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Research Paper

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A Study to Evaluate the Effect of Planned Teaching Programme on Knowledge Regarding Prevention and Management of Side Effects of Dots Therapy Among Patients Attending TB Centres of Sangli- Miraj- Kupwad Corporation Area

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Article Info

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ABSTRACT:

An estimated 9.0 million cases and 1.5 million fatalities from tuberculosis were reported in the 2014 global report on the disease. Multidrug-resistant (MDR) and extensively drug-resistant bacteria tuberculosis (TB) have enhanced the significance of TB control efforts for public health. The objectives stated such 1. To assess the existing level of knowledge regarding the prevention and management of side effects of DOTS therapy. 2. To assess the post-test knowledge regarding prevention and management of side effects of DOTS therapy after administration of planned teaching. 3. To compare the pretest and post-test knowledge among patients attending TB centres. Material and methods- A Quantitative Research approach and Pre-Experimental-One group-pre-test -post-test design was adopted for the study. The conceptual framework used in the study was an open system by Ludwig Von Bertalanffy's. The study was conducted in selected DOTS centres of Sangli, Miraj Kupwad corporation. The sample size was obtained by power analysis and the Non-Probability-Incidental sampling technique was used with a sample size of 65 patients. Data collection was done by using Demographic variables and a structured knowledge questionnaire. Result And Conclusion- The pre-test revealed that the majority of patients receiving DOTS therapy 49(75.39%) had poor knowledge (Score 06-09), 10(15.38%) had average knowledge (Score 10-13), and 6(9.23%) had good knowledge (Score 14-17) scores. The post-test revealed that the majority of patients 51(78.47%) had average knowledge (Score 10-13), 10(15.38%) had poor knowledge (Score 06-09), and 4(6.15%) had good knowledge (Score 14-17) score. The calculated paired t -value is 17.2485, and the p-value is <.00001. This value is less than 0.05 level of significance. The study concluded that planned teaching regarding the prevention and management of side effects of DOTS therapy was effective.

Keywords- Effectiveness, Planned Teaching, Knowledge, Prevention And Management Of Side Effects, Dots Therapy.

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1. Introduction

Salla Atkins, and David Biles, stated that many people fail to take their medications as directed. The repercussions for chronic and debilitating diseases like tuberculosis are severe, with extended durations of infectiousness, relapse, the establishment of drug-resistant Mycobacterium tuberculosis isolates, and increased morbidity and mortality. The study looked at the effectiveness of education and counselling in encouraging adherence to treatment for both latent (dormant) and active tuberculosis. Three extremely low-quality evidence trials with a total of 1437 individuals that examined education and counselling interventions in increasing adherence to drug completion for the treatment of latent tuberculosis were found. Two of these trials found that education and counselling improved adherence to drug treatment, but the third did not.

Janaína VST, Jordana AN, Lenilde DS, Data also suggests that decentralization of TB services has no negative impact on effects of treatment Localities where patients live, work, and attend school are where community-based tuberculosis care is given. Community-based DOT (CB-DOT) is an element of community-based TB care that aims to lessen the load of patient care on overworked healthcare facilities in nations with a high TB prevalence. Patients can get therapy in their homes, places of employment, or places of education. instead of commuting large distances and waiting for extended periods of time in within medical institutions. This is especially important in areas where access to healthcare is constrained. Enhancing treatment outcomes can be significantly impacted by care in the community in such settings.

Problem Statement-

“A Study to Evaluate the Effect of Planned Teaching Programme on Knowledge Regarding Prevention and Management of Side Effects of Dots Therapy Among Patients Attending TB Centres of Sangli- Miraj- Kupwad Corporation Area”

The objectives of the study-

1. To assess the existing level of knowledge regarding the prevention and management of side effects of DOTS therapy.
2. To assess the post-test knowledge regarding prevention and management of side effects of DOTS therapy after administration of planned teaching.
3. To compare the pretest and post-test knowledge among patients attending TB centres.

Hypothesis

H₀-There is no significant difference between pre-test and post-test knowledge scores regarding the prevention and management of side effects of DOTS therapy.

H₁- There is a significant difference between pre-test and post-test knowledge scores regarding the prevention and management of side effects of DOTS therapy.

2. Materials and methods

Research Approach and DesignQuantitative research approach with A Quasi-Experimental-one-group pre-test-post-test design was used.

Variables:

- Independent Variable: Planned Teaching Programme regarding prevention and management of side effects of DOTS therapy.

- Dependent Variable: knowledge

Research Setting- The settings were the Tuberculosis Centre of Sangli, Miraj, and Kupwad Corporation area. The present study settings were selected as per the needs and criteria, from which samples were selected.

Population- The population consists of patients who attended TB centres in the Sangli-Miraj-Kupwad Corporation area. TB patients who are taking treatment in DOTS Centre.

SAMPLE: In this study, samples are patients who attended selected TB centres in the Sangli-Miraj-Kupwad Corporation area and also those who fulfil the criteria. Selected Patients of TB attending DOTS centre.

Sample Selection Criteria-

- **Inclusion criteria-**

- Those who were available at the time of data collection.
- Those who were willing to participate in the study.
- Those who were able to read and write in Marathi and English.

- **Exclusion Criteria**

- 1 Those who have attended any teaching session on the same topic.

Sampling Method: Non-Probability- Incidental Sampling Technique was used.

Sample Size Sample size = 55 and 10% of the dropout rate so the total sample size = 65 The final sample size will be a total of 65 (10% dropout will be considered) based on power analysis.

The tool and the content of the planned teaching program were done by 3 Doctors from the TB Unit, 13 faculty from various nursing colleges, 10 from the Department of Community Health Nursing, and 1 statistician. A total of 27 experts tested the content validity of the tool. The split-half method was used. The reliability coefficient is $r = 0.7318$ and the spearman Brown correction is 0.82 both are more than 0.70 which shows the tool is reliable internally consistent and acceptable. The mean knowledge score of the post-test was 10.5 and for pre-test score was 7.625 after the planned teaching program knowledge improved. The pilot study helped to visualize some practical problems that could be faced during the final study and also gave better insight into research methodology. No changes were made after the pilot study.

3. Results and Findings

Organizations of the findings

Analysis and explanation of study results under the following heading were arranged:

SECTION I- Frequency and percentage distribution of demographic variables.

SECTION II- Analysis of pre-test knowledge scores regarding prevention and management of side effects of DOTS therapy among patients attending TB centres.

SECTION III- Analysis of post-test knowledge scores regarding prevention and management of side effects of DOTS therapy among patients attending TB centres.

SECTION IV - Analysis of Pre-test and post-test scores for prevention and management of side effects of DOTS therapy patients attending TB centres

SECTION V - Compare the Pre-test and post-test scores for prevention and management of side effects of DOTS therapy patients attending TB centres.

TABLE NO.1: Frequency and percentage distribution of demographic variables of patients receiving DOTS therapy (n=65)

SN	Characteristics	Frequency (f)	Percentage (%)
1	Age in years----		
1.1	20-40	21	32.3
1.2	41-60	33	50.78
1.3	61-80	11	16.92
2	Gender-		
2.1	Male	40	61.53
2.2	Female	25	38.47
3	Duration of DOTS therapy		
3.1	Up to 3 months	49	75.39
3.2	6-8 months	16	24.61
4	Side effects of DOTS therapy		
4.1	Yes	54	83.08
4.2	No	11	16.92

The findings in **Table No. 1** show that in the age group, the majority of the participants 33(50.78%) were comprised the age group of 41-60 years, some of the participants 21(32.30%) were comprised the age group of 20-40 years, and the remaining 11(16.92%) of the participants were comprised from age of 61-80 years. When gender is taken into consideration in the study findings majority 40(61.53%) were male and 25(38.47%) were female patients receiving DOTS therapy. With regards to the duration of DOTS therapy majority 49(75.39%) of the patients receiving this therapy from the last 3 months and some of the participants 16(24.61%) of the patients receiving DOTS therapy from the last 6-8 months. As per the data received by the patient's majority 54(83.08%) of the patients had side effects of DOTS therapy and only 11(16.92%) don't have any history of side effects of DOTS therapy.

Table No.2: Analysis of the level of knowledge before the administration of planned teaching among patients receiving DOTS therapy (n=65)

Pre-test Knowledge score		
Level of Knowledge scores	f	%
Poor	49	75.39
Average	10	15.38
Good	6	9.23

According to the study result findings in Table 2, shows that in the pre-test the majority of patients receiving DOTS therapy 49(75.39%) had poor knowledge (Score 06-09), 10(15.38%) had average knowledge (Score 10-13), and 6(9.23%) had good knowledge (Score 14-17) scores regarding prevention and management of side effects of DOTS therapy.

Table No.3 Analysis of the level of knowledge after the administration of planned teaching among patients receiving DOTS therapy(n=65)

Level of Knowledge scores	Frequency(f)	Percentage (%)
Poor	10	15.38

Average	51	78.47
Good	4	6.15

According to the study result findings in **Table 3** shows that in the post-test the majority of patients receiving DOTS therapy after planned teaching 51(78.47%) had average knowledge (Score 10-13), 10(15.38%) had poor knowledge (Score 06-09), and 4(6.15%) had good knowledge (Score 14-17) regarding prevention and management of side effects of DOTS therapy. Hence, it shows that the administration of planned teaching helps in increasing the knowledge score in the post-test than in the pre-test.

Table No.4- Analysis of Comparisons of the Pretest and Post-test Knowledge Scores of Patients Receiving DOTS Therapy- n=65

Knowledge	Mean	SD	df	Calculated t- value	p -Value
Pre-test	7.65	1.73	64	17.2485	0.0001
Post-test	11.65	1.76	64		

The maximum score in the structured knowledge-based questionnaire was 17 regarding the prevention and management of side effects of DOTS therapy. The data represented in **table no.4** shows the mean scores of post-test knowledge of the participants was (11.65± 1.76(SD)) with a range of (14-17) than the mean of pre-test knowledge scores (7.65± 1.73) with a range of (6-9). The calculated paired t -value is 17.2485, and the p-value is 0.0001. The result is highly significant at <0.05. Hence hypothesis H₁ is accepted and H₀ is rejected. This suggests that there is a statistically significant increase in post-test knowledge scores so, planned teaching regarding the prevention and management of side effects of DOTS therapy among the participants was proved to be effective.

4. Discussion

Similar findings were supported by the study conducted by Daxaben Patel, and Khushbu Patel (2021) Prior to the test, 20% of the sample had low knowledge (scoring 1–10) on tuberculosis and treatment, while 46% of the sample had average knowledge (score 11–20), and 34% had good knowledge (20–41). And in the post-test, 0% of the sample had low knowledge (scoring 1–10) of tuberculosis and dots therapy, while 18% had an average understanding (score 11–20), and 82% had strong knowledge (20–41) of these topics. Section 3: Compare the pre-and post-test results. The average pre-test observation score was 16.4, the average post-test observation score was 23, and the standard deviation for each score was 5.64 for the pre-test and 7.67 for the post-test score. Additionally, the calculated "t" value was 4.20, which was higher than the table value at the 0.05 level of significance. Increased staff nurse knowledge of tuberculosis and dot treatment was achieved through systematic instruction.

5. Conclusion

According to the research's findings the below-said conclusions were drawn. It brings out the limitation of the study into the picture. The implications are given on various aspects like nursing practice, nursing education, nursing administration, and nursing research and also give an insight into further studies.

The study shows that,

- 1.The pre-test showed that the knowledge of patients regarding the prevention and management of side effects of DOTS therapy was inadequate in all areas.

- 2.The planned teaching tested in this study was found to be effective in improving the knowledge of patients attending TB centres that participated in the study.
- 3.It indicates the importance of frequent education programs to update the knowledge regarding the prevention and management of side effects of DOTS therapy among TB patients is essential.

Implications:

Scientific and technological development is a challenge to nursing, to keep abreast with new developments, continuing education is necessary. The educational program is a major factor in shaping the future of the profession of nursing service. The findings of the study have several implications for nursing service, nursing education, and nursing research.

Nursing Practice:

The present study findings may help nurses to understand the awareness of TB patients regarding the Prevention and management of side effects of DOTS therapy. As a practitioner, the nurse can create awareness, and provide guidance and counselling at the community level.

Nursing Education:

Nurse educators may give more attention to educating TB patients regarding the prevention and management of side effects of DOTS therapy. Nursing students can be motivated to organize awareness and educational programs to enhance TB patients' knowledge on elements of prevention and management of side effects of DOTS therapy. Student nurses should have a training program to obtain adequate knowledge about the same. It helps the students to organize an awareness program for TB patients and their family members by conducting a series of educational programs during their urban and rural posting.

Nursing Administration:

The study findings may help nursing administrators for significant role in encouraging and motivating nurses to improve their knowledge in order to keep pace with the changing needs of society. Nurse administrators may develop standard protocols for appropriate action regarding the prevention and management of side effects of DOTS therapy. They provide appropriate nursing services and organize educational and awareness programs.

Nursing Research:

There is a great need for nursing research in the area of elements of prevention and management of side effects of DOTS therapy. Nurses will be motivated to conduct studies and incorporate recent research findings in the health care system to promote nursing care at TB centres.

Recommendations

On the basis of the findings of the study, the following recommendations were made.

- 1.A similar study can be replicated on a larger sample with different demographic characteristics.
- 2.An Experimental study can be undertaken with the control group.
- 3.A Study can be undertaken to find out the association between demographic variables and knowledge of TB patients on prevention and management of side-effects of DOTS therapy.
- 4.A Similar study can be conducted using other strategies like SIM, booklets and pamphlets.

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