"Planned teaching programme on prevention and treatment of Multi drug resistant and extensively drug resistant TB among staff nurses"

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Abstract

The present study aimed at development of planned teaching program for assessing the knowledge of 80 staff nurses in S.S.S.B. Govt. Satellite and Late Sh. Khemraj Katara Govt. Satellite Hospital at Udaipur city, Rajasthan. The method adopted for the present study was evaluative approach, this would help the investigator to evaluate the effect of specific intervention that is "Planned teaching program" on the variable that is "Knowledge" of staff nurses regarding prevention and treatment of Multi drug resistant and Extensively drug resistant TB in selected health centers of Udaipur district, Rajasthan. In this study samples were drawn by using simple random technique method. Data was collected by using structured knowledge questionnaire. From the findings of the study it was found that the pre-test mean knowledge score was 16.66, post-test mean knowledge score was 23.96. The significance of the findings was obtained by using paired "t" test the value of pre-test and post-test of knowledge was 24.48 (P<0.05) emphasizing the significance of the findings. Hence the research hypothesis H_1 is accepted that there is a significant difference between pre-test and post-test of knowledge score. There is a significant association between pre-test knowledge score with selected socio demographic variables such as age in years, gender, religion, marital status, area of residence, educational qualification, working experience and source of information were significant at 0.05 level. Hence, research hypothesis H_2 is accepted. The study concluded that there was improvement in the level of knowledge of staff nurses which indicated that the planned teaching programme was effective. The demographic variables of staff nurses significantly associated with the pre-test knowledge score. This will helps the staff nurses to enhance their knowledge.

Keywords: Knowledge, Planned teaching programme, Staff nurse.

Introduction

Tuberculosis is an infectious disease caused by mycobacterium tuberculosis. The major source of infection is infected sputum of persons having tuberculosis who are either not being treated or not being fully treated. They are source of infection to environment and people around them. Tuberculosis affects all age group. The incidence of infection increase sharply from infancy to adolescence. One percent of children in the age group of under five are infected with tubercle bacilli as evidence by tuberculin test. The incidence of infection is more in male children then in female children. The risk of developing tuberculosis disease is high in pre-school years. The child is not born with immunity. It is acquired as a result of natural infection or BCG vaccination. Children who are malnourished and living in dark and dingy and overcrowded places have poor resistance and have poor resistance and have increased chances of developing tuberculosis.[1]

Multiple drug resistant (MDR-TB) is a Mycobacterium tuberculosis that is resistant at least to isoniazid and refampicin. Extensively drug resistant (XDR-TB) is a Mycobacterium tuberculosis resistant to isoniazid, rifampicin, any fluoroquinolone and at least one of three injectable. Drug-resistant TB poses a major threat to control of TB worldwide. By the end of 2014, data on anti-TB drug resistance were available for 153 countries, accounting for more than 95% of the world's population and estimated TB cases. Eighty of these countries have continuous surveillance systems, while the others rely on epidemiological surveys.[7]

Globally, an estimated 3.3% (95% Cl: 2.2-4 4%) of new cases and 20% (95% Cl: 14-27%) of previously treated cases have MDR-TB; these levels have remained virtually unchanged in recent year in 2014, there were an estimated 480 000 (range: 360 000-600 000) new cases of MDR-TB worldwide, and approximately 190 000 (range 120 00- 260 000) deaths from MDR-TB among patients with pulmonary TB who were notified in 2014, an estimated 300 000 (range: 220 000- 370 000) had MDR-TB. More than half of these patients were in India, China and the Russian federation.[3]

Objectives of the Study

1. To assess the pre-test knowledge score regarding prevention and treatment of MDR and XDR-TB among staff nurses.
2. To prepare and administer planned teaching programme on knowledge regarding prevention and treatment of MDR and XDR-TB among staff nurses.
3. To assess the post-test knowledge score regarding prevention and treatment of MDR and XDR-TB among staff nurses.
4. To determine the effectiveness of planned teaching programme on knowledge regarding prevention and treatment of MDR and XDR-TB among staff nurses.
5. To find out the association between pre-test knowledge scores regarding prevention and treatment of MDR and XDR-TB and selected socio-demographic variables among staff nurses.

Hypothesis

H₁: There will be a significant difference between the pre-test and post-test knowledge scores regarding prevention and treatment of MDR and XDR-TB among staff nurses working in health center.

H₂: There will be significant association between the pre-test knowledge of staff nurses regarding prevention and treatment of MDR and XDR-TB with selected socio-demographic variables.

Materials and Methods

Research Approach
The research approach adopted for the present study was evaluative approach

Research Design
In the present study, one group pre test and post test design was selected for the study.

Research Setting
The present study has been conducted at S.S.S.B. Govt. Satellite and Late Sh. Khemraj Katara Govt Satellite Hospital at Udaipur city, Rajasthan.

Population
In the present study population consist of 80 staff nurses of selected health centers of Udaipur district, Rajasthan.

Sampling Technique
In the present study, simple random technique was taken to select the samples and 80 staff nurses were selected.

Sample and Sample Size
The Sample Size for the present study consists of 80 staff nurses of selected health centers of Udaipur district, Rajasthan.

Sampling Criteria
Staff nurses who are in the age group between 21 year to above 50 years are included in the study.

Statistical Methods
1. Mean, median, SD and mean percentage were used to describe the area wise pre-test and post-test knowledge score of the respondents on prevention and treatment of MDR & XDR-TB.
2. Paired 't' test is used to find the effectiveness of Planned teaching programme by comparing pre and post-test knowledge score of the respondents.
3. Chi–square is used to find the association between the pre-test knowledge score of the respondents regarding prevention and treatment of MDR and XDR-TB and selected socio-demographic variables.
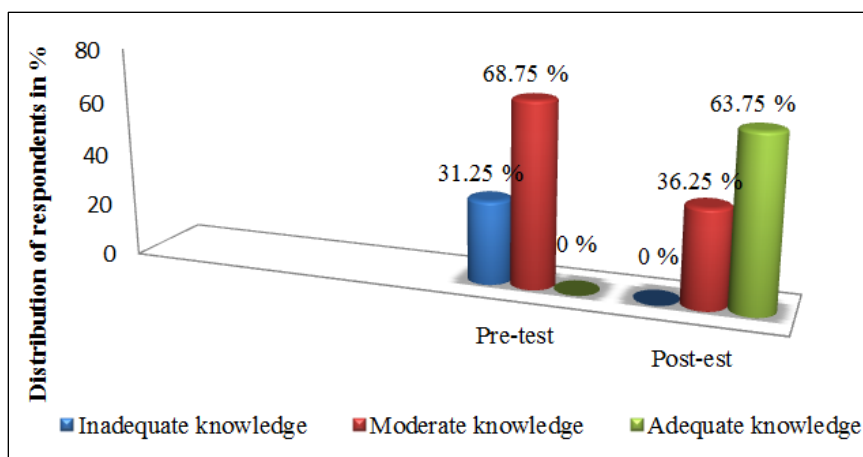
Results

Table 1: Area wise pre-test knowledge score of respondents. N=80

Area	Max score	Mean	Mean%	S.D.
Introduction of MDR and XDR-TB	08	5.16	64.53	1.39
Incidence rate of Tuberculosis	05	2.69	53.75	1.12
Causes of Tuberculosis	02	1.11	55.62	0.70
Sign and Symptoms of Tuberculosis	02	1.00	50.00	0.61
Diagnosis	02	1.08	54.37	0.72
Prevention	02	0.95	47.50	0.61
Treatment	09	4.67	51.94	1.79

Table 2: Area wise post-test knowledge score of respondents. N=80

Area	Max score	Mean	Mean%	S.D.
Introduction of MDR and XDR-TB	08	6.61	82.65	0.92
Incidence rate of Tuberculosis	05	3.92	78.50	0.80
Causes of Tuberculosis	02	1.50	75.00	0.57
Sign and Symptoms of Tuberculosis	02	1.52	76.25	0.54
Diagnosis	02	1.58	79.37	0.56
Prevention	02	1.48	74.37	0.61
Treatment	09	6.65	73.88	1.14

Fig. 1: Pre-Test and Post-Test Knowledge Score

Table 3: Effectiveness of planned teaching programme on prevention and treatment of MDR and XDR-TB. N= 80

Knowledge Score	Mean	Mean%	SD	Enhance-ment	Enhance-ment%	df	't'	P value
Pre- test	16.66	55.03	3.94	6.60	22.11	79	24.48	S
Post-test	23.26	77.14	2.94					

S = Significant (P=0.05)

Discussion

The level of knowledge among staff nurses regarding prevention and treatment of MDR & XDR-TB was assessed in pre-test out of 80 respondents 31.25% had inadequate knowledge and 68.75% staff nurses had moderate knowledge on prevention and treatment of MDR & XDR-TB. The level of knowledge among staff nurses regarding prevention and treatment of MDR & XDR-TB were assessed in post-test out of 80 staff nurses 63.75% had adequate knowledge, 36.25% had moderate knowledge and none of the staff nurses found to be with inadequate knowledge. The overall mean of pre-test knowledge among staff nurses regarding prevention and treatment of MDR & XDR-TB was found to be 16.66 with standard deviation of 3.94 and mean of post-test was 23.26 with standard deviation of 2.94. The mean score of post-test knowledge was 23.26 apparently higher than the mean score of pre-test knowledge i.e. 16.66, suggesting that the planned teaching programme was effective in increasing the knowledge of the staff nurses regarding prevention and treatment of MDR & XDR-TB. The mean difference was 6.59 between pre-test and post-test knowledge score of the staff nurses and was found to be significant at p=0.05. So research hypothesis (H_1) is accepted.

Overall there is significant association between knowledge of respondents and socio-demographic variables such as Age in years χ^2= 30.10, Religion χ^2= 87.50, Marital status χ^2= 39.20, Educational qualification χ^2= 56.50, Working experience χ^2= 41.60 and Source of information χ^2= 10.70 were found to be significant at 0.05 level and variables such as Gender χ^2=3.20 and Area of residence χ^2= 2.45, was found to be non significant at 0.05 level. Hence the research hypothesis (H_2) is accepted.

Conflict of Interest: None.

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