



KNOWLEDGE AND PRACTICE OF NURSES REGARDING PULMONARY TUBERCULOSIS IN A TERTIARY CARE HOSPITAL

Hamdan Khan^{1*}, Humaira Saddique², Syeda Sidra Tasneem³

Abstract:

Background. Tuberculosis (TB) is an infectious illness that constitutes a serious public health burden and is still one of the primary causes of preventable mortality in the globe.

Aim. The aim of the study was to knowledge and practices of nurses regarding pulmonary tuberculosis.

Methodology. The research study design employed was a cross-sectional descriptive design. Outcome.

Result According to the survey, 50 participants, or 35.7%, had moderate knowledge. And 58 nurses (41.4%) had subpar practices.

Conclusion. The study found that, in a tertiary care hospital, the majority of nurses had low or moderate understanding of pulmonary tuberculosis. The study found that, in a tertiary care hospital, the majority of nurses had low or moderate understanding of pulmonary tuberculosis.

Key word: (pulmonary tuberculosis) knowledge and practice.

^{1*}Department of Nursing. The superior university Lahore Pakistan.

²faculty of the superior university Department of Nursing.

***Corresponding Author:** Hamdan khan

*(Generic) BSN Email. Hamdankhanparrai@gmail.com Phone: 00923065765700

DOI: 10.53555/ecb/2024.13.04.04

INTRODUCTION.

Mycobacterium tuberculosis, the TB bacteria, is the infectious agent that causes tuberculosis (TB), a disease that mostly affects the lungs. (Sins haw, Gumi, Alemu, Dagne, & G. Seid, 2022). According to Chinedum, Ifeanyi, Emmanuel, Ndidi Amaka, and Stella (2018), tuberculosis is the only disease caused by the human immunodeficiency virus, making acquired immune deficiency syndrome the leading cause of death globally from a single infectious agent. When a person has active tuberculosis (TB), the TB germs are growing quickly and affecting several body organs (Natarajan, Beena, Deniker, & Mali, 2020). Cough, phlegm, chest pain, weakness, fever, chills, and night sweats are some of the common symptoms of active tuberculosis (TB) (Gopalaswamy, Dusthacker, Kannayan, & Subbian, 2021). When someone coughs infected particles into the air, they can transmit tuberculosis to other people who are unwell with active pulmonary TB disease (Turner & Bothamley, 2015). latent tuberculosis Many TB patients may not exhibit symptoms of the illness. Their chest x-ray may be normal, and they do not exhibit any symptoms (Turner & Bothamley, 2015). The global incidence (new and recurrent) of tuberculosis (TB) was predicted by the World Health Organization (WHO) to reach 9.9 million (127 per 100,000 individuals) by 2020. The WHO identified three new high-TB countries for the years 2021–2025 in 2021. However, it is no longer in the top 30 countries (Thanapop, Rakpaitoon, & Thanapop, 2022). Pakistan is estimated to have the sixth-highest number of tuberculosis cases worldwide. In Pakistan, the prevalence of pulmonary tuberculosis is startlingly high. Out of the 210 million people living in the nation, 1.5 million are TB patients (Mahad Ahmed Khan et al., 2022). Pakistan accounted for 5.7% of the world's total TB cases in 2020, with Punjab province reporting 60% of these cases (Zafar et al., 2022). The application of strategies to reduce the risk of cross-transmission is significantly influenced by nurses' knowledge of TB infection prevention and control (Baral & Koirala, 2022). The standard practice and protocol in the clinical sectors are applied with the good knowledge that nurses possess. Numerous studies demonstrate that environmental, administrative, and individual methods for tuberculosis prevention and control are not adequately maintained in underdeveloped nations (Baral & Koirala, 2022). In order to stop the spread of tuberculosis in hospital settings, nurses in particular adopt adequate infection control methods (Sissolak, Marais, & Mehtar,

2011). To reduce the danger of transmission to other patients and healthcare personnel, this involves using personal protective equipment (PPE), isolation precautions, and environmental controls. Regarding pulmonary tuberculosis, nurses' practices were not ideal (Johnston, Ogunremi, Defalco, Savard, & Smith, 2022). According to a number of studies, nurses' knowledge and practices about pulmonary tuberculosis play a little impact in the disease's prevention, and their treatment of TB patients results in a lower rate of morbidity. Among practice-related issues, the primary area of insufficiency still presents challenges for nurses. In a tertiary care hospital, the study may serve to enhance the care given to patients suffering from pulmonary tuberculosis. Through evaluating nurses' practices and expertise, we can pinpoint areas in which they might benefit from further guidance or instruction. Better patient outcomes and a decrease in disease transmission may result from this. The results can also be used to inform the creation of focused interventions and nurse education initiatives, which will ultimately raise the standard of care provided in hospitals.

METHODS

A descriptive cross-sectional study was done to find out what nurses knew and did not know about pulmonary tuberculosis. The sampling technique's goal was employed. Staff nurses from Jinnah Hospital in Lahore's pulmonary ward, intensive care unit, and medical ward made up the study population. The study was conducted at Jinnah Hospital in Lahore. The (proportion) formula will be used to determine the study sample. This trial lasted for nine months. The data from the sample will be combined with an approved questionnaire. The information was obtained from TB nurse-trained pulmonary ward nurses. A self-administered knowledge and practice questionnaire about pulmonary tuberculosis was used to gather data. Following data collection, the SPSS software version 22 was used to analyze the data. The goal of the study is to explain what is good and dangerous, and patient confidentiality will be maintained.

CHAPTER ANALYSIS

Table No 1. Demographic characteristics

The bulk of the age group in this demographic table is between 26 and 30 years old. Males made up the majority of the population. The majority of married individuals. most nurses who have worked for more than 15 years. bulk holding a BSN in nursing.

The majority of employed nurses worked in pulmonology.

Variable	Category	Frequency%
Age	21-25 years	35(35%)
	26-30 years	40(40%)
	31-35 years	34(34%)
	36-40 years	31(31%)
Gender	Male	70(70%)
	Female	69(69%)
Marital Status	Single	65(65%)
	Married	75(75%)
Experience	1-5 years	24 (24%)
	6-10 years	34 (34%)
	10-15 years	40 (40%)
	Above than 15 years	42 (42%)
Qualification	Diploma in Nursing	30 (30%)
	Post RN	50 (50%)
	BSN (Generic)	60 (60%)
Department	ICU	35 (35%)
	Pulmonology	78 (78%)
	Medical ward	27(27%)

Table 2: Knowledge questionnaires

The majority of participants are well-versed in the topic of "How is pulmonary tuberculosis transmitted." The majority of participants know a good deal about "How is pulmonary TB best diagnosed?" The majority of participants are well-versed in the question of "What is the expanded form of DOTS?" Regarding "How many drugs are

used in the intensive phase to treat a new case of sputum positive pulmonary TB," the majority of participants are well-informed. Regarding "What is the minimum duration for which antitubercular treatment has to be given in a new case of sputum positive pulmonary TB," the majority of participants are well-informed.

Questions	Respond	Frequency %
How is pulmonary tuberculosis transmitted.	Needle Freke	25 (25%)
	Food Intake	37 (37%)
	Air born	77 (77%)
How is pulmonary TB best diagnosed.	Sputum smear test	67 (67%)
	Complete blood count	40 (40%)
	None of the above	33 (33%)
What is the expanded form of DOTS.	Deliver oxygen therapy simultaneous	35 (35%)
	Directly observer treatment	68 (68%)
	None of the above	37 (37%)
How many drugs are used in the intensive phase to treat a new case of sputum positive pulmonary TB.	Two	35 (35%)
	Three	35 (35%)
	Four	70 (70%)
What is the minimum duration for which antitubercular treatment has to be given in a new case of sputum positive pulmonary TB?	5 months	32 (32%)
	6 months	61 (61%)
	4 months	47 (47%)

Table 3: practice questionnaires

When it came to "I usually perform hand hygiene and wear PPE before contact with TB patients / samples," the majority of participants had inadequate hand hygiene practices. When it came to "I usually wear N95 respiratory when caring for

patient with PTB/working on TB sample," the majority of participants had good practices. When it came to "Always put the patient with active TB in the isolated room," the majority of participants followed good practice. When it came to "I open windows, when possible, in TB patient room to

increase natural ventilation," the majority of participants had bad practices. The vast majority of participants had good practice in this area. I ask for

contact tracing for every verified case of tuberculosis.

Questions	Respond	Frequency %
I usually perform hand hygiene and wear PPE before contact with TB patient /samples.	Agree	64 (64%)
	Strong agree	20 (20%)
	Neutral	30 (30%)
	Disagree	15 (15%)
	Strong disagree	11 (11%)
I usually wear N95 respiratory when caring for patient with PTB/working on TB sample.	Agree	54 (54%)
	Strong agree	34 (34%)
	Neutral	24 (24%)
	Disagree	14 (14%)
	Strong disagree	14 (14%)
Always put the patient with active TB in the isolated room.	Agree	26 (26%)
	Strong agree	54 (54%)
	Neutral	24 (24%)
	Disagree	24 (24%)
	Strong disagree	12 (12%)
I open windows, when possible, in TB patient room to increase natural ventilation.	Agree	23 (23%)
	Strong agree	23 (23%)
	Neutral	47 (47%)
	Disagree	34 (34%)
	Strong disagree	13 (13%)
I request contact tracing for all confirmed TB cases.	Agree	44 (44%)
	Strong agree	36 (36%)
	Neutral	27 (27%)
	Disagree	23 (23%)
	Strong disagree	10 (10%)

Discussion

The majority of participants—77, or 55.0%—answered the question, "How is pulmonary tuberculosis transmitted?" correctly. The majority of participants—67, or 47.9%—answered the question "How is pulmonary TB best diagnosed?" correctly. When asked, "What is the expanded form of DOTS?" the majority of participants answered "true" (68, or 48.6%). When asked how many medications are used in the intensive phase to treat a new case of sputum-positive pulmonary tuberculosis, the majority of participants answered "true." were fifty-one (50.0%). When asked, "What is the minimum duration for which antitubercular treatment has to be given in a new case of sputum positive pulmonary TB?" the majority of participants answered "true." were forty-one (43.6%). Answering the question, "I usually perform hand hygiene and wear PPE before contact with TB patient / samples," revealed that the majority of nurses, 64 (45.7%) agreed. When asked if they typically wear N95 respirators when caring for patients with PTB or working on TB samples, the majority of nurses answered "Agree 54" (38.6%). Most of the nurses expressed strong

Regarding the question "Always put the patient with active TB in the isolated room," 54 people (38.6%) agree. Regarding the question, "I open windows, when possible, in TB patient room to increase natural ventilation," the majority of the nurses answered "Neutral 47" (33.6%). When asked if they requested a sputum test when they suspected active tuberculosis, the majority of nurses answered "Agree 53" (37.9%).

Conclusion

According to the results of the current study, the tertiary care hospital's nurses had poor practice and moderate awareness of pulmonary tuberculosis. It is time to think about the knowledge that is needed in this area, as well as the necessity for refresher courses and knowledge enhancement. Regarding this matter, the hospital's management and policy makers ought to act strictly. A program of follow-up is necessary to guarantee that knowledge and practice are improving. To verify the knowledge, experimental research is required.

Limitation

In order to determine the knowledge and practices of nurses on pulmonary tuberculosis in tertiary care hospitals, the current study used a cross-sectional study design. The study's sole objective is to evaluate nurses' understanding of and proficiency with pulmonary TB. • The study sample was insufficient to allow the results to be broadly applied.

Recommendation

The current study examines the tertiary care hospital's degree of pulmonary tuberculosis knowledge and practice. In order to evaluate knowledge and practice and provide interventions for improving knowledge and practice regarding pulmonary tuberculosis, future researchers can focus on improving knowledge and practice through experimental studies.