



EFFECTIVENESS OF A STRUCTURAL TEACHING PROGRAMME ON TUBERCULOSIS AND ANTI TUBERCULAR THERAPY: AN INTERVENTIONAL STUDY

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ABSTRACT

TB is an infectious bacterial disease caused by Mycobacterium tuberculosis. Although a remarkable achievement has been made toward containing the disease and it is estimated that 37 million lives have been saved through effective diagnosis and treatment of TB since 2000, TB remains a major health problem globally. WHO analysis of the pandemic's impact on TB mortality indicate that a 50% drop in the detection of TB cases over 3 months will lead to almost 400000 more people dying from TB. Lack of knowledge among TB patients and community may lead to potential delay in health seeking, persistence of social stigma and misconceptions about TB, and the resultant poor adherence to TB treatment. The objective of the study was to assess knowledge of nursing students regarding Tuberculosis and Anti Tubercular Therapy before and after structural teaching programme. Result of the study showed that the mean difference between pretest and post test mean score was a true difference and not by chance. Present study showed improvement in the knowledge after the structural teaching programme.

KEYWORDS : Tuberculosis, Anti Tubercular Therapy, Nursing students, Structured Teaching Programme.

INTRODUCTION

TB is an infectious bacterial disease caused by Mycobacterium tuberculosis. Although a remarkable achievement has been made toward containing the disease and it is estimated that 37 million lives have been saved through effective diagnosis and treatment of TB since 2000, TB remains a major health problem globally [1]. According to World Global TB Report 2015 revealed that TB is still the world's biggest threat because disease caused the death of 1.5 million people worldwide [2]. WHO analysis of the pandemic's impact on TB mortality indicate that a 50% drop in the detection of TB cases over 3 months will lead to almost 400000 more people dying from TB. [3].

Apart from the mortality from TB, the morbidity effect as indicated by the report which showed that "9.6 million people fell ill due to TB across the world (5.4 million men, 3.2 million women, and 1.0 million children), with an estimated 12% of the 9.6 million new TB cases being HIV-positive.[4]

India contributes to one fourth of total tuberculosis (TB) burden in the world. In year 2016, out of the estimated annual global incidence of 10.4 million cases in 2019, approximately 2.8 million new cases were estimated to have occurred in India. According to National Strategic Plan (NSP) 2017–2025, the current focus of Government of India is to achieve rapid decline in TB cases, and morbidity and mortality due to TB, while working towards elimination of TB in the country by 2025 [5].

As the Revised National TB Control Programme (RNTCP) of India relies on passive case finding, to realize these goals of NSP 2017–2025, it is necessary that the chest symptomatic and the community at large should be aware of the disease etiology, symptomatology, management, mode of spread of TB, and preventive measures against the disease, and its duration of treatment. Lack of such knowledge among TB patients and community may lead to potential delay in health seeking,

persistence of social stigma and misconceptions about TB, and the resultant poor adherence to TB treatment [6].

Therefore it is necessary to update knowledge of nursing students regarding tuberculosis and anti tubercular therapy. Approved policies, education, current evidence can be implemented and evaluated for the change in practice. The various research studies and practice aspects, created insight in the researcher mind and felt the need for design a study to conduct structural teaching programme for nursing students on tuberculosis and anti tubercular therapy. This will help to learn and improve knowledge and practice of nursing students in community and in clinical areas.

OBJECTIVES

The objective of this study was to assess knowledge of nursing students regarding Tuberculosis and Anti Tubercular Therapy before and after structural teaching programme so that the health resources are suitably directed to meet the future needs in this field.

MATERIAL AND METHODS

A cross-sectional interventional study was done to assess the effectiveness of a structural teaching programme on Tuberculosis and Anti Tubercular Therapy among the nursing students. It was conducted by nursing faculty members at Maharishi Markandeshwar College of nursing in March 2021. Total 30 participants were registered.

Resource persons were invited from outside. The three sessions were held for one day, four hours of teaching programme scheduled for a day. Teaching was given through zoom app. Different teaching methods were used like lecture with power point presentation, videos etc for the teaching programme. Teaching faculty of M. M. College of nursing was also engaged in various sessions. Topics covered in the teaching programme were statistical data of tuberculosis

around the World and in India, its transmission, causes, Sign & Symptoms, Investigation, Prevention and Anti Tubercular Therapy, Multi Drug Resistant and Revised National TB Control Programme (RNTCP). Finally, the sessions were wrapped with the feedback of participants. Every participant attended all the sessions. This study involved a pretest, educational intervention, and posttest. O1, X, O2. O1, O2 was the Observation of the dependent variable (pretest and posttest); X was the exposure to the educational intervention, the independent variable.

A pre-test and post-test contained 30 questions and for the test completion 20 minutes were given and this test includes various topics in the sessions. Test was given on a day before the start of session and after the Structured Teaching Programme, to test the participants knowledge before and after the teaching programme. Structured Knowledge questionnaire with closed ended questions were used. An answer key was prepared for all the questions. Each correct response was awarded by 1 mark and an incorrect response was awarded by 0 marks. All the participants were certified with the certificate of participation at the end.

STATISTICAL ANALYSIS

The mean test score of pre-test and post-test were compared by using paired t-test, for p-value of <0.005. The statistical package used was used SPSS 22 version.

RESULT

Study results revealed that the mean pretest knowledge score of nursing students was 14.20 and in posttest it was 18.43. The result further showed that the computed 't' value i.e. -14.78 was found to be statistically significant at 0.05 level which showed that the mean difference between pretest and post test mean score was a true difference and not by chance. (Table1 / Figure1)

Table 1: Mean, Mean difference, Standard Deviation Difference, Standard Error of Mean Difference and 't' value of pre test and post test Knowledge Score of Nursing Before and After the Structural Teaching Programme

| | Mean | Mean _d | SD _d | SE _{MD} | t- value | p-value |
|------------------|-------|-------------------|-----------------|------------------|----------|---------|
| Pre test (n=30) | 14.20 | | | | | |
| | | -4.23 | 1.56 | .28 | -14.78 | .000* |
| Post test (n=30) | 18.43 | | | | | |

*significant (p<0.05), t(29) = 2.05
NS not significant(p > 0.05)

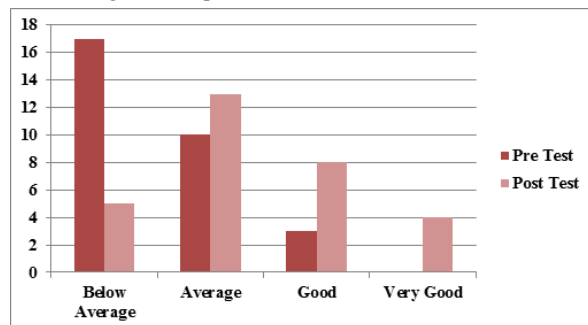


Figure 1: Bar Graph Showing Score Distribution of Nursing Students in Terms of Level of Knowledge Regarding Tuberculosis and Anti Tubercular Therapy.

Participant's feedback showed that teaching programme created more interest, enthusiasm, and inspiration to learn the topic.

DISCUSSION

This study prospectively investigated knowledge acquired by nursing students through session. An analysis of the data has helped the investigator to get a clear understanding of the

study undertaken. The interpretation drawn from the findings of the study were based on the knowledge related to statistical data of tuberculosis around the World and in India, its transmission, causes, Sign & Symptoms, Investigation, Prevention and Anti Tubercular Therapy, Multi Drug Resistant and Revised National TB Control Programme (RNTCP) regarding tuberculosis and anti tubercular therapy.

Present study showed that majority (56.6%) participants had below average knowledge before structural teaching program only (33.3%) participants had average knowledge. A very few (10%) participants had good knowledge. Nearly half (43.3%) participants had average knowledge further one fourth (26.6%) participant had good knowledge and only (13.3%) of participants had very good knowledge after the post test i.e. after the structural training programme. Similar finding were reported by a research study on Knowledge about tuberculosis among pulmonary tuberculosis patients: A cross-sectional study from Uttarkhand showed that 65.0 % of the patients had good knowledge of TB. [7].

Current study showed significant improvement in knowledge regarding tuberculosis and anti tubercular therapy among nursing students from pre knowledge score to post knowledge score.

Similar finding were reported by a research study on knowledge and awareness about tuberculosis in senior school children in Bangalore, India showed a significant knowledge improvement about TB from 1.59% (pre-education) to 49.67% (post-education) [8].

Limitations

The limitations of the present study were small number of participants.

CONCLUSION

Present study showed improvement in the knowledge after the structural teaching programme. The participants has given good feedback about the sessions and expressed their wish to attend such more programme. It leads to an improvement for patient safety and care as well as prevention of Tuberculosis and uses, side effects of Anti Tubercular Therapy. Furthermore, researchers should investigate the transfer of knowledge into practice i.e. how utilized and implemented in practice. The findings of this study show that there was highly statistical significant relation difference between pre-test and post-test.

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