Monthly Multidiciplinary Research Journal

Golden Research Thoughts

Chief Editor
Dr.Tukaram Narayan Shinde

ORIGINAL ARTICLE

GRT

A STUDY TO ASSES THE KNOWLEDGE AND ATTITUDE OF STAFF NURSES REGARDING PREVENTIVE ASPECTS OF TUBERCULOSIS INK. C. GENERAL HOSPITAL, MALLESHWARAM, BANGALORE.

NISHA MD

Poyanil college of nursing, KozhencherryKerala

Abstract:

A descriptive study was conducted to assess the knowledge and attitude of staff nurses regarding the preventive aspects of TB in K. C General Hospital, Bangalore. The instruments used for the study were a self- administered questionnaire and a five point Likert scale. A total of 60 staff nurses were selected by using convenience sampling technique. The data obtained were analyzed and interpreted in terms of the objectives and hypothesis of the study. In view of nature of the present and to accomplish the study a self instruction module was prepared focusing on TB and its preventive aspects

KEY WORDS:

Tuberculosis, Staff nurse, Knowledge, Attitude.

INTRODUCTION

"Any fact facing us is not as important as our attitude
towards it, for that determines our success or failure".

- Norman Vincent Peale

Astonishing scientific and technological advancements are being made in the 21st century, subsequently disease prevalence and incidence is also increasing due to ignorance and undesirable attitude. Tuberculosis could be either arrested or delayed only when the staff nurses have adequate knowledge and desirable attitude regarding preventive aspects of Tuberculosis.

Tuberculosis is an oldest worldwide chronic communicable bacterial disease. It is caused by Mycobacterium Tuberculosis, which is also commonly known as "Koch bacilli" or "Acid Fast Bacilli (AFB).1 Robert Koch discovered tubercle bacilli in 1882. It is a complex disease with a long history of human infection. Specific individuals and groups are at an increased risk of developing tuberculosis. The acid – fast bacilli that causes tuberculosis is transmitted via the airborne route .2

Mycobacterium tuberculosis is transmitted most commonly from a person with infectious pulmonary tuberculosis to other persons through droplet nuclei. Tiny droplet nuclei may remain in the air for several hours. There may be 3,000 infectious nuclei per cough.3

In 1993 WHO declared tuberculosis as a global emergency in recognition of its growing importance as a public health problem. The global target for TB control, adopted by World Health Assembly, is to cure 85% of newly detected cases of sputum smear- positive tuberculosis and to detect 70% of the estimated incidence of sputum smear- positive tuberculosis. A study conducted by WHO in 2003 shows that National estimate of the annual incidence of smear positive patients are 75/100,000.4

A pamphlet published by WHO in connection with World Tuberculosis Day on 24-03-2001 reports that:

Every year 20 lakhs people develop Tuberculosis in India. Nearly
5, 00,000 people die off tuberculosis every year and 1,000 every day and one die every minute from it.
Tuberculosis kills more people in India than HIV, Malaria, Leprosy and tropical diseases combined.5

When the investigator worked as a staff nurse it was found that, the Health Care Workers (HCWs) are at high risk for acquiring occupational diseases such as TB. If the staff nurses are having adequate knowledge and a positive attitude towards TB and its preventive measures they could be able to practice effectively. It is very easy to arrest the transmission of TB to HCWs as well as to the patients

OBJECTIVES OF THE STUDY

1.To Asses the knowledge of the staff nurses regarding the preventive aspects of tuberculosis.
2.To Asses the attitude of the staff nurses regarding the preventive aspects of tuberculosis.
3.To identify the relationship between the knowledge and attitude of the staff nurses with the selected demographic variables.
4.To prepare a self instruction module based on the knowledge and attitude of the staff nurses.
.

OPERATIONAL DEFINITION

1 Knowledge: - It is the staff nurses' understanding ability to answer the questions regarding tuberculosis and its cause, mode of transmission, diagnosis and treatment and prevention of pulmonary Tuberculosis.
2 Attitude: - It is the staff nurses' opinion towards the preventive aspects of pulmonary Tuberculosis.
3 Staff Nurse :- Is a person who has successfully undergone a period of training
 (3 or 3 ½ years) in a School of Nursing that is recognized by Indian Nursing   Council and is licensed to practice as RN,RM in any area of nursing field.
4 Preventive aspects: - Refers to any measures which are taken to avoid the spread   of pulmonary Tuberculosis.
4 Tuberculosis: - Tuberculosis is an infectious disease, which primarily affects the lung parenchyma, caused by Mycobacterium Tuberculosis

Inclusion Criteria

Staff nurses who are having 1-30 years of service
Nurses who have undergone General Nursing and Midwifery course
Nurses who are working in K.C. General Hospital, Bangalore
Nurses who are willing to participate in the study
.   .

Assumption

Staff nurses working in K.C. General Hospital possess some knowledge on preventive aspects of tuberculosis.
Staff nurses knowledge regarding   preventive aspects of   tuberculosis can be measured by a knowledge questionnaire.
Staff nurses attitude regarding preventive aspects of tuberculosis can be measured by a modified Likert scale.
The increased knowledge of the staff nurses will show a positive attitude towards prevention of tuberculosis.

Conceptual Framework

The conceptual framework selected for the study is based on "General System Theory by Ludwig Von Bertlanffy (1968).

REVIEW OF LITERATURE

Toufiq Rashid. Reported that TB is no.1 enemy for India's health. A World Health Organization (WHO) report released in Paris says more than 4.5 million people in India are suffering from Tuberculosis.

About 1.8 million new cases are detected every year and about 460,000 deaths so far.

Toufiq Rashid. reported in TB infection rising among kids: that Tuberculosis continued to claim the highest toll among diseases and a recent study showed that infection, especially among children, was on the rise. The study conducted by the Central Tuberculosis Division shows about 9-10 percent prevalence in children between one and nine years. An estimated 1,100 to 1,900 persons out of every one lakh people are infected every year.

Waclawik J, Gasiorowski J, Inglot M, Andrzejak R, Gladysz A. studied epidemiology of occupational infections in health care workers of the Wroclaw region in 1990-2002. The result revealed that during last years 136-300 cases of occupational diseases among health care workers were annually diagnosed in the Wroclaw region, infectious diseases made 10-30% of this number. In this group of diseases, TB and viral hepatitis were the most frequent (45-82%).

Kanyerere HS, Salani Poni FM. conducted a study on Tuberculosis among the health workers in a central hospital, Malawi. The purpose of the study was to determine (1) the TB cases notification rate in health workers and (2) whether NTP guidelines were adhered in diagnosing Tuberculosis. The results revealed that, of 571 HCWs 33(6%) were noticed with TB in 2001, giving a TB case notification rate of 5780/100,000. Patient attendants had higher rate of TB than nurses, ward attendants and doctors NTP diagnosis guidelines were not properly followed.

Jereb JA, KlevenSRM, Privett TD, Smith PJ Crawford JT, Sharp VL,et al. et al. investigated TB in health care workers (HCW) employed at a hospital with an outbreak of multi-drug resistant Mycobacterium TB. The patient consisted of 361 HCWs who had either serial Tuberculine skin tests or TB. 6 health care workers had disease due to Mycobacterium Tuberculosis. The estimated risk of a skin test conversion was positively associated with the time.The result revealed that nurses and house keepers had relatively high risk of 8.0 and 9.4 times. Laboratory workers had a relative risk of 4.2 times.

Jackson MM, Rymer TE. state that nurses are at high risk for many infections including TB, HIV, Hepatitis and Rubella, which may cause morbidity for the nurse and his or her family. A few will lose their lives to infections acquired on the job. Although all occupational infections cannot be prevented, understanding the chain of infection and how to break the links can reduce the risk and maintaining health for all health workers.

METHODOLOGY

Research Design

The investigator adopted a descriptive approach to assess the "knowledge and attitude of staff nurses regarding the preventive aspects of Tuberculosis".

Setting

The investigator selected K.C General Hospital, Malleshwaram, Bangalore to conduct the study.

Sample and Sampling Technique

In the present study the sample consisted of 60 staff nurses (General Nurses) working in K.C General Hospital, Malleshwaram, Bangalore

Data collection Technique

Every day minimum 3-4 staff nurses were selected for assessing their knowledge and attitude. 60 staff nurses were selected by convenience sampling. It was ensured that the routine of the hospital would not be disturbed. Staff nurses were called in a separate room and the tools were handed over to less busy time so that they would be more responsive. The questionnaire was collected after completion by the staff nurses. The questionnaire and attitude scale was completed in the presence of the investigator to avoid bias in data collection. Approximately 40-45 minutes were spent with each nurse to collect complete data..

Description of the Tool

A structured questionnaire consists of two sections.

Section A - Demographic data
Section A : Demographic Data

     The first section of the tool consisted of 6 items to collect data regarding personal and baseline characteristics of the subjects (staff nurses).

Section B – Knowledge Questionnaire

     There were 27 items on knowledge domain, 6 items on application and 12 items in comprehension domain. The tool consists of 44 items which give the level of knowledge of staff nurses. The items were developed so as to cover five different areas of TB and its preventive aspects

The five different areas are:

Part 1. Questions related to TB and its cause
Part 2. Questions related to mode of transmission
Part 3. Questions related to diagnosis and treatment
Part 4. Questions related to prevention of TB and
Part 5. Questions related to TB and other diseases.

     The items were of multiple choice type. The total score is 44. Each correct response will carry "one score" and "zero" for incorrect response.

. . Section C : Attitude Scale

     This section contains 10 statements framed into a Likert type attitude scale which gives the attitude of staff nurses regarding preventive aspects of TB.

RESULT AND DISCUSSION

     The data obtained were analyzed and tabulated according to the objectives of the study, using descriptive and inferential statistical tests which included

Frequency and percentage for analysis of demographic data
Frequency, Mean, Mean Percentage and Slandered Deviation to determine the knowledge and attitude scoring of staff nurses
$X2$ test was used to find out the significance between the knowledge and selected demographic variables
The relationship between knowledge and attitude of the staff nurses regarding preventive aspects of TB would be tested by using Product Moment Correlation co-efficient

Section – I

Table I
Over all Knowledge of the Staff Nurses on
the Preventive Aspects of TB.

N = 60

Sl, NO.	Over all Level of Knowledge	NO	%
1	Inadequate (<50%)	29	48.33
2	Moderately adequate (50-75%)	13	21.67
3	Adequate (>75%)	18	30

Total Score=42

Table XIII show the over all knowledge of the staff nurses regarding preventive aspects of Tuberculosis.

Regarding the preventive aspects of TB, 30% staff nurses had adequate knowledge, 21.67% had moderately adequate knowledge and 48.33% nurses had inadequate knowledge .

Table II
Over all Attitude of the Staff Nurses
Regarding the Preventive Aspects of TB.

N = 60

Sl. NO.	Over all Level of Attitude	NO	%
1	Unfavourable (<50%)	13	
2	Moderately favourable (50-75%)	35	21.67 58.33
3	Most favourable (>75%)	12	20

Maximum score =50, Minimum Score =10

Table XIV show the over all attitude level of the staff nurses on the preventive aspects of TB.
It reveals that maximum number of staff nurses 58.33% had moderately favourable attitude, 21.67% staff nurses had unfavourable attitude and only 20% staff nurses had the most favourable attitude on the preventive aspects of Tuberculosis .

Table III
Association between the selected Demographic Variables of the Staff Nurses and their level of Knowledge Regarding   Preventive Aspects of TB.

N = 60

SL. No.	Demographic Variables		Inadequate		Moderately Adequat e		Adequate		x^2
			No.	%	No.	%	No.	%	
1	Age in years	21-30	7	87	1	12.5	0	0	Value
		31-40	14	58.33	4	16.67	6	25	
		41-50	8	44.44	5	27.78	5	27.78	x^2-17.11
		51-60	0	0	3	30	7	70	
		Rural	23	53.49	9	20.93	11	25.58	df - 6
		Graduation	0	0	0	0	1	100	P<0.05
2	Course attended regarding TB	No	29	56.86	10	19.61	12	23.53	x^2-11.5 Sig.
		Yes	0	0	3	33.33	6	66.67	df - 2
		Pead. Ward	2	66.67	1	33.33	0	0	P<0.05
		OPD	6	54.55	3	27.27	2	18.18	Sig.
		OT	8	66.67	1	8.33	3	25	
		Sp. Ward	2	66.67	0	0	1	33.33	
		Surg. Ward	5	38.46	3	23.08	5	38.46	
		Med. ward	0	0	3	30	7	70	
3	Years of experience as a staff nurse	< 5	5	83.33	1	16.67	0	0	
		5-15	17	65.38	5	19.24	4	15.38	x^2-20.3
		16-25	7	38.88	5	27.74	6	33.38	df - 6
		26-35	0	0	2	20	8	80	

Sig.-Significant   NS.-Not Significant P<0.05 Sig.

Table III describe the association between selected demographic variable of the staff nurses' and their level of knowledge regarding the   preventive aspects of TB.

The table reveals that there is a significant association between the knowledge level of the staff nurses regarding preventive aspects of TB and their age. At 5% level of significance with 6 degree of freedom the calculated Chi-square value i.e. 17.11, is greater than the table value of Chi-square (12.59). Hence there is a significant association between the knowledge level and age of the staff nurses. Thus H1 was found to be true.

The table reveals that there is a significant association between the knowledge level of the staff nurses and the course attended regarding TB. At 5% level of significance with 2 degree of freedom the calculated Chi-square value i.e. 11.5, is greater than the table value of Chi-square (5.99). Hence there is a significant association between the knowledge level and course attended regarding TB. Thus H3 was found to be true.

The table also reveals that there is a significant association between the knowledge level of the staff nurses regarding preventive aspects of TB and the years of experience. At 5% level of significance with 6 degree of freedom the calculated Chi-square value i.e. 20.3, is greater than the table value of Chi-square (12.59). Hence there is a significant association between the knowledge level and the years of

experience of the staff nurses.

Table IV
Association between selected demographic variables of staff nurses'
and their level of attitude regarding   preventive aspects of TB.
N = 60

SL. No.	Demographic Variables		Unfavorable		Favorable		Most Favorable		x^2
			No.	%	No.	%	No.	%	
1	Age in years	21-30	5	62.5	3	37.5	0	0	Value
		31-40	6	25	16	66.67	2	8.33	x^2-22.70
		41-50	2	11.11	12	66.67	4	22.22	df - 6
		51-60	0	0	4	40	6	60	P<0.05
		Rural	10	23.26	26	60.46	7	16.28	Sig.
		Higher secondary	8	19.05	26	61.90	8	19.05	
		Graduation	0	0	0	0	1	100	
		No	13	25.49	30	58.82	8	15.69	
2	Presently working ward	OBG Ward	2	25	6	75	0	0	x^2-22.01-12
		Pead. Ward	2	66.67	1	33.33	0	0	p<0.05
		OPD	3	27.27	6	54.55	2	18.18	
		OT	4	33.33	8	66.67	0	0	
		Sp. Ward	0	0	2	66.67	1	33.33	Sig.
		Surg. Ward	2	15.38	8	61.54	3	23.08	
		Med. Ward	0	0	4	40	6	60	
3	Years of experience as a staff nurse	< 5	4	66.67	2	33.33	0	0	
		5-15	7	26.92	17	65.38	2	7.7	x^2-28.25
		16-25	2	11.11	13	72.22	3	16.67	df - 6
		26-35	0	0	3	30	7	70	

Sig. – Significant   N.S   -   Not – significant

P<0.05

Table VI describe the association between the selected demographic variable of the staff nurses' and their level of attitude regarding the preventive aspects of TB.

The table reveals that there is a significant association between the attitude level of the staff nurses and their age. At 5% level of significance with 6 degree of freedom the calculated Chi-square value i.e. 22.70, is greater than the table value of Chi-square (12.59). Hence there is a significant association between the attitude level and age of the staff nurses. Thus H4 was accepted.

To find out the association between the level of the attitude and presently working ward, a Chi-square test was done. The calculated Chi-square value (22.01) is greater than the Chi-square table value (21.03) with degree of freedom 12, there is a significant association between the attitude and presently working ward of the staff nurses.

Table v
Correlation of the Staff Nurses' Knowledge and the
Attitude on the Preventive Aspects of TB

N = 60

Items	Mean	Standard Deviation	Product Moment Correlation co-efficient 'r'
Knowledge	22.93	7.728	
Attitude	30.25	5.973	0.823

Table V depicts the correlation of the nurses' knowledge and the attitude on the preventive aspects of TB.

The mean value of over all knowledge was 22.93 with a standard deviation of 7.728; where as the mean value of attitude was 30.25 with a standard deviation of 5.973. The knowledge and attitude correlation value was 'r' = 0.823. It shows that statistically high positive correlation between the staff nurses' knowledge and attitude on the preventive aspects of Tuberculosis at $p<0.05\%$ level of significance .

Implication

The present study insists upon the need for proper organizing health services. It will be a challenge for nurses to be a competent professional nurse or a team member in achieving the National Health goal.

Nursing Education

The present study emphasizes on enhancement in the knowledge of the preventive aspects of TB by nurses. In order to achieve this, the Diploma and Degree curriculum should include a unit on occupational risk of communicable diseases.

Nursing Practice

Nurses are the key person of the health team, who play a major role in the health promotion and maintenance, nursing research studies are usually not interested in pursuing knowledge simply for the sake of knowledge. It is a practicing profession, so the researchers generally integrate findings into practice.

Nursing Administration

Since the study reveals an inadequacy of knowledge and the attitude of nursing personnel in different areas of preventive aspects of TB. The in-service educational programmes, continuous education, orientation, short term courses, protocol, leaflets, self instruction modules influences the knowledge and the attitude of the staff nurses..

Nursing research

The essence of research is to build a body of knowledge in nursing as it is an evolving profession. The findings of the present study serve as the basis for the professionals and the students to conduct further

8

studies. The generalization of the study result can be made by replication of the study.

CONCLUSIONS

The following conclusions were made on the basis of the findings of the study.

1.Present knowledge showed that there was inadequate knowledge about preventive aspects of TB.
2.Present attitude showed that there was lack of desirable attitude about preventive aspects of TB.
3.Continuing education could keep the nurses working in the hospital to update with necessary knowledge with regards to the recent trends in the preventive aspects of TB.
4.There was no significant association between the level of knowledge and the demographic variables such as residential status, general education status and presently working ward.
5.There was no significant association between the level of attitude and the demographic variables such as residential status, general education status and the course attended regarding TB.

REFERENCES

1.Jugal Kishore, S. Puri, *Rojha.Nursing role in prevention and control of Tuberculosis. Indian Nursing Year Book: 2000-01; 10:155-160.*
2.Van Wormer LM. *Tuberculosis: the latest. CRNA (11271033) 2000 Feb (cited 2004. Jun 17) 11(1): (15-9). Available from URL: http: //www. Pubmed.com.*
3.*Braunwald, Fauci, Kasper, Hauser Lango, Jameson. Harrison's-Principles of Internal Medicine.* 15th ed. New York (US): Mc Graw-Hill Medical publishing division; 2000.
4.*Treatment of Tuberculosis: Guidelines for National Programmes. WHO Report Geneva*,2003.WHO.
5.*Dots World TB Day. WHO Report*. New Delhi, 2001. WHO.
6.Park K. Park's *Text book of Preventive and Social Medicine. 17th de. Jabalpur (India)*: m/s. Bamarsidas Bhanst Publishers; 2002.
7.Takeda E, Robazzi ML, *Lavarador MA, Occupational risk acquiring tuberculosis among hospital nursing personnel. Rev Bras Enfem* (00122-21944) 2001 June (cited 2004 Jan 10); 54 (3): (456-65. Available from URL http://www.medscape.com.
8.*Tuberculosis control-India (Ms. Word). New Delhi, (India)*: Ministry of Health and Family Welfare; 2004.http://www.tbcindia.org.
9.*Indians achieve break through in TB treatment. The Times of India* 2004 sep7; Sect. A: 8 (col 1).
10.*Jaydip Bhaduri. Co-existence of the disorders.* TB & HIV 2004; 2(1): (7: -10).
11.*Stop TB Partnership. 2nd report. Geneva*; 2004: WHO.
12.*Global Tuberculosis control: Country profile India, WHO Report. Geneva:* 2004. WHO.
13.*RNTCP- Performance Report, 5 Second Quarter, New Delhi*, Directorate General of Health Services; 2004.
14.Collins CM. *Reducing occupational transmission of tuberculosis to health care workers. Medsurg Nurs* (10920811) 1993 OCT (cited July 10); 2 (5): (389-95). Available From: URL: http://www.pubmed.com.

Publish Research Article
International Level Multidisciplinary Research Journal
For All Subjects

Dear Sir/Mam,
We invite unpublished research paper.Summary of Research Project,Theses,Books and Books Review of publication,you will be pleased to know that our journals are

Associated and Indexed,India

* International Scientific Journal Consortium   Scientific
* OPEN J-GATE

Associated and Indexed,USA

* EBSCO
* Index Copernicus
* Publication Index
* Academic Journal Database
* Contemporary Research Index
* Academic Paper Databse
* Digital Journals Database
* Current Index to Scholarly Journals
* Elite Scientific Journal Archive
* Directory Of Academic Resources
* Scholar Journal Index
* Recent Science Index
* Scientific Resources Database