

Research Article

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Tuberculosis Awareness Among Nurses Working in Tertiary Care Hospital Peshawar

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Abstract

Objective: The objective of the study was to assess tuberculosis awareness among nurses.

Methodology: A descriptive cross-sectional study was conducted in tertiary care hospital Peshawar KPK. Participants were selected through random sampling technique. The data was collected through a self-developed structured questionnaire. The confidentiality and anonymity was maintained throughout the study.

Result: The study consisted of 52 participants including 12(23.1%) males and 40(76.9%) females. Awareness of staff was calculated; result showed that 23.1% had high, 65.4% had moderate and 11.5% had low level of knowledge. Chi square test was applied to check the association between variables and awareness. There was no association found in the result.

Conclusion: The study was conducted to assess the tuberculosis awareness among nurses in private tertiary care hospital. The majority of the participant ie 65.4% had moderate level of knowledge. General lack of knowledge was assessed regarding various aspects. Nurses need further training regarding TB.

Keywords: Infection; Knowledge; Nurses; Tuberculosis

Background

Tuberculosis (TB) is a communicable disease that affects mostly the lungs but can also affect other parts of the body. It is caused by bacteria which are called *Mycobacterium tuberculosis*. The most common symptoms of tuberculosis are cough, fever, night sweat, weight loss. TB is air borne disease transmitted through air from one person to another [1].

According to World Health Organization (WHO), [2] report, TB is the ninth leading cause of death worldwide and the leading cause from a single infectious agent, ranking above HIV/AIDS. An estimated 10.4 million people (90% adults; 65% male; 10% people living with HIV) fell ill with TB in 2016. Most of the estimated number of incident cases in 2016 occurred in the WHO South-East Asia Region (45%). The top five countries, with 56% of estimated cases, were (in descending order) India, Indonesia, China, the Philippines and Pakistan [2].

A Cross-sectional study was conducted about healthcare provider knowledge, attitudes & practices regarding tuberculosis

care. The result of study revealed that 56.13% had a good level of TB knowledge; and the remainder had a fair level. Providers' knowledge levels were significantly linked to attendance at TB training, as well as their profession. There was strong association between knowledge and attendance at TB program [3].

Another Cross-sectional study about knowledge and practices regarding tuberculosis among nurses was conducted. The staff of medical college and peripheral health care unit was observed. The nursing staff posted in Medical College had less knowledge (mean score-12.8) as compared to the nursing staff of a peripheral health care unit (mean score- 15.3). Further they identified that Training under Revised National TB control program (RNTCP) should not be limited to peripheral health unit's Nurses but also organize this program to nurses of medical colleges [4].

A study on Assessment of knowledge, attitudes and practices regarding T.B was conducted among medical students in Iran. The knowledge of the students was assessed and the mean score was 16.13 ± 2.06 . The majority of the students were fall in moderate to high level of knowledge. Around all of them had knowledge of T.B patients can't be treated only on radiography. Two –thirds of

them were no knowledge regarding distance which was kept from contagious patients. Most of the students were unaware of BCG vaccine that prevents T.B [5].

TB is one the major public health issues and nurses play a vital role in the prevention and treatment. Knowledge of nurses regarding TB is very important and should be addressed. The treatment and prevention of infection is the responsibility of nurses. Nursing staff is first level professional person and are responsible for direct patient care. They also impart health education to patient as well as his/her family members and other contacts [4].

Purpose

The purpose of this study was to explore knowledge of nurses working in private tertiary care hospital in Peshawar, Pakistan.

Research Questions

What do nurses working in private tertiary care hospital know about tuberculosis?

Methodology

Study Design

For this research project a quantitative, descriptive cross sectional study was used. Cross-sectional design is used when the researcher is concerned to gather the evidence at a given point and provide a picture of the population.

Population and Setting

The population of the study was all nursing staff of private tertiary care hospital Peshawar, KP.

Sampling technique

Simple random sampling technique was used to gather data from subjects. By using random sampling technique an unbiased sample was selected from population.

Sample size

Sample size of the study was 52, as calculated by Raosoft software, using the population size 176 with 5% margin of error and 5% non-responsive rate.

Data collection tools

Self-structured questionnaire was developed, which consisted of 18 questions about tuberculosis awareness among nurses. A criteria was developed; positive response to more than 14 questions was considered as high awareness, positive answer to more than 7 and less than 14 questions was deliberated as moderate

awareness and poor awareness was reflected when positive response was less than 7 questions.

Ethical consideration

Approval was taken from Chief Nurse of the institute for data collection. Informed Consent was taken from each participant prior to participation in the study. Confidentiality and anonymity was maintained throughout the study.

Pilot Study

Pilot study was conducted on 10% of the participants to evaluate the feasibility of the study. During the pilot study, there was no specific difficulty faced by participant.

Inclusion criteria

All those Nurses who are working at the same hospital for at least one year.

Exclusion criteria

All those nurses who are on the management posts.

Data analysis

Analysis and presentation of the data was done using statistical Package for social sciences (SPSS) 20 version. Tables and flow charts were used for presentation of descriptive data, percentages and frequencies were calculated for nominal and ordinal data. Chi square test was used to check association among variables.

Results

The study consisted of 52 participants, including 12 (23.1%) males and 40 (76.9%) females (shown in Figure 1). Numbers of the subjects from 18-25 years were 36 (69.2%), from 25-30 years were 8 (15.40%), from 30-35 years were 5 (9.6%), and above 35 were 3 (5.8%), (Shown in Figure 2). Concerning the educational level of the respondents, 48 (92.3%) were diploma holders and 4 (7.7%) were BSN degree holders (shown in Figure 3). Only 16 (30.8%) of the respondents were graduates of government nursing schools and 36 (69.2%) were graduates of private nursing schools (Table 1). Experience of the participants from 1-3 years =30 (57.7), 3-6 years = 12 (23.1%), 6-9 years = 5 (9.6%), and above 9 years 5 (9.6%) were calculated (Shown in Figure 4). Awareness of staff was calculated in percentage; result showed that among the participants 23.1% were high, 65.4% were moderate and 11.5% were low level of knowledge (Shown in Figure 5). Furthermore, chi-square test was applied to check the association among variables and awareness; there was no association found in the results (Table 2).

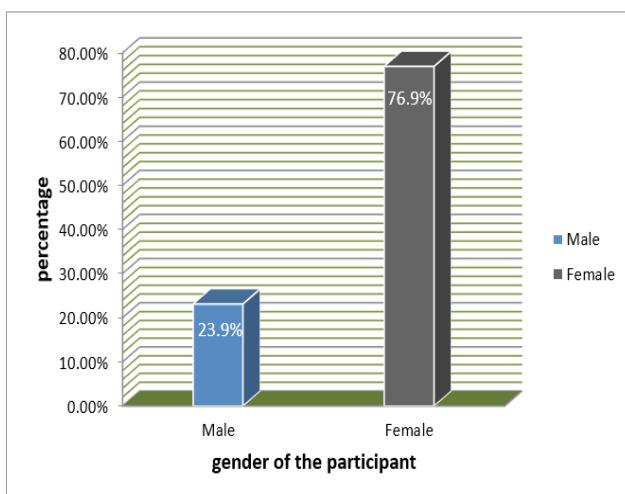


Figure 1: Gender of the participants.

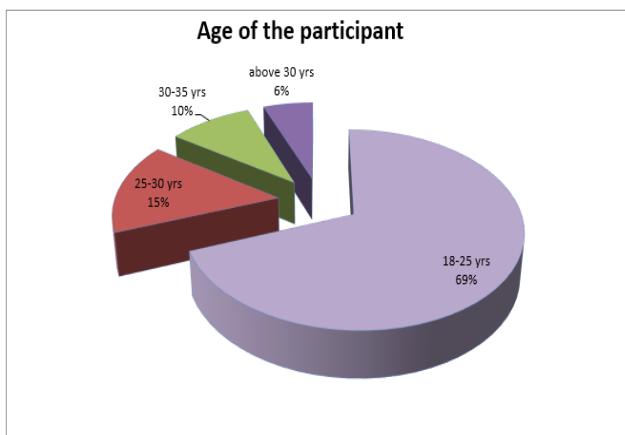


Figure 2: Age of the participant.

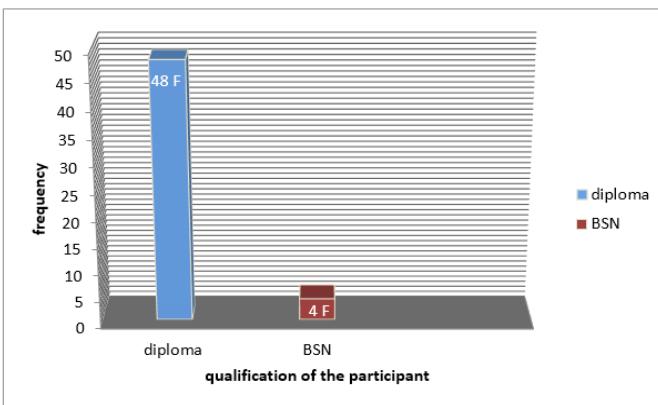


Figure 3: Qualification of participant.

S/No	Categories	total	Percentage
1	government	16	30.80%
2	private	36	69.20%
3	total	32	100%

Table 1: Graduation from.

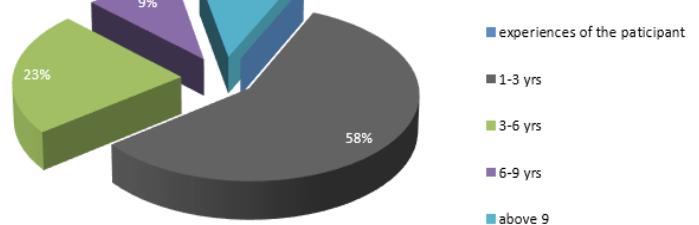


Figure 4: Experiences of the participant.

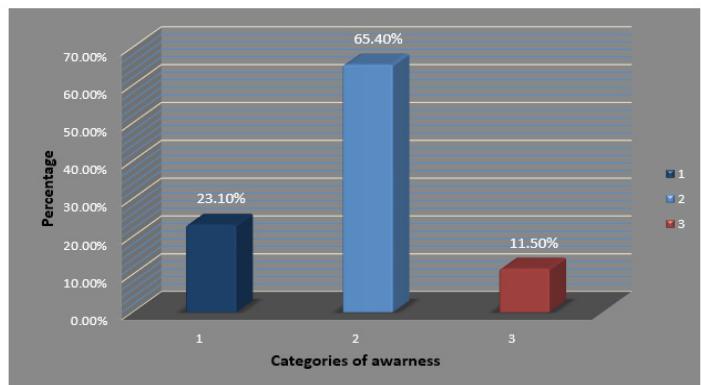


Figure 5: Awareness about tuberculosis.

Awareness about Tuberculosis

S/No	Categories	Frequency	Percentage
1	high knowledge	12	23.10%
2	Moderate knowledge	34	65.40%
3	low knowledge	6	11.50%

S/no	Questions	T/Participant	Yes	%age	No	%age	Don't know	%age
1	have you heard about tuberculosis	52	52	100%	Nil	Nil	Nil	Nil
2	Do you know the causative agent of TB	52	45	86.50%	7	13.50%	Nil	Nil
3	Is tuberculosis a transmissible disease	52	47	90.40%	4	7.70%	1	1.90%
4	Do you know how people get TB	52	34	65.40%	13	25.00%	5	9.60%
5	Are the patient with HIV is at higher risk of developing tuberculosis	52	20	38.50%	22	42.30%	10	19.20%
6	Does TB affect only lungs	52	27	51.90%	20	38.50%	5	9.60%
7	Do you know about common symptoms of TB	52	42	80.80%	8	15.40%	2	3.80%
8	Does TB diagnose is in children is more difficult than in adult	52	18	34.60%	20	38.50%	14	26.90%
9	Does Sputum microscopy is the most effective tool for the diagnosis of TB	52	29	55.80%	14	26.90%	9	17.30%
10	Is tuberculosis a curable disease	52	14	84.60%	4	7.70%	4	7.70%
11	Do you know about DOTS therapy	52		21.20%	13	25.00%	28	53.80%
12	Is there a vaccine for TB	52	35	67.30%	11	21.20%	6	11.50%
13	Do you know the best time for BCG vaccination	52	39	75.00%	7	13.50%	6	11.50%
14	Do TB conformed patients should be kept separately	52	31	59.60%	11	21.20%	10	19.20%
15	Do you know how to protect from TB	52	42	80.80%	19	17.30%	1	1.90%
16	Do you know about N95 mask	52	24	46.20%	13	25.00%	15	28.80%
17	Is N95 mask protecting the health care worker from M. Tuberculosis	52	21	40.40%	12	23.10%	19	36.50%
18	Is ventilation necessary in the implementation of TB infection control	52	22	42.30%	16	30.80%	14	26.90%

Table 2: The overall percentage of questions about Tuberculosis Awareness is given in table-2.

Discussion

Literature was searched thoroughly about tuberculosis awareness among nurses. A number of studies were found from different countries of the world. There were no specific studies found in KPK on the same topic.

Study consistent with findings of current study was conducted in Thailand by [3] found that 56.13% had Good and approximately 44% of the health care providers had a fair level of TB knowledge.

A study conducted by [6] in Russia. That was overall TB knowledge score were low among healthcare workers, especially laboratory technician and support staff. They further reported the percentage of correct responses of TB 'causative agent' was 87% and the response of 'common symptoms' of TB was 79%.

Current study also showssame result; 86.5% and 80.8% was the correct response of causative agent and knowledge about common symptoms respectively.

A study in the Berea District of Lesotho, South Africa on occupational exposure to TB reported that the majority of healthcare workers (86.1%) have a 'fair' score for knowledge [7]. While the result of current study also showed lack of knowledge regarding various aspects of tuberculosis among nurses.

Study conducted in Iraq showed that overall, 98.4% health care workers had good knowledge about TB [8]. A study conducted in Iran by [5], identified knowledge level of the subjects was moderate to high in the majority of the students. These results reported high level of knowledge about tuberculosis. On other side current study highlights low level of knowledge among nurses.

The discrepancy might be due to the differences in the study set up and methods.

Recommendations and Limitations

The health care organization should arrange continuous educational sessions and training programs to keep nurses updated regarding TB. Educational sessions and training programs regarding TB should be made compulsory for those health care professionals who work in pulmonary department.

A large scale study is needed to be conducted on this topic. A study is needed to conduct to find out the reasons behind inadequate knowledge among nurses regarding TB. Due to financial and time constraints study was limited only to private tertiary care, and hence result could not be generalized.

Conclusion

It is concluded that majority of the participant i.e. 65.4% had moderate level of knowledge. However, tuberculosis is the common communicable disease and being healthcare professional nurses should have enough knowledge about each aspect of the disease. In this study a general lack of knowledge regarding various aspects of tuberculosis among nurses were observed. Nurses need further education and training regarding TB.

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