 27.4% are married.

The results of TB awareness on clinical symptoms and risk factors shown in Table 2 demonstrated that more than half (78.1%) of the respondents were aware of haemoptysis as a clinical symptom of TB, followed by chest pain (78.1%), coughing for over 2 weeks (77.8%), difficult breathing (67.4%), weight loss (55.6%) and loss of appetite (41.5%). On the other hand, HIV/AIDS (71.1%) was recognized by majority of the respondents as one of the risk factors of TB, this is followed by living with individual having chronic cough (70.7%), people exposed to TB in their working places (69.3%), smoking cigarette (69.3%) and low income groups (57.4%). However, diabetes mellitus which is second to HIV/AIDS as the risk factor of TB was known

by less than half of the respondents (37.8%) as the risk factors of TB.

Table 1 Socio-demographic profile of the respondents

Characteristics	Numbers	Percentages
Gender		
Male	160	59.3
Female	110	40.7
Race		
Malays	151	55.9
Chinese	56	20.7
Indians	43	15.9
Others	20	7.4
Year of education		
Year 1	169	62.6
Year 2	68	25.2
Year 3	22	8.1
Year 4	11	4.1
Marital status		
Single	196	72.6
Married	74	27.4

Table 2 Respondents awareness about symptoms and risk factors of TB

Characteristics	Numbers	Percentages
Symptoms		
Difficult breathing	182	67.4
Coughing for over 2 weeks	210	77.8
Haemoptysis	211	78.1
Loss of appetite	112	41.5
Chest pain	211	78.1
Loss of weight	150	55.6
Risk factors		
HIV/AIDS	192	71.1
Diabetes mellitus	102	37.8
Smoking cigarette	187	69.3
Low income group	155	57.4
Living with individuals with chronic cough	191	70.7
Exposed to TB from place of work	187	69.3

The awareness of the respondents was analyzed and presented in Table 3. It has shown that the majority (82.2%) of respondents were aware that TB is curable and only 67.8% knows that there are drugs for treating TB. However, majority (88.9%) does not aware that the actual duration of treatment is within 6 to 9 months.

Table 3 Awareness of TB treatment and attitude of the respondents

Characteristics	Numbers	Percentages
Curability of TB	222	82.2
Availability of TB drugs	183	67.8
Treatment duration		
Till recovery	68	25.2
1-3 months	68	25.2
3-6 months	24	8.9
6-9 months	30	11.1
Do not know	80	29.6

An individual's response to TB is affected by his/her previous knowledge of the disease, better knowledge of TB is related to better health-seeking behavior of an individual. The demographic study has shown the higher participation of unmarried males compared to female respondents at 48%. A similar pattern of gender observed from many studies in Malaysia [6, 11]. However a study by Mokhtar *et al.*(2012) had shown the majority of the respondents are female (54.8%) which contrary the finding by this study [6]. In addition a study by Hagag *et al.*(2012) has shown the interest of married respondent to participate in a survey to develop an educational program for TB awareness in Egypt [17]. Due to the population of Malay students is higher in UTHM it was expected to have higher percentage of respondent among them compared to other races. In addition, the Year 1 student most likely interested to answer the questionnaire compared to their seniors. Interestingly, majority of the respondents show prior knowledge about the TB disease and this has been proven by only 10.4% respondents had never heard about the disease. The knowledge of the disease can be a key factor for prevention. Despite the knowledge of the disease in general, the key information

which is symptoms of TB are more crucial [18]. In this present study, the respondents mostly recognized the typical symptoms of TB including haemoptysis followed by chest pain, coughing for over 2 weeks, difficulty in breathing and a significant weight loss. This finding was analogous to the findings by Koay (2004) that has been performed in Malaysia [20]. The finding indicated that in general, people with cough might not aware of the likelihood that they might have severe disease unless their cough was accompanied by other symptoms, especially haemoptysis.

This study also revealed that approximately 71.1% of respondent were aware of typical factors on how the TB can be transmitted from person to person. This data could be indicated that the UTHM students may have prior knowledge about the disease transmission. It is inevitable that by knowing the nature of the disease, may lead to the logical ideas of disease transmission. This can be observed when only 37.8% of the respondents were answered "yes" to the questions of diabetes as a common disease transmission factor. This study also indicated that the most known risk factors were including factors of immunocompromised person with HIV/AIDS (71.7%) and living with individuals with chronic cough (70.7%). However, only 37.8% were unaware of diabetes as one of risk factor. This similar to the finding in Nigeria by Desalu *et al.*(2013) which indicates respondent as aware the factors that may increase the risk of infection [14].

4. Conclusion

Lack of awareness of TB symptoms is associated with delays in seeking professional treatment. The study shows that awareness among University students in Malaysia about TB is fairly good. However, the awareness regarding the risk factors should be elevated by designing appropriate programs in order to educate people regarding the condition of persistent cough either accompanied by blood (haemoptysis) or not.

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