

Knowledge and Attitude of Nurses Regarding Control of Tuberculosis in Pimh

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Abstract

Background

T.B is an infectious disease which is growing day by day and it is fatal disease and transfers to nurses and people through air borne route. T.B is the leading disease all over the world but especially it attacks in Asia and Pakistan. Nurses' knowledge and attitude play a significant role to control T.B. Infection control guidelines to be followed strictly by nurses to for T.B patients like that hand washing before and after attending patient, use of appropriate respiratory mask N95 for nurse and surgical mask for patient, Use of personal protective equipment, Do not recap needles and etc. whenever, nurses attend a suspected T.B patient, infected T.B patient, they must follow these guidelines. One positive T.B patient can effect on other 17 persons. Nurses also may suffer with same disease. So uses of appropriate precautions always help nurses to provide effective care to patients and relief the stress of nurses.

Methodology

Descriptive cross sectional study has conducted for this research in Punjab Institute of Mental Health; A questionnaire had used to assess the knowledge of nurses regarding control of T.B.

Results

60% nurses had not enough knowledge that T.B transfers to other people and nurses due to poor handling of disease.

Conclusion

Nurses' knowledge is very imperative to control T.B disease through respiratory and environment control. The provision of N95 respirator mask for nurses to save from infectious disease T.B. Prevention is better than cure.

Key Words: Knowledge, Attitude, Infectious Disease, Tuberculosis (T.B), Nurse, Punjab Institute of Mental Health (PIMH).

Introduction

Background

Tuberculosis (TB) is a common and often lethal infectious disease caused by *Mycobacterium tuberculosis*. According to a report by the World Health Organization (WHO), an estimated 1.7 million people died from TB in 2009, and there were an estimated 9.4 million incident cases of TB. Most of the estimated cases in 2009 occurred in Asia (55%) and Africa (30%) including Pakistan. T.B is one of the leading causes of mortality in the world. Psychiatric illness may develop subsequent to TB infection, and mood disorders seem to be particularly common in TB patients (Thwaites et al., 2009).

It is a major issue in the world that Infectious diseases spread direct or indirect contact through toxins and infectious disease from animals, products infected person, reservoir host, vector or inanimate environments through specific bacteria. T.B is such infectious disease which spread

rapidly in the world through a person or an animal. T.B also known as communicable disease (Society & America, 2007)

Punjab Institute of Mental Health (PIMH) is the place where mentally ill patients are admitted for long period of time. All patients are live together in a same ward. A large number of patients admitted in PIMH with mental illness and many patients have medical illness like that cough, flu, high grade body temperature, diarrhea, scabies, hepatitis tuberculosis (T.B) and etc. Many disease transfer from person to person through direct contact where contact isolation is required, on the other hand some disease spread via indirect contact through air. The way of transportation of disease is air born and many people effect with such infectious disease. So T.B is the infectious disease who spread through droplet infection and care of patient is an important part to control such infectious disease. Nurses' knowledge and attitude play a significant role to control T.B. Infection control guidelines to be followed strictly by nurses to for T.B patients like that hand washing before and after attending patient, use of appropriate respiratory mask N95 for nurse and surgical mask for patient, Use of personal protective equipment, Do not recap needles and etc. whenever, nurses attend a suspected T.B patient, infected T.B patient, they must follow these guidelines. One positive T.B patient can effect on other 17 persons. Nurses also may suffer with same disease. So uses of appropriate precautions always help nurses to provide effective care to patients and relief the stress of nurses. There is lack of empirical literature on nurses' knowledge about TB treatment. Therefore this study will enhance knowledge among nurses about TB treatment. (Fukuta & Muder, 2013)

(Bhebhe, Van Rooyen, & Steinberg, 2014) describes about nurses attitude while attending the patient of T.B. Nurses are unavoidably exposed to T.B because they are directly interacting with patients who had not confirmed diagnosis or potentials for TB. Nurses and novice nurses suffer with T.B diseases because they have very poor attitude to follow infection control and Centre of Diseases control and prevention(CDC) guidelines like that isolation of patient on proper time, use of mask, proper education to patient and attendant, even poor hand washing is a big factor. American Thoracic Society (2000) describes that there are many ways to control the droplet infectious diseases T.B. Ventilation with fresh air is an important item in hospital settings, T.B could be control by ultraviolet irradiation of room, In addition patient have to cover cough, sneezing and air by use of mask, and posturizing of milk is the best way to control of T.B from cow to human.

(Jensen, Lambert, Iademarco, & Ridzon, 2005) Describes about CDC guidelines that the area must have minimal exposure of people where T.B patients are present, a special room is required for T.B. patient, even though patient lives is in hospital settings like as a separate room with negative air pressure should be made even in Operation Theater, Emergency Area, Endoscopy are where ever procedure are going to do. But inpatient departments must have special rooms where patient must be isolated by nurses after suspicion of T.B. In spite of these respiratory measures to be done by nurses including use of N95 mask while attending the T.B patient. Nurses must instruct the patient whenever he will talk with some cover his mouth by use surgical mask. Patient must cover their cough, sneezing, spit and sputum, Nurse must follow the standard precautions like that proper hand washing before and after attending a patient, Use of personal protective equipment's like apron, N95 respirator mask, Gloves etc, do not recap needle while administration of injectable, Cover cough and respiratory etiquettes, Disposal of proper wastage. On the other hand Punjab Institute of Mental Health (PIMH) is the place where T.B patient are live like as other mentally ill patients. They did not have any kind of special protocol like that air born isolation or use of masks. This is not good for nurses as well as for other patients who did not have exposure of T.B.

Significance

This study has imperative part to know the knowledge of nurses which will be helpful to provide the effective care to TB patients on time as per their requirement at PIMH and provide the awareness to nurses the way to prevent themselves from such infectious disease.

This study provides the information to nurses to save themselves from T.B. Nurses in most facilities are at high risk of becoming infected with tuberculosis (nosocomial transmission) especially because they spend most of the time with patients. It is therefore very important to have guidelines for infection prevention and control for a better understanding in the context of health care settings on issues of TB transmission.

Moreover, this study will support hospital management to guidance for their nursing staff to control T.B in the PIMH. It will also help to keep hospital's staff safe from such infections and minimize the shortage of staff within organization due to sickness. Other than that it will decrease the financial burden from hospital of staff medical.

This research enhances my knowledge about attitude of nurses to control T.B and also find out gaps and barriers in knowledge and attitude of nurses working in clinical area. Furthermore I will focus to overcome in these gaps as much as possible by my knowledge which gathered from research.

Purpose

This study has a great purpose to assess the knowledge and attitude of nurses regarding control "Tuberculosis" in Punjab Institute of Mental Health.

Research Question

Do nurses have knowledge and attitude about control of T.B

Hypotheses

Null Hypothesis

PIMH nurses have no knowledge and attitude about tuberculosis control measures

Alternative Hypothesis:

PIMH nurses have knowledge and attitude to control of T.B.

Definitions of Terms or Operational Definition

Infectious Diseases

"Infectious disease or communicable disease is defined as an illness caused by a specific infectious agent or its toxic product that results from transmission of that agent or its products from an infected person, animal, or reservoir to a susceptible host, either directly or indirectly through an intermediate plant or animal host, vector or inanimate environment" (Christie, 1980).

Conceptual Definition

Infectious diseases are the diseases that disseminate from person to person through various routes and animals. Infectious diseases spread through direct contact or air and attack on patient where he suffer physically and psychologically.

Tuberculosis

Conceptual Definition

Tuberculosis (TB) is a potentially serious infectious disease that mainly effects on lungs. Most of the times it spread from person to person through droplet like cough, sneezing and sputum of in infected person in sunlight which is always harm full for other persons. TB is a fatal disease.

Operational Definition

Tuberculosis is an infectious diseases of human and animals which is caused by the tubercle bacillus and characterized by the formation of tubercles on the lungs another tissues of the body, often developing long after the initial infection.

Attitude

Altered way to thinking and doing some thing

Knowledge

It is a familiarity, awareness or understanding of someone or something

Assess

It is to make a judgment about (something)

Nurse: Is the person who is trained for care of sick people.

N95 Respirator Mask

Allan, J. (2013) describes that “The N95 medical mask is a type of disposable respirator that may be used in a medical or industrial setting. Both types of N95 function by filtering out particulates in the air before they reach your respiratory system. Both the FDA and the National Institute for Occupational Safety and Health approve the use of N95 respirator masks to protect against tuberculosis transmission”.

Review of the literature:

Fukuta, & Muder (2013) describes about a psychiatric hospital report in Florida where a patient developed pulmonary T.B. Than 17 patients were affected from one patient where all patients have positive sputum culture reported. However, two patients did not report their sickness and they died after 2 year with long illness due to Pulmonary T.B because could not identify about T.B disease for mentally patients. So T.B is still a fatal and communicable disease.

(Nelson & Williams, 2012) states that during the research they have identified those different kinds of diseases have different time to spread with different routes of transmission for diseases. Infections can be verified by screening and clinical manifestations of the patient. Every disease has their specific incubation time period and they have specific way to disseminate infection. TB has 14 days of incubation period and it needs special attention like air born isolation to control the I.B infection and save the other patients as well.

Nurses play a central role to prevent a human from TB since beginning of life because role of nurse start from the immunization, administering and supervision of TB treatment. Even though when a patient comes in hospital first of all patient is in closes contact with nurse than goes to other health care professionals and a nurse on high risk to become infected from that TB patient who is not diagnosed at the time. Lack of knowledge about handling of T.B patient always increases the risk of medication errors, nosocomial infections among TB patient as well nurses (Yukseltürk, N., & Dinç, L. 2013).

T. B in mental hospital is a major issue due to poor hygiene, no proper housing for patients. Patients who comes in mental hospital for treatment they live for long period of time. Social isolation and T.B itself effects to disturb mental process where many patients suffer with mental illness. (Pachi, Bratis, Moussas, & Tselebis, 2013)

Theoretical Framework

Andrew Thinhal (1980) presented a health promotion model which has three main components like that health education, prevention and health protection. Health education is designed to change the knowledge, belief attitude and behavior in health facilities. Disease prevention is minimizing the risk and consequences of disease. Health control is the focus on legal controls and policies.

Heath Education: is to assess the knowledge and attitude of nurses are the specific parts in this research.

Health Prevention: is the way to control Spread of TB by follow the proper guidelines of infection control Programme including isolation.

Protection: is the way to know what kind of practices they are doing in their routine while attending T.B patients.

Materials and methods

Study Design

A descriptive cross sectional study design had conducted and convenient sampling technique had used.

Target population

All registered nurses of PIMH had targeted population for this research project.

Exclusion Criteria

Trainee, visitor student nurses and other health care professionals had not part of research

Sample Size

92 nurses had participated for this research from Punjab institute of mental health.

Ethical Consideration:

To complete the research project first of all permission had taken through a letter from research committee of Lahore School of Nursing, The University of Lahore. After that, institutional consent for conducting research from executive director of PIMH. At the end permission had taken from individual who participated in research.

Research Tool

A close ended questionnaire had distributed to nurses at PIMH to collect data, two questions had more than two options to select one and remaining thirteen questions had two options to select one.

Data Analysis:

Software Package for Statistical Analysis (SPSS) version20 and Microsoft Excel software had used for data analysis

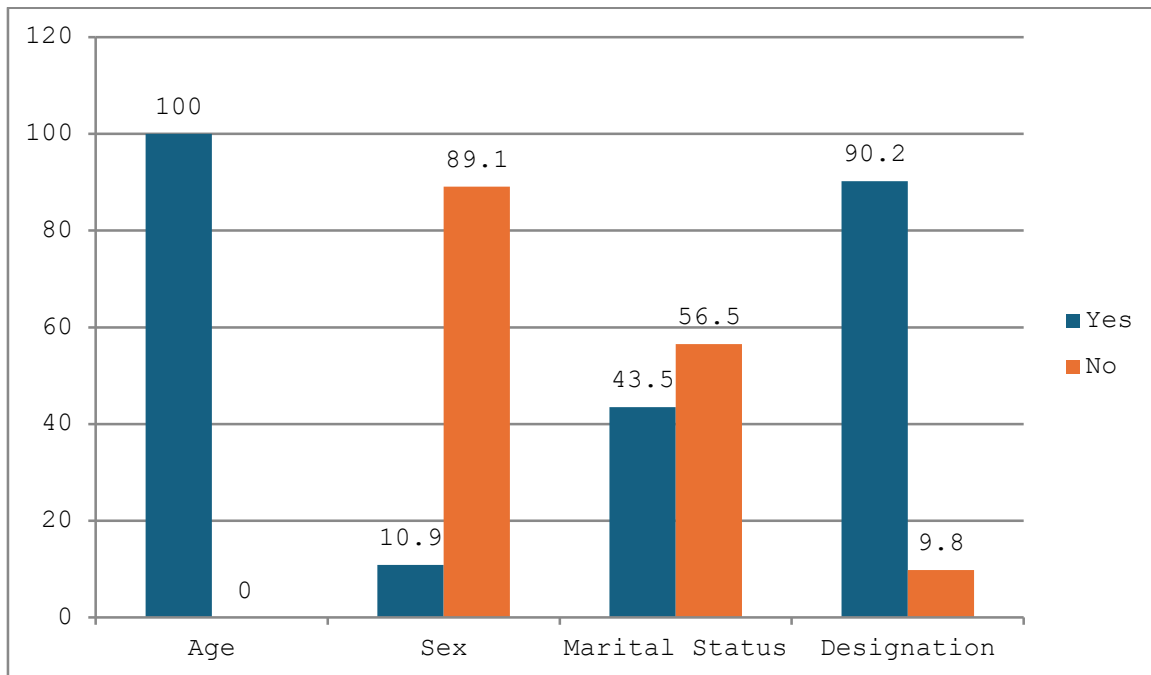
Results

Demographic Data

Table 1

| Age | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------------|-----------|---------|---------------|--------------------|
| Valid 20-60 | 92 | 100.0 | 100.0 | 100.0 |
| Sex | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid Male | 10 | 10.9 | 10.9 | 10.9 |
| Valid Female | 82 | 89.1 | 89.1 | 100.0 |
| Valid Total | 92 | 100.0 | 100.0 | |
| Marital Status | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid Single | 40 | 43.5 | 43.5 | 43.5 |
| Valid Married | 52 | 56.5 | 56.5 | 100.0 |
| Valid Total | 92 | 100.0 | 100.0 | |

| Designation | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Charge Nurse | 83 | 90.2 | 90.2 | 90.2 |
| Valid Head Nurse | 9 | 9.8 | 9.8 | 100.0 |
| Total | 92 | 100.0 | 100.0 | |



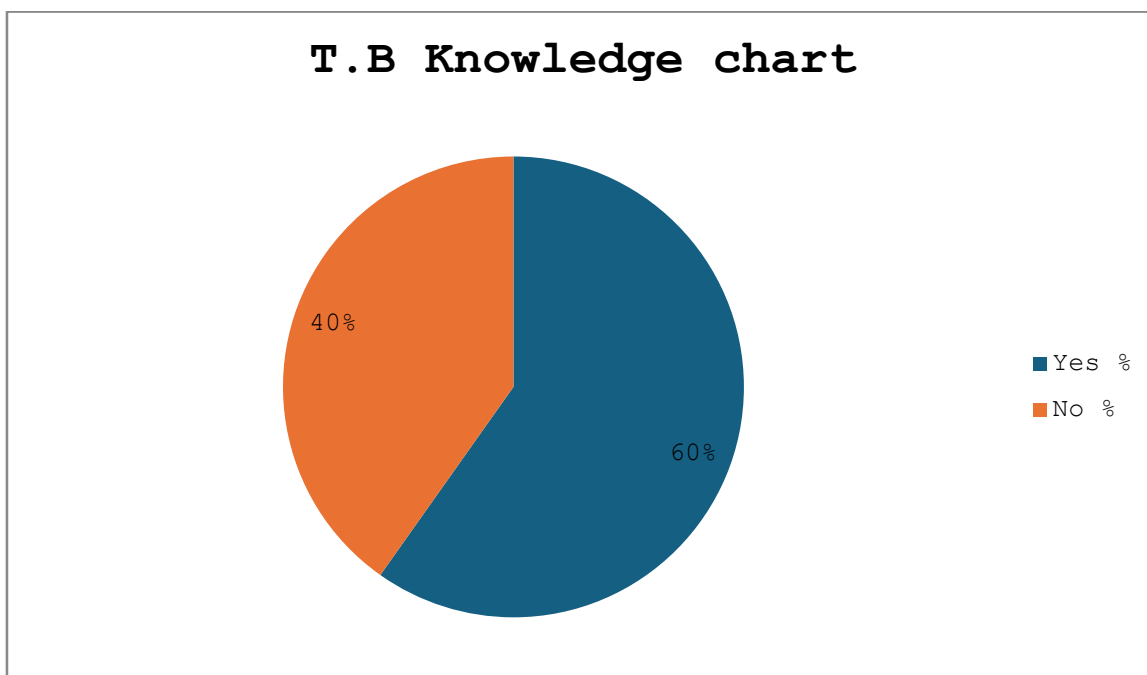
Punjab Institute of Mental health Nurses had participated for this research where 92 nurses actively participated and no one had refused to give consent or data according to sample. PIMH has 120 total nurses. 10.9% male and 89.9% female nurses had participated to fill up the questioner. However 43.5 % nurses not get married and rest of 56.5% nurses had married. Moreover 90.2% nurses had working as charge nurse and rest of 9.8% had designation of head nurse in PIMH.

Knowledge

Table 2

Do you know Tuberculosis (T.B) is an infectious disease which spread through air borne route?

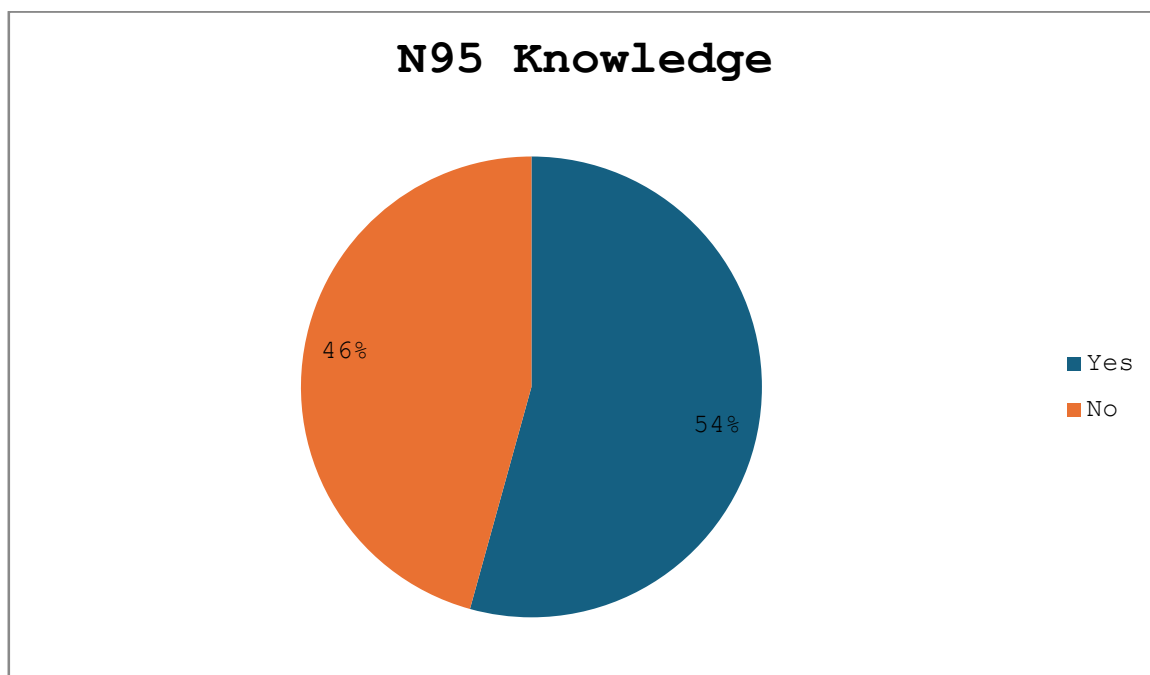
| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid Yes | 55 | 59.8 | 59.8 | 59.8 |
| Valid NO | 37 | 40.2 | 40.2 | 100.0 |
| Total | 92 | 100.0 | 100.0 | |



Nurses had asked to know that T.B is an infectious disease which spreads through air borne route than 59.8% nurses reported that they know it spreads through air borne route where 40.2% nurses did not have knowledge T.B spreads via air borne route.

Table 3
Do you know N95 respirator mask?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid Yes | 50 | 54.3 | 54.3 | 54.3 |
| Valid NO | 42 | 45.7 | 45.7 | 100.0 |
| Total | 92 | 100.0 | 100.0 | |

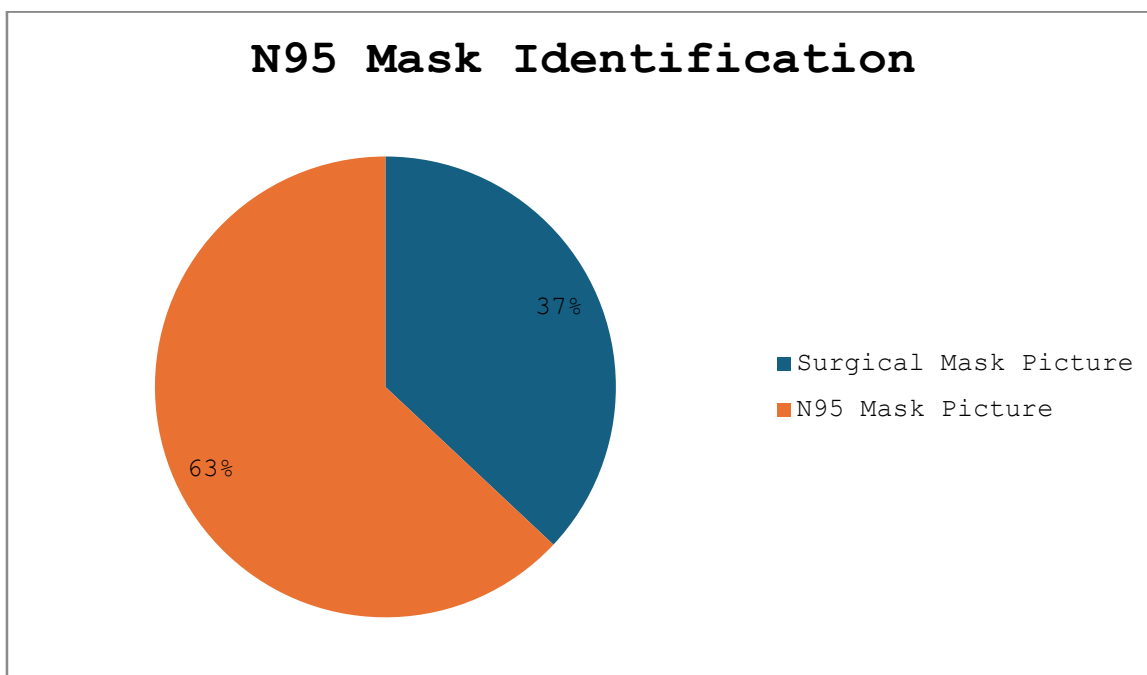


54.3% nurses answered yes when asked that they know about N95 respirator mask and 45.7% nurses reported they had not knowledge about N95 respirator mask.

Table 4

Identify N95 respirator mask?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------------|-----------|---------|---------------|--------------------|
| Surgical Mask Picture | 34 | 37.0 | 37.0 | 37.0 |
| Valid N95 Mask Picture | 58 | 63.0 | 63.0 | 100.0 |
| Total | 92 | 100.0 | 100.0 | |

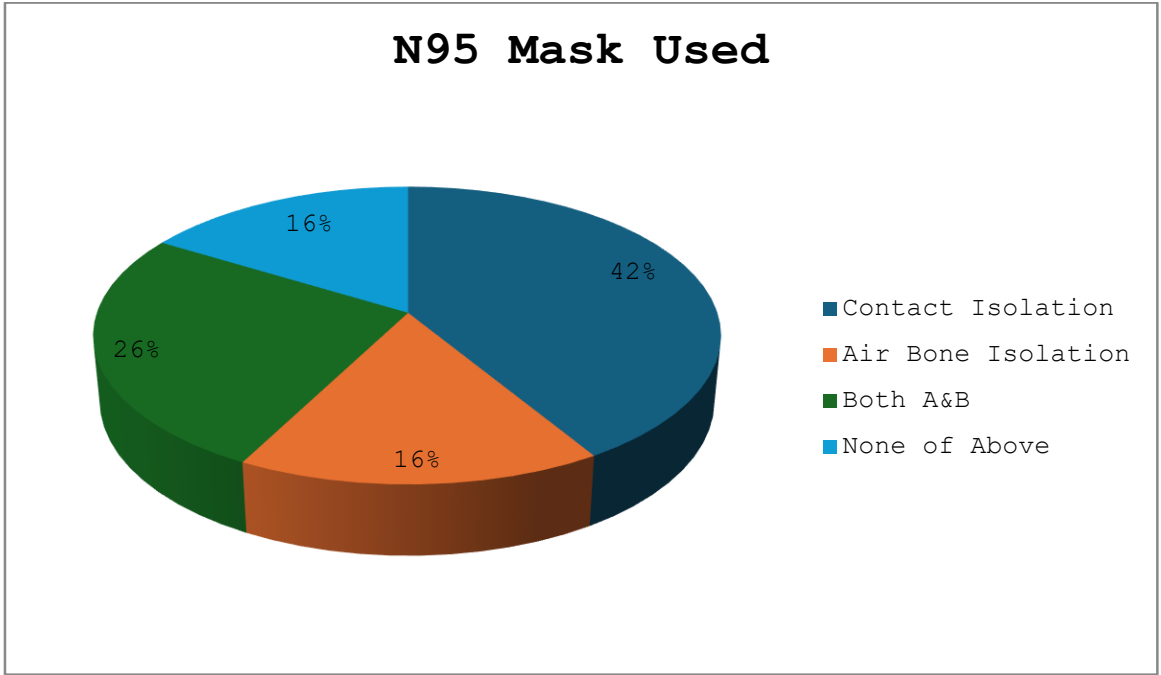


Nurses had shown two types of masks through two type's pictures and ask them to identify N95 respirator. 63% nurses marked on picture (A) which was a surgical mask and 37% nurses marked picture (B) which was N 95 respirator mask.

Table 5

N 95 mask is used for

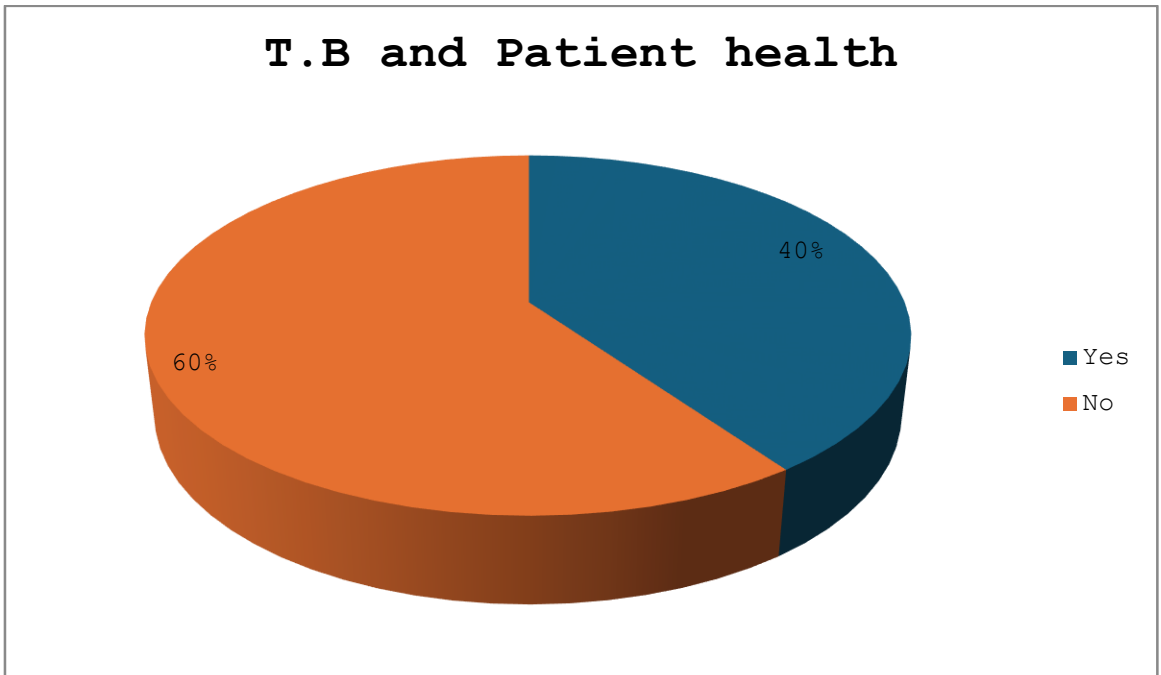
| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------------|-----------|---------|---------------|--------------------|
| Contact Isolation | 38 | 41.3 | 41.3 | 41.3 |
| Air borne Isolation | 15 | 16.3 | 16.3 | 57.6 |
| Both A&B | 24 | 26.1 | 26.1 | 83.7 |
| None of above | 15 | 16.3 | 16.3 | 100.0 |
| Total | 92 | 100.0 | 100.0 | |



Nurses were asked to purpose for use of N95 mask than 41.3% nurses had that N95 mask is used for patients in contact isolation, 16.3% nurses said it is used for air borne isolation, 26.1% thought both and 16.5% nurses reported none of above.

Table 6
Is T.B effects on patient's physical and mental health?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----------|---------|---------------|--------------------|
| Valid | Yes | 37 | 40.2 | 40.2 |
| | No | 55 | 59.8 | 100.0 |
| | Total | 92 | 100.0 | 100.0 |

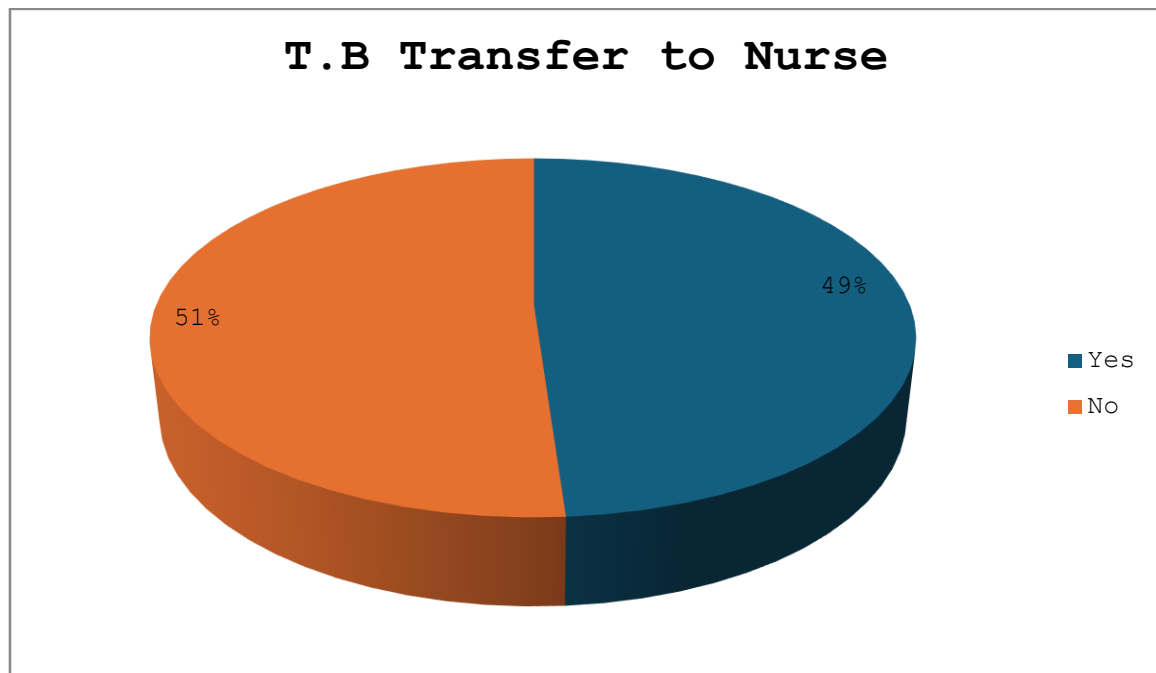


40.2% nurses answered yes that T.B effects on mental health of patient and 59.8 % nurses had answered NO.

Table 7

Can T.B transfers to nurses while attending an infected patient by uncovered sputum, cough, sneezing and etc?

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | Yes | 45 | 48.9 | 48.9 | 48.9 |
| | NO | 47 | 51.1 | 51.1 | 100.0 |
| | Total | 92 | 100.0 | 100.0 | |

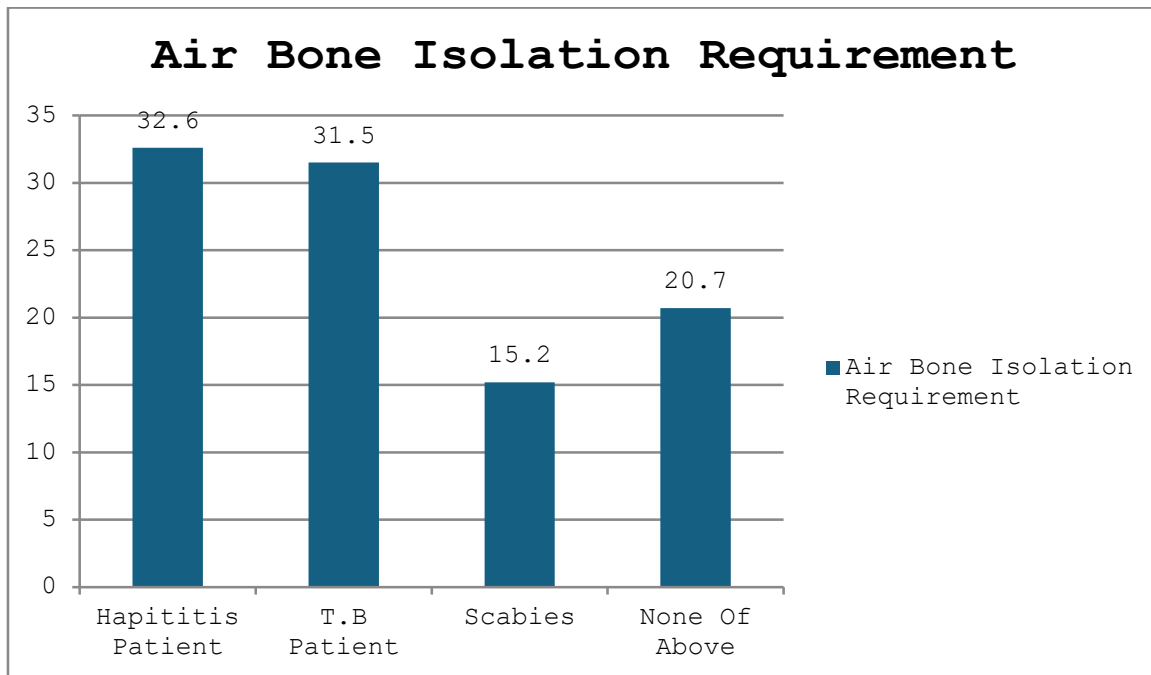


48.9% nurses marked yes, when asked that T.B can transfers to nurses and patients through uncovered sputum, cough, sneezing and etc. But remaining 51.1% nurses marked NO that T.B can spread through this way.

Table 8

Air borne isolation is require for

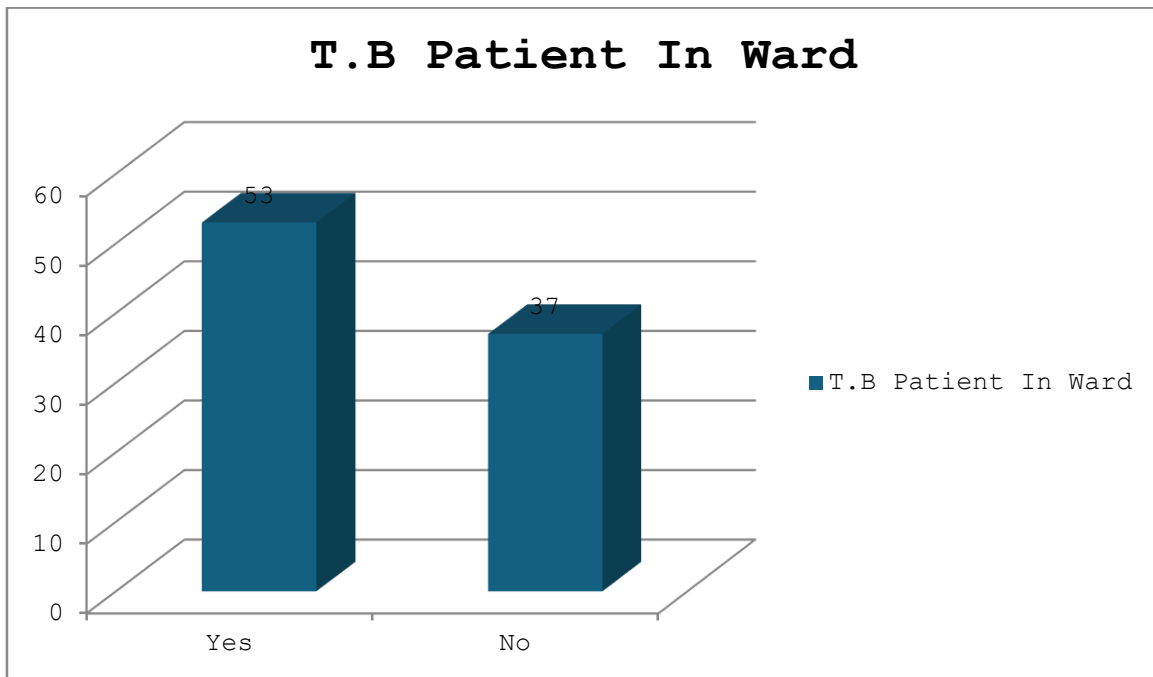
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------------------|-----------|---------|---------------|--------------------|
| Valid | Hepatitis Patient | 30 | 32.6 | 32.6 | 32.6 |
| | T.B Patient | 29 | 31.5 | 31.5 | 64.1 |
| | Scabies | 14 | 15.2 | 15.2 | 79.3 |
| | None of above | 19 | 20.7 | 20.7 | 100.0 |
| | Total | 92 | 100.0 | 100.0 | |



Nurses had asked to choose an option for air borne isolation than 32.6% nurses said hepatitis patient, 31.5% nurses marked T.B patient, 15.2 for scabies patients and 20.7% nurses marked none of above.

Table 9
Do you have T.B active patient in you ward?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid Yes | 58 | 63.0 | 63.0 | 63.0 |
| Valid NO | 34 | 37.0 | 37.0 | 100.0 |
| Total | 92 | 100.0 | 100.0 | |

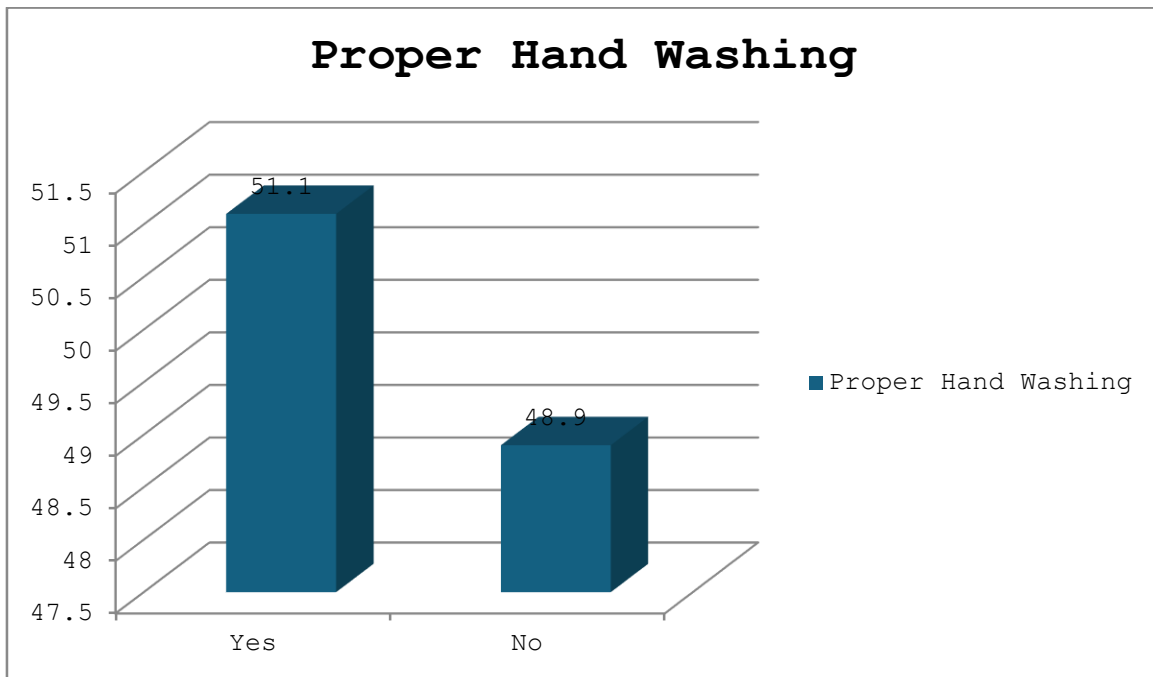


63%Nurses marked yes when asked do you have T.B patient is your ward, and remaining 37% nurses marked NO that they did not have T.B patient in their ward.

Table 10

Is proper hand washing a basic step before and after attending a T.B patient?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid Yes | 47 | 51.1 | 51.1 | 51.1 |
| Valid NO | 45 | 48.9 | 48.9 | 100.0 |
| Total | 92 | 100.0 | 100.0 | |

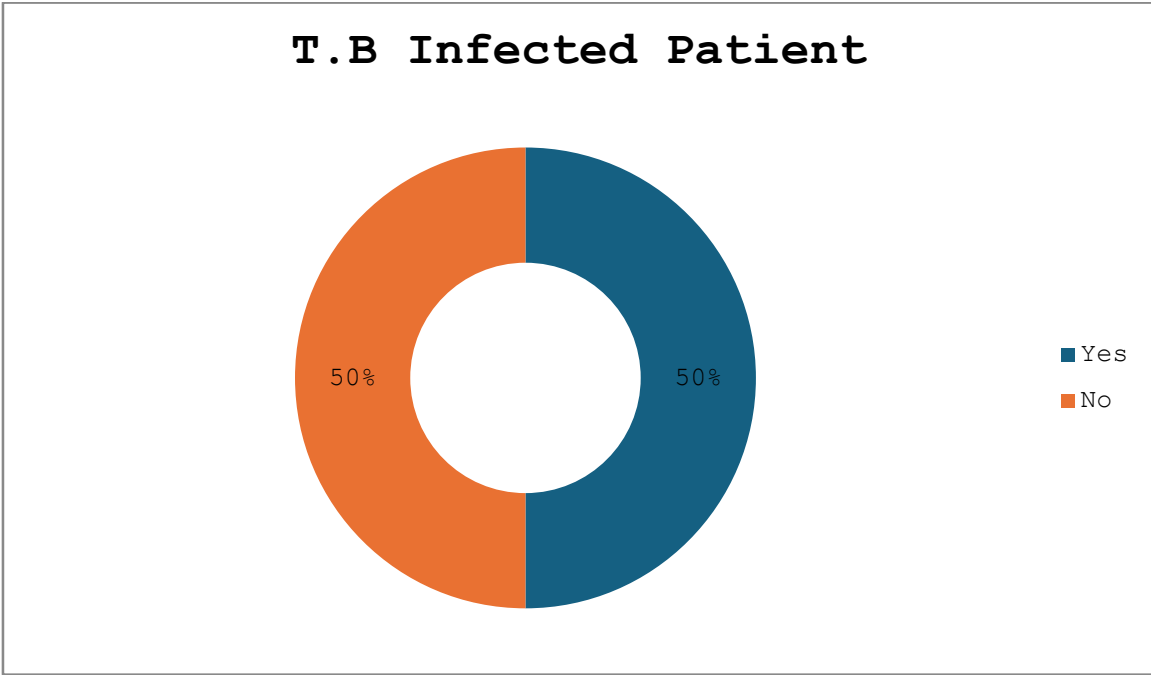


51.1% PIMH nurses had answered yes that hand washing is basic step before and after attending a T.B patient to control spread of T.B but 48.9 % nurses answered no.

Table 11

Do you think must have present Apron, surgical mask, N95mask, gloves to be present zx outside the T.B infected patient's room?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid Yes | 46 | 50.0 | 50.0 | 50.0 |
| Valid No | 46 | 50.0 | 50.0 | 100.0 |
| Total | 92 | 100.0 | 100.0 | |



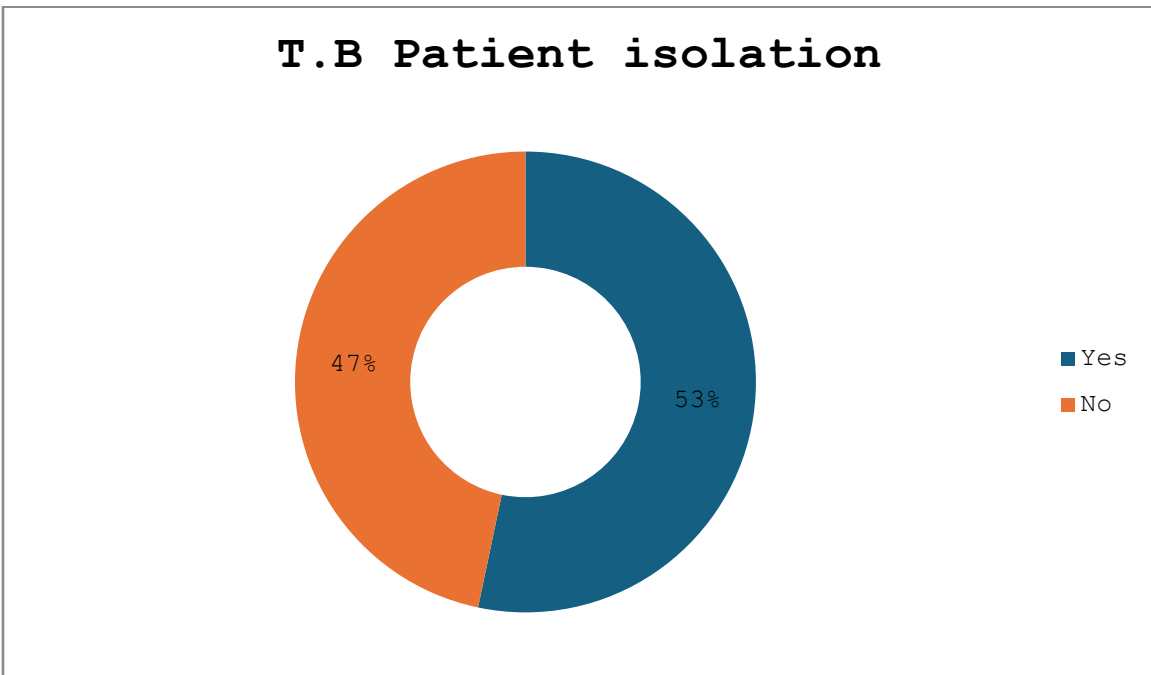
PINH nurses had asked for availability of Apron, mask, N95mask, and Gloves outside the T.B infected patient room, than 50% nurses said yes and 50% NO

Attitude

Table 12

Is T.B patient isolated in negative air pressure room in PIMH?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid Yes | 49 | 53.3 | 53.3 | 53.3 |
| Valid No | 43 | 46.7 | 46.7 | 100.0 |
| Total | 92 | 100.0 | 100.0 | |

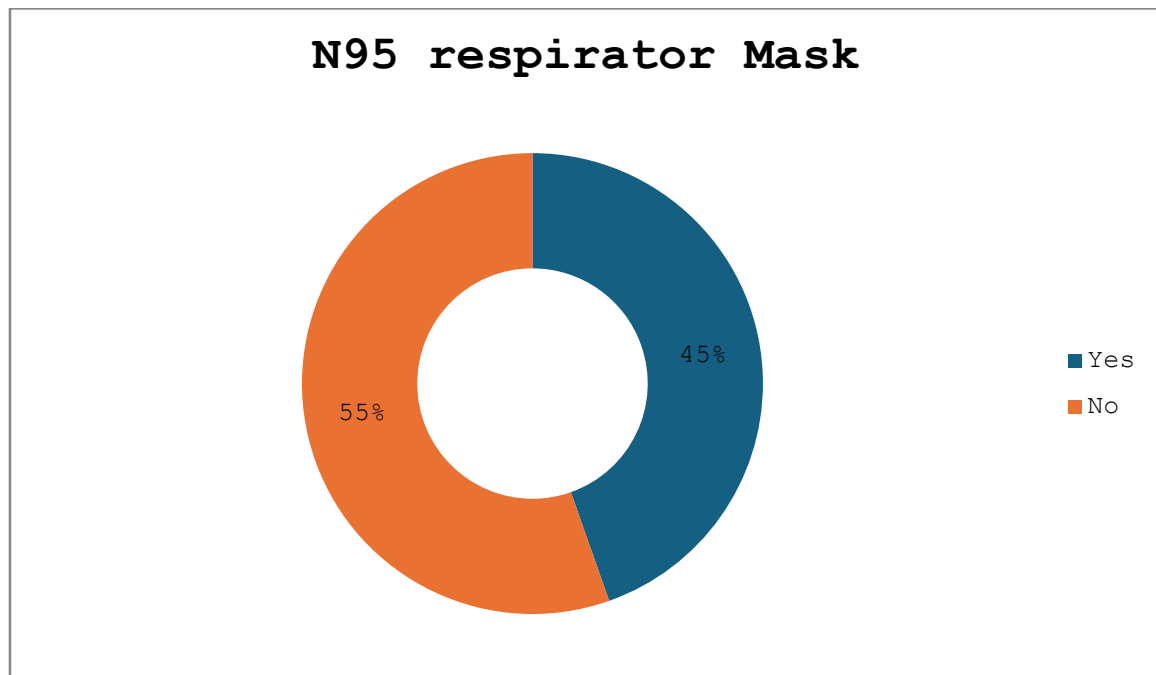


53.3 percent nurses had marked Yes when asked that T.B patients are isolated in negative air pressure and remaining 46.7 % nurses marked NO.

Table 13

Is N95 respirator mask used by nurses while attending a T.B patient in PIMH?

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | Yes | 41 | 44.6 | 44.6 | 44.6 |
| | NO | 51 | 55.4 | 55.4 | 100.0 |
| | Total | 92 | 100.0 | 100.0 | |

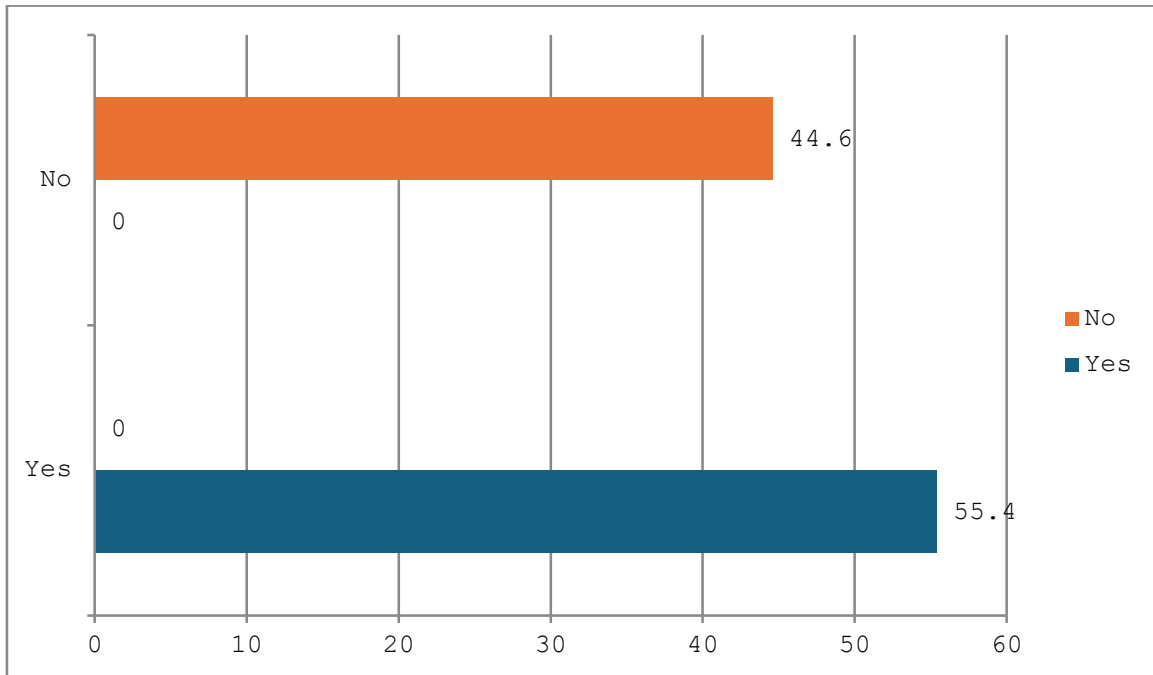


PIMH nurses had asked that they use N95 mask while attending T.B patient 44.6% nurses marked Yes and 55.4% nurses marked NO

Table 14

Is T.B infected patient use a surgical mask during walk in PIMH?

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | Yes | 51 | 55.4 | 55.4 | 55.4 |
| | NO | 41 | 44.6 | 44.6 | 100.0 |
| | Total | 92 | 100.0 | 100.0 | |

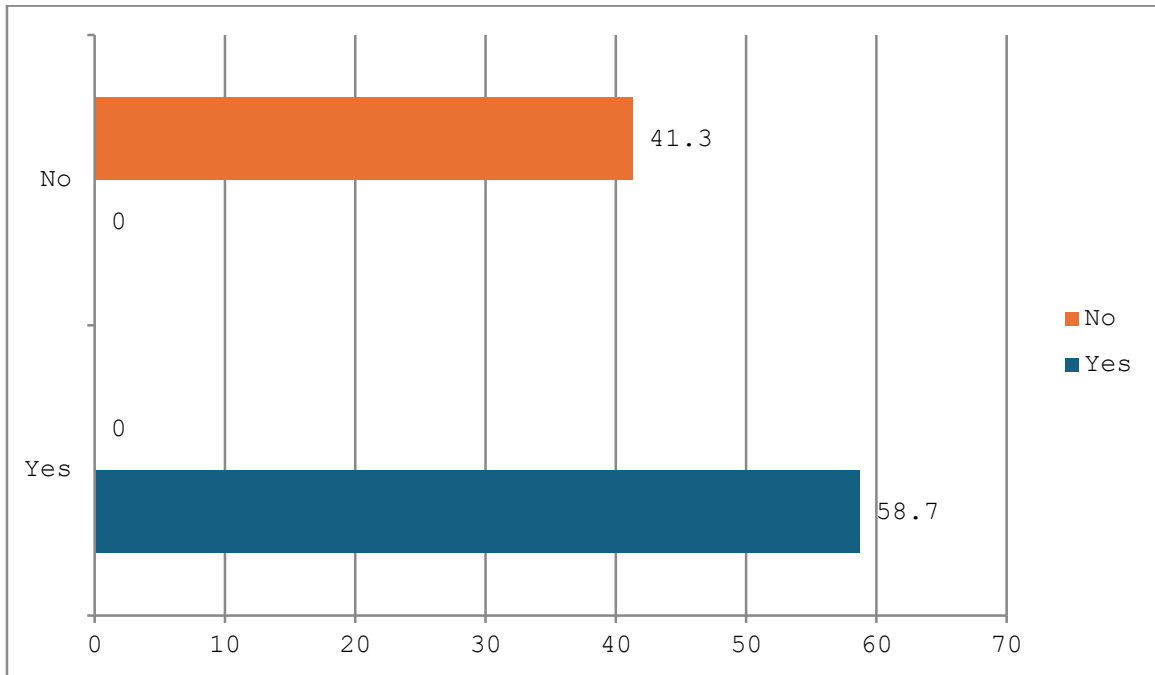


55.4% nurses said that T.B infected patient wear mask in PIMH during walk but 44.6% nurses marked NO.

Table 15

Is T.B infected patient living normally with other patients in PIMH?

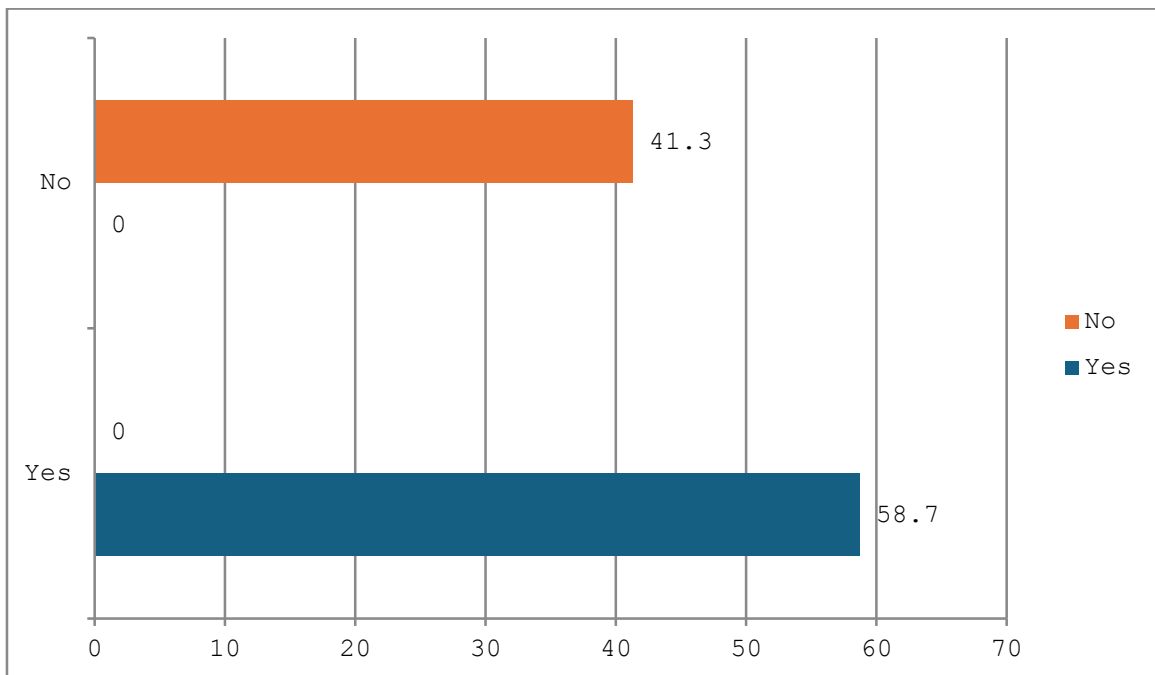
| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid Yes | 54 | 58.7 | 58.7 | 58.7 |
| Valid NO | 38 | 41.3 | 41.3 | 100.0 |
| Total | 92 | 100.0 | 100.0 | |



58.7% nurses had marked Yes when asked that T.B patients live normally with other patients in PIMH and remaining 41.3% nurses answered they do not live with other patients.

Table 16
Is T.B infected patient living normally with other patients in PIMH?

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid Yes | 54 | 58.7 | 58.7 | 58.7 |
| Valid NO | 38 | 41.3 | 41.3 | 100.0 |
| Total | 92 | 100.0 | 100.0 | |



58.7% PIMH nurses had answered Yes when asked for special unit for T.B patients in PIMH but rest of 41.3% nurses says that there is no any kind of specific area for T.B patients in this hospital.

Discussion

All PIMH nurses attend inpatients and outpatients with a risk of healthcare-associated TB infection at this hospital were represented in the present study. A thorough understanding of the way in which TB is contracted remains critical for the implementation of infection prevention and Control (IPC) measures. 59.2% nurses had knowledge that T.B is an infectious disease which transmits to others via air borne route. Knowledge of nurses is not sufficient because (Kiefer, Shao, Carrasquillo, Nabeta, & Seas, 2009) describes nurses must have enough knowledge when they work in practical field especially have sound knowledge for rote of transmission of T.B. Because T.B is the disease which attacks to other people via air borne route and it is a fatal disease.

PIMH nurse did not know about N95 respirator mask when nurses were asked than 63% PIMH nurses had not knowledge N95 respirator mask. T.B is the disease can control by use of N95 respirator mask by nurses. N95 mask save the nurses to become T.B infected from a T.B patient who transfers to others through air borne route by uncovered cough, sputum, sneezing and etc. Nurses are in close contact of T.B patients so use of special mask helps to control T.B disease. (Escombe et al., 2010)

A major gap had identified in the present study about knowledge, when only 15% nurses had reported right answer that air born isolation is required for T.B patients. Air born isolation is very imperative for T.B patients during incubation period because T.B has 14 days incubation period when it is actively spread via air borne route. Air borne isolation is done only in negative air pressure room that is designed and constructed for T.B disease. Proper assessment of T.B disease on time and proper isolation in negative air pressure room helps to prevent transmission of T.B disease.(Escombe et al., 2010)

Hand washing is a basic step and a universal precaution while attending a patient nurses must wash their hand prior and after attending the patient by following while world health organization and Centre of Diseases Control guidelines. Only 51% nurses had knowledge that hand washing is a basic step.(Stowell et al., 2014) describes that hand hygiene in proper by nurses always helps to reduce the chance of transmission of diseases but all steps of hand hygiene must be followed.

The findings regarding personal protective equipment had a concern, because 50% nurses have knowledge about personal protective equipment's which are used to deal a T.B infected patient in isolation. patient Biscotto et al. had similar findings, in which they found that nurses had not use personal protective equipment's when perform procedures or attend patients with high risk of healthcare-associated infection. For example, attending a TB patient isolation rooms. Nurses do not use personal protective equipment's that way they do not have knowledge that which kind of items required for air borne isolation. (Bhebhe et al., 2014)

The attitude of nurses regarding control of T.B is a major concern. 59% PIMH nurses did not use N95 mask. Because PIMH nurses reported that they do not have knowledge about N95mask. Because they had not resources from hospital management for isolation, N95respiraor mask Apron and etc. A research was conducted for concern regarding attitude of nurses like that nurses did not use of personal protective equipment especially N95 mask for air borne isolation due to non-availability of resources in the hospital.(Biscotto, Pedroso, Starling, & Roth, 2005)

Attitude of nurses has found in PIMH when 59percent nurses reported T.B infected patient lives with mentally ill patients. They do not isolate T.B patients in PIMH. The recent Lancet series

on global mental health highlighted the lack of research on the interactions between mental disorders and communicable diseases such as T.B. That's way nurses do not bother to think and isolate the patient in mental hospitals.(Deribew et al., 2010)

58% nurses reported that they do not isolate the patient in PIMH for T.B patient because they do not have any specific unit for T.B patients in PIMH. (Deribew et al., 2010) again describes that organization must play their role to change the attitude of nurses because provision of resources in mental hospital for air borne isolation helps to change nurse attitude and enhance the knowledge of nurses.

Recommendations

The knowledge of nurses plays an important role to control T.B so nurses knowledge need to upgrade regarding T.B.(Bhebhe et al., 2014) describes in their research that nurses knowledge upgraded in the hospital settings through arrange workshops on regular basis. In addition seminars and T.B control programmes for nurses to be arranged and attended by nurses.

The hospital management must provide personal protective equipment to nurses in the units to prevent patients and nurses from become sick with T.B disease. Provision of personal protective equipment to nurses always helps to enhance the knowledge and boost up the attitude of nurses regarding their job satisfaction and it helps to control air borne disease T.B (Bhebhe et al., 2014).

Infection control workshops to be arranged for nurses to prevent nurses from nosocomial infections and illness like T.B. Infection control program always helps the hospital management and nurses to provide healthy environment. It reduces the medical bills and shortage of staff due to medical illness (Jensen et al., 2005)

Negative air pressure room should be made in the hospital which will be helpful for nurses to change the attitude and enhance the knowledge of nurses regarding control of T.B in PIMH.

Null hypothesis is accepted that PIMH nurses have no knowledge and attitude about tuberculosis measures.

Someone can do more study in future to elaborate further about knowledge and attitude of nurses regarding control of tuberculosis in mental hospital.

Limitations

This research has limitation to collect the data from those nurses had been performing duty in female ward in PIMH. Male are not supposed to allow going inside the female ward. So limited data gathered from female ward nurses with help of female colleagues. Nurses may use personal protective equipment's if they have availability but non availability of resources may have different from results.

Conclusion

Tuberculosis is a fatal disease which transfers to other patients and nurses while attending T.B patient in hospital setting. Knowledge of nurses is very imperative to prevent their self from illness and also it helps to hospital management to decrease the medical expenses and shortage of nursing staff. Hospital management must full fill their responsibility to provide personal protective equipment's means control of respiratory, and availability of N95 mask for nurses, surgical mask for patients. Environmental control of T.B by hospital management is a basic step to isolate the patient in specific area and new guidelines of CDC to be followed by make negative air pressure rooms and allocations of specific area for T.B patients while they did not have negative pressure room and use of ultraviolet rays to control the T.B disease. However vaccination of T.B which is administered to the baby for control disease but it is not effect actively because after getting BCG nurses are suffering with T.B disease so respiratory and

environmental control is essential to reduce morbidity of and control of T.B disease. Reparatory and environmental control is like that prevention is better than cure.

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