

**NURSES KNOWLEDGE AND PRACTICES REGARDING PULMONARY
TUBERCULOSIS PATIENT MANAGEMENT AT KHULNA MEDICAL COLLEGE
HOSPITAL, KHULNA**

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ABSTRACT

Pulmonary Tuberculosis (PTB) has been a major public health problem and one of the leading causes of adult mortality in Bangladesh. Global access to TB treatment is increasing but remains low. The aim of the study was to assess the level of nurses' knowledge and practice regarding pulmonary tuberculosis patient management at Khulna medical college hospital, Khulna, Bangladesh. The cross-sectional study was conducted purposively selected 100 senior staff nurses involved in caring of pulmonary tuberculosis patients from May 2019 to June 2020. Data were collected face to face by using semi structured questionnaire and an observational checklist was also used to observe actual practice level. Collected data were analyzed by using descriptive statistics. The maximum 41% respondents in the age group were 36-40 years. Mostly 70% had good knowledge, 20% had average knowledge and only 5% had poor knowledge regarding PTB patient's management. On the other hand out of 100 respondents, majority 89% had good practice, 9% had average practice and only 2% had poor practice regarding PTB patient's management. It is recommended that the hospital plan should conduct the necessary education/training of nurses on the prevention and control of TB to update their knowledge. Additionally, it is necessary to develop and implement the TBIPC policy in the hospital and implement the placement provisions of nurses according to their training and specialty.

KEYWORDS: Pulmonary tuberculosis, DOTS, knowledge, practices and Nurse.

INTRODUCTION

Pulmonary tuberculosis (PTB) is an airborne infectious disease caused by Mycobacterium tuberculosis and is a major cause of morbidity and mortality, particularly in developing countries.^[1] In 2005, 8.8 million people developed active TB and 1.6 million died of the disease.^[2] Most cases occur in Southeast Asia and Africa. Patients with active pulmonary TB may be asymptomatic, have mild or progressive dry cough, or present with multiple symptoms, including fever, fatigue, weight loss, night sweats, and a cough that produces bloody sputum. If TB is detected early and fully treated, people with the disease quickly become noninfectious and eventually cured. However, multidrug-resistant (MDR) and extensively drug-resistant TB, HIV-associated TB, and weak health systems are major challenges. The World Health Organization is making an effort to dramatically reduce the burden of TB and to halve TB deaths and prevalence by 2015, through its

Stop TB Strategy and supporting the Global Plan to Stop TB.^[3]

Bangladesh is one of the densely populated countries in the world, with about Population 164,400,000 in 2010^[4] people in only 2, 59,201 sq. km^[5] its problems are many and health is one of them. Tuberculosis (TB) has been a major public health problem and one of the leading causes of adult mortality in Bangladesh. World Health Organization ranks Bangladesh 6th among the world's 22 high-burden TB countries. Translating the estimates of 2007 by WHO on estimated population of 2009 it is found that every year about 66,437 people die due to tuberculosis in Bangladesh. National Tuberculosis Control Programme (NTP) under Directorate General of Health Services (DGHS), Ministry of Health and Family Welfare (MOHFW) performs tuberculosis control activities and provides service through 800 DOTS centers, 1000 microscopy centers and 35 external quality

assurance centers all over the country. The World Health Organization estimated that in 2007 there were approximately 387 TB cases per 100,000 populations of which 223 per 100,000 population new cases were occurring each year in Bangladesh. Of these, approximately 100 per 100,000 were infectious cases, i.e., they are able to transmit TB in the community. It is further estimated that about 45 persons per 100,000 people die of TB every year.^[6] Tuberculosis remains one of the world's major causes of illness and death. Every twenty seconds, a person dies from TB somewhere in the world. This needless loss of lives is even more tragic given the fact that TB is a disease that is both treatable and preventable.

TB has been on the rise since the 1980s, with its spread concentrated in Southeast Asia and Africa. Much of TB's resurgence is directly connected to the HIV/AIDS pandemic, especially in Africa, where HIV is the most important factor determining the increased incidence of TB. Directly Observed Treatment, Short Course, known as DOTS, is the internationally recommended strategy to control TB and a major component of the World Health Organization's (WHO) 'Stop TB Strategy'. DOTS are an inexpensive and highly effective means of detecting and treating patients infected with TB. Global access to TB treatment is increasing but remains low. DOTS programs have increased the global case detection rate to 61 per cent, but four out of ten patients still do not have access to accurate diagnosis and effective treatment.^[7]

In Bangladesh Nurses are at particularly high risk of infection with tuberculosis (TB) due to frequent exposure to patients with infectious diseases. In addition, undiagnosed, untreated and potentially contagious TB is often also seen in health facilities, increasing the exposure risk for Nurses and other staff. This study would be very effective for public health and for the aim to assess the level of nurses' knowledge and practices regarding pulmonary tuberculosis management at Khulna Medical College Hospital, Khulna, Bangladesh.

MATERIALS AND METHODS

This study was a cross sectional study at Khulna Medical College Hospital, Khulna from May 2019 to June 2020. Total 100 nurses had sample who were working with PTB patients. Purposive type of non-probability sampling technique was followed. Data were collected by face to face interview using semi-structured questionnaire and an observational checklist also used to evaluate the practice.

RESULT

This is cross sectional descriptive study was carried out among the Nurses who are providing nursing care of the PTB patient in Khulna Medical College Hospital. The overall findings of this study have been presented under the following sub-heading:

Table 1: Distribution of the respondents according to socio-demographic characteristics (n=100)

Age(in complete years)	Frequency (f)	Percentage (%)
31 – 35	9	9%
36 – 40	41	41%
41 - 45	32	32%
46 – 50	12	12%
51 - 55	6	6%
Sex		
Female	100	100%
Male	00	00%
Educational qualification		
Diploma in Nursing & Midwifery	93	93%
B.Sc in Nursing	6	6%
M.Sc in nursing/MPH	1	1%
Special Training on PTB		
Yes	00	00%
No	100	100%
Length of service		
1 – 5 years	2	2%
6 – 10 years	30	30%
11 – 15 years	37	37%
16 – 20 years	8	8%
21 – 25 years	13	13%
26 – 30 years	10	10%
Total	100	100.0%

Table 1 showed the socio-demographic characteristics of the respondents. Here, maximum 41% respondents in the

age group 36-40 years and minimum 6% respondents were age group 50-55 years and all respondents, 100%

were female. Their educational qualification 93% was Diploma in Nursing & Midwifery and they had no special training on PTB. From the total respondent's

maximum 37% respondent's length of service were 11-15 years.

Table 2: Distribution of the respondents according to knowledge regarding PTB patient management (n=100)

Causative agent of Pulmonary tuberculosis	Frequency (f)	Percentage (%)
Bacteria	80	80%
Virus	20	20%
Pulmonary tuberculosis transmitted by		
Droplet	100	100%
Sexual activities	00	00%
Water	00	00%
Clinical Feature of Pulmonary tuberculosis		
Cough with Low grade fever	81	81%
Loss of appetite and Weight loss	10	10%
Hemoptysis	9	9%
High risk populations for pulmonary Tuberculosis		
Obese	00	00%
Children	5	5%
Malnourished	68	68%
Suffering from AIDS	7	7%
Old age	20	20%
Name of tuberculosis vaccine		
BCG vaccine	100	100%
D.P.T vaccine	00	00%
Hepatitis vaccine	00	00%
Know about DOTS		
Yes	44	44%
No	56	56%
Know about strategies of the DOTS.		
Yes	11	11%
No	89	89%

Table 2 showed the respondents knowledge regarding PTB patient management. From the total respondents, 80% were said that bacteria are the causative agent of PTB and all respondents 100% known PTB transmitted by droplet infection. Here, most of the respondents 81% told that Cough with Low grade fever are the clinical

feature of PTB and 68% said malnourished persons are in high risk for PTB. All respondents are known about BCG is tuberculosis vaccine. Out of total respondents, 44% know about DOTS and only 11% know the strategies of DOTS.

Table 3: Distribution of the respondents according to practices regarding PTB patient management (n=100)

Change the linen daily	Frequency (f)	Percentage (%)
Yes	10	10%
No	90	90%
Leveling of PTB patient bed		
Yes	7	7%
No	93	93%
Collecting the sputum of PTB patient		
Yes	0	0%
No	100	100%
Using the mask during patient care of PTB patient		
Yes	0	0%
No	100	100%
Giving medicine in schedule time		
Yes	100	100%
No	0	0%

Table 3 showed the respondents practices regarding PTB patient management. Among the total respondents, 90% change the linen daily 93% had leveled PTB patient's bed and all respondents 100% were collecting sputum

from PTB patients properly. Here, 100% respondents were using mask during PTB patients care and all medicine had given in schedule time.

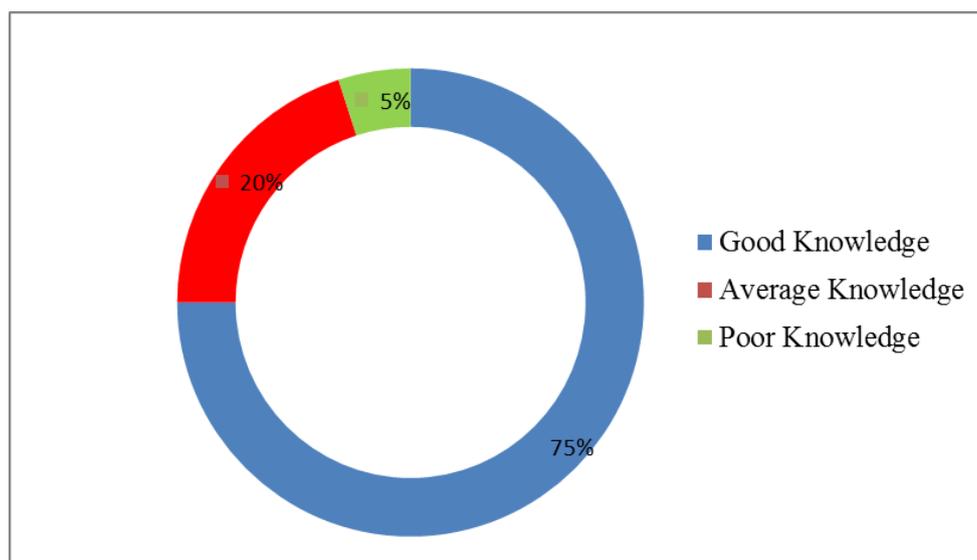


Figure 1: Distribution of the respondent's knowledge level regarding PTB patient's management.

Figure 1: Showed the respondent's knowledge level regarding PTB patient's management. Out of 100 respondents, mostly 70% had good knowledge, 20% had

average knowledge and only 5% had poor knowledge regarding PTB patient's management.

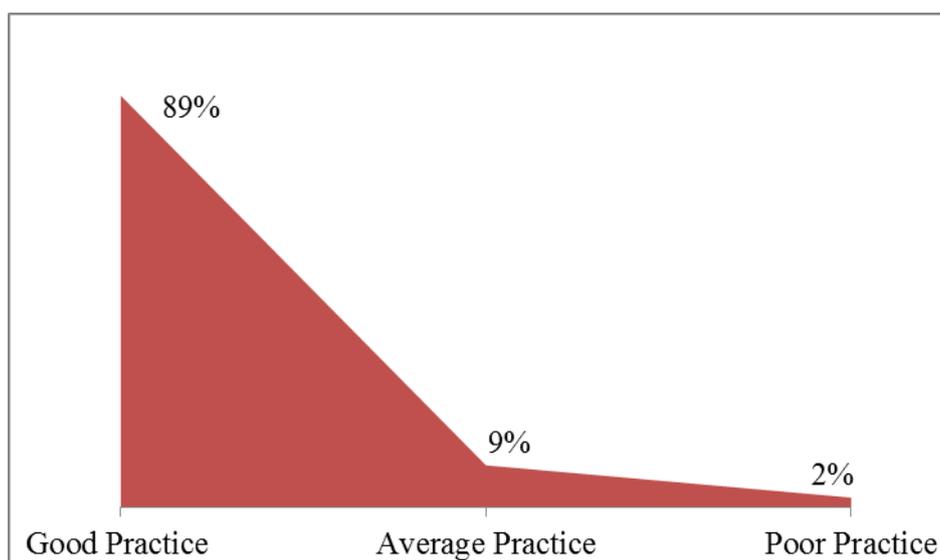


Figure 2: Distribution of the respondent's practice level regarding PTB patient's management.

Figure 2: Showed the respondent's practice level regarding PTB patient's management. Out of 100 respondents, majority 89% had good practice, 9% had average practice and only 2% had poor practice regarding PTB patient's management.

DISCUSSION

Pulmonary tuberculosis easily spread by breathing in air droplets from a cough or sneeze of an infected person. In addition, undiagnosed, untreated and potentially contagious TB is often also seen in health facilities,

increasing the exposure risk for Nurses and other staff. In the context of Bangladesh Nurses are more vulnerable in attracting pulmonary tuberculosis. Because of their professional duty consciously or unconsciously they need to contact with people who have TB. Tuberculosis (TB) is still major public health problem in Bangladesh. TB is a preventable disease, even in those who have been exposed to an infected person.

In this study 100 samples were purposively selected from the nurses who were working in Khulna Medical College

Hospital Khulna. The present study states that 100% of respondents are female and no male nurse services in Khulna Medical College Hospital. Maximum 41% respondents in the age group 36-40 years and minimum 6% respondents were age group 50-55 years and all respondents, 100% were female. Their educational qualification 93% was Diploma in Nursing & Midwifery and they had no special training on PTB. From the total respondent's maximum 37% respondent's length of service were 11-15 years. This present study also states that, from the total respondents, 80% were said that bacteria are the causative agent of PTB and all respondents 100% known PTB transmitted by droplet infection. Here, most of the respondents 81% told that Cough with Low grade fever are the clinical feature of PTB and 68% said malnourished persons are in high risk for PTB. All respondents are known about BCG is tuberculosis vaccine. Out of total respondents, 44% know about DOTS and only 11% know the strategies of DOTS. Among the total respondents, 90% change the linen daily 93% had leveled PTB patient's bed and all respondents 100% were collecting sputum from PTB patients properly. Here, 100% respondents were using mask during PTB patients care and all medicine had given in schedule time.

The study revealed that, mostly 70% had good knowledge, 20% had average knowledge and only 5% had poor knowledge regarding PTB patient's management. Out of 100 respondents, majority 89% had good practice, 9% had average practice and only 2% had poor practice regarding PTB patient's management.

According to *Patrick Aboh Akande, 2020*, the finding dissimilar to our study that was the respondents had mean knowledge and practice scores of 68.2 and 79.9% respectively. Using cut-off points of 80 and 100% for good knowledge and practice scores respectively, small proportions of the nurses had good scores – knowledge (10.5%) and practice (6%).^[8]

CONCLUSIONS

This study showed that the level of nurse's knowledge and practices regarding pulmonary tuberculosis management was adequate. It is recommended that the hospital plan should conduct the necessary education/training of nurses on the prevention and control of TB to update their knowledge. Additionally, it is necessary to develop and implement the TBIPC policy in the hospital and implement the placement provisions of nurses according to their training and specialty.

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