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A Study to Evaluate the Effectiveness of Video Assisted Teaching Programme on Knowledge Regarding DOT'S Utilization of Dot's Therapy, and its Complience among TB Patients in Selected PHC'S of Vijayapur District, Karnataka

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Abstract **Original Research Article**

Background: The benefits of adaptation include improved quality of life, enhanced return to work and reduced cost for subsequent hospital treatment. Hence the investigator felt that the need to develop Video assisted Teaching Programme on DOTS therapy to facilitate education to TB patient on life style modification. This will be helping them to stick on DOTS therapy. ***Objectives of The Study*:** To assess the knowledge regarding DOT'S utilization of DOT'S therapy, and its compliance among TB patients in selected PHC and to determine the effectiveness of video assisted teaching programme on knowledge regarding DOT"S utilization of DOT"S therapy, and its compliance. ***Methodology*:** An Evaluative survey approach was considered as the best way to assess the effectiveness of Video Assisted Teaching Programme on knowledge regarding DOT'S utilization of DOT'S therapy, and its compliance among TB patients of selected primary health centre of Vijayapur. Pre experimental research one group pre test post test research design was used and 60 samples of TB were selected by purposive Sampling technique at selected PHC. ***Result:*** There was significant difference between knowledge score on DOT'S utilization of DOT'S therapy, and its compliance among TB patients with selected demographic variable such as age ($\chi 2$=3.57), religion ($\chi 2$ =3.59), type of family ($\chi 2$ =0.901), place of residency ($\chi 2$ =0.59) and source of information ($\chi 2$ =3.08). There was significant association between knowledge score on DOT'S utilization of DOT'S therapy, and its compliance among TB patients with selected demographic variable such Gender ($\chi 2$ =4.57) was found. Hence H1 accepted and H_2 is rejected. ***Conclusion and Recommendation:*** Thus, to conclude the investigator has achieved the objective for evaluate the knowledge based on the study finding. Video Assisted Teaching Programme was very effective in increasing the knowledge of the patients regarding DOT'S utilization of DOT'S therapy, and its compliance.

Keywords: Evaluate, Effectiveness, VATP, Knowledge, DOT'S utilization of DOT'S therapy, and its compliance, TB patients of selected PHC's.

INTRODUCTION

The full form of DOTS is the Directly Observed Therapy, Short-course. It is also known as TB – DOTS. It refers to a strategy aimed at curing and reducing the risk of TB (tuberculosis) cases [1]. In this technique, a healthcare practitioner or some other suitable representative provides the recommended TB medications to tuberculosis patients and ensures that the patient takes every dose. If the patient left alone, then they may fail to take any of the doses that can result in the spread of drug-resistant tuberculosis [2]. In 1994 the World Health Organisation (WHO) announced a new strategy, called DOTS, for the worldwide control of TB. DOTS was the Directly Observed Treatment Short course strategy.

All countries with a TB problem were to provide standardized short course drug treatment to, at least, all sputum smear positive TB patients. Until 2006 DOTS was to be the internationally recommended approach to global TB control [3, 4].

DOTS strategy had 5 main components Political will (therefore administrative commitment), Diagnosis by quality microscopy of sputum, Adequate

drug supply, Directly observed treatment, Accountability – systematic monitoring [5, 6].

DOT is available to anyone with TB in the UK. If finding it difficult to take your tablets regularly, DOT could work well for you. Your doctor may recommend DOT to help you through your treatment if you have drug-resistant TB, because the treatment involves more tablets and will last longer than six months. People who have DOT find it really helps them stay motivated. DOT also makes sure that your TB is cured completely.DOT is very successful and is used in over 180 countries around the world. It is saving hundreds of thousands of lives [7].

DOT includes: delivering the prescribed medication checking for side effects watching the patient swallow the medication documenting the visit answering questions. DOT should be initiated when TB treatment starts. Do not allow the patient to try self- administering medications and missing doses before providing DOT. If the patient views DOT as a punitive measure, there is less chance of successfully completing therapy. A nurse or supervised out reach worker from the patient's county public health department normally provides DOT. In some situations, it works best for clinics, home care agencies, correctional facilities, treatment centres, schools, employers, and other facilities to provide DOT, under the guidance of the local health department. Family members should not be used for DOT. DOT providers must remain objective. For complex regimens including IV/IM medications or twice daily dosing, home care agencies may provide DOT or share responsibilities with the local health department. If resources for providing DOT are limited, priority should be given to patients most at risk. See the MDH DOT Risk Assessment form for help identifying high- priority patients [8].

OBJECTIVES OF THE STUDY:

1) To assess the knowledge regarding DOT'S utilization of DOT'S therapy, and its compliance among TB patients in selected PHC at Vijayapur district, Karnataka.
2) To determine the effectiveness of video assisted teaching programme on knowledge regarding DOT‟'S utilization of DOT‟'S therapy, and its compliance
3) To find the association between knowledge scores with selected socio-demographic variables.

METHODOLOGY

In the present study Pre experimental one group pretest and post test design was used to evaluate the effectiveness of VAT (Video Assisted Teaching Programme) on knowledge regarding DOT'S utilization of DOT'S therapy, and its compliance.

Group	Pre test	Intervention	Post test
TB patients selected degree in selected PHC at Vijayapur district	Knowledge regarding DOT'S utilization of DOT'S therapy, and its compliance before administration of VAT	VAT	Knowledge regarding DOT'S utilization of DOT'S therapy, and its compliance after administration Of VAT
	0_1	X	O_2

Sample and Sample size

Sample consists of a subset of a population selected to participate in research study. In the present study TB patients who met the inclusion criteria were selected as samples. The sample size for the present study is 60.

Sampling technique

Sampling technique is the procedure, which the researcher adopts in selecting the samples for the study. Purposive sampling technique is used for the present study.

Sampling Criteria

Inclusion criteria: TB Patients who are

- Co operative and willing participate in the study.
- Available during the time data collection.
- At age group between 18-60 years.

Exclusion criteria: TB Patients who are

- Not willing to participate in the study.
- Not available at the time of data collection.
- Less than 18 years and more than 60 years

Data Collection Procedure:

The data collection was carried after the permission was obtained from the chief medical officer of selected primary health centre at Vijayapur. The investigator administered the tool to those who were willing to participate after introducing and explaining the purpose of the study. The interview was conducted in a one to one. The investigator established rapport followed by a self-introduction to the subjects, explained about the purpose of the interview and the nature of the study. The confidentiality was explained to the subjects and after getting the individuals consent, the actual procedure was carried out the data was collected with one to one interview by self-administered knowledge questionnaire. Duration of time 30 minutes. Duration of the study is four weeks.

RESULTS

The study shows that maximum of the subjects 15 (25%) were belongs to age group of (18-31 years) where as 34 (57.7%) belongs to age group of (32-45 years), 11 (15%) belongs to age group of (46- 60 years). Maximum of the subjects 36 (60%) were male participant where as 24(40%) were female participants. Maximum of the subjects 29 (48.3%) were belongs to Hindu, where as 18(30%) belongs to Muslim, 05 (8.3%) belongs to Christian and 08(13.3%) belongs to Others .Most of the subjects 30(50%) have Nuclear family whereas 18 (30%) belongs to Joint family and 12(20%) have extended family. Maximum study subjects 29(48.3%) were living in semi-urban area followed by 12(20%) were living in rural area and remaining 19(31.7%) were living in urban area.

Maximum study subjects 15(25%) were having government job followed by 36(60%) were having private job and remaining 09(15%) were semi employee. Majority of study subjects 22(36.7%) had knowledge regarding DOT'S utilization of DOT‟S therapy, and its compliance. through family and friends, 19(31.7%) through books and magazines, 07(11.7%) through internet and remaining 12(20%) from health care providers. This data is summarized in Table 1.

Table 1: Frequency and percentage distribution of subjects according to socio- demographic variables

Sl. No	Socio demographical variables	Frequency	% n=60
01	Age in years		
	a) 18-31	15	25
	b) 32-45	34	56.7
	c) 46-60	11	18.3
02	Gender		
	a) Male	26	60
	b) Female	34	40
03	Religion		
	a) Hindu	29	48.3
	b) Muslim	18	30
	c) Christian	05	8.3
	d) Others	08	13.3
04	Type of family		
	a) Nuclear	30	50
	b) Joint	18	30
	c) Extended	12	20
05	Place of residency		
	a) Rural	29	48.3
	b) Semi urban	12	20
	c) Urban	19	31.7
06	Occupation		
	a) Government	15	25
	b) Private	36	60
	c) Semi employee	09	15
07	Source of information		
	a) Family and friends	22	36.7
	b) Books and Magazines	19	31.7
	c) Internet	07	11.7
	d) Health care providers	12	20

Assessment of knowledge of TB patients regarding DOT'S utilization of DOT‟S therapy, and its compliance is discussed in table 2. It was observed that, maximum 57(95.0%) study participants had inadequate pre-test knowledge and very few 3(5.0%) had pre-test moderately adequate knowledge no one (0%) adequate knowledge and after VAT, Maximum 48(80.0%) had post test adequate knowledge. 7(11.7%) had post test moderately adequate knowledge and very few 5(8.3%) had post test inadequate knowledge.

Table 2: Comparison of level of knowledge regarding DOT'S utilization of DOT‟S therapy, and its compliance among the study participants

Level of knowledge	Pre-Test		Post-Test	
	f	%	F	%
Inadequate	57	95.0	05	8.3
Moderately adequate	03	5.0	07	11.7
Adequate	00	00	48	80.0
Total	60	100.0	60	100.0

Effectiveness of Video Assisted Teaching Programme on DOT'S utilization of DOT‟S therapy, and its compliance among TB patients in the selected PHC at Vijayapur, which is further categorized in to 3 parts bas shown table 3. It was observed that, maximum 57(95.0%) study participants had inadequate pre-test knowledge and very few 3(5.0%) had pre-test moderately adequate knowledge no one (0%) adequate knowledge and after VAT, Maximum 48(80.0%) had post test adequate knowledge. 7(11.7%) had post test moderately adequate knowledge and very few 5(8.3%) had post test inadequate knowledge

Table 3: Comparison of level of knowledge regarding DOT'S utilization of DOT‟S therapy, and its compliance among the study participants

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Adequate	00	00	48	80.0
Total	60	100.0	60	100.0

Paired t-test analysis was used to assess the effect of self instruction module on knowledge of study participants regarding DOT'S utilization of DOT'S therapy, and its compliance which is shown in table no.4. It was observed that paired mean pre-test post-test knowledge score difference was -19.80 with standard deviation of the difference was 4.91 which highly significant as its p-value was less than 0.0001 indicate that VAT was effective in increasing TB patients knowledge of study participants regarding DOT'S utilization of DOT‟S therapy, and its compliance. The study aso states that mean post test score is high in all the categories of level of knowledge. Mean pre-test inadequate knowledge score was 5.8 where as mean post-test inadequate knowledge score was 13.8, Mean pre-test moderately adequate knowledge score was 16.0 where as mean post-test moderately adequate knowledge score was 21.2 and pre-test adequate knowledge score was 0 where as mean post-test adequate knowledge score was 28.1.

Table 4: Paired t-test to assess the effect of self instruction module on knowledge of study participants regarding DOT'S utilization of DOT'S therapy, and its compliance

Paired Differences					
Mean	Std. Deviation	Std. Error Mean	t	df	p-value
-19.80	4.91	0.63	-31.22	59	<0.0001(S)

The study also reveals that there is association between knowledge score of TB patients regarding DOT'S utilization of DOT‟S therapy, and its compliance and socio demographic variables (Table 4). It was observed that, there was no association between level of knowledge and selected socio-demographic variables such as age, religion, types of family, residence and occupation but there was high association between gender and level of knowledge regarding DOT'S utilization of DOT‟S therapy, and its compliance.

DISCUSSION

The study shows Comparison of knowledge level of Male health workers in the pre test and post-test. It was observed that, maximum 57(95.0%) study participants had inadequate pre-test knowledge and very few 3(5.0%) had pre- test moderately adequate knowledge no one (0%) adequate knowledge and after VAT, Maximum 48(80.0%) had post test adequate knowledge. 7(11.7%) had post test moderately adequate knowledge and very few 5(8.3%) had post test inadequate knowledge regarding DOT'S utilization of DOT'S therapy, and its compliance.

The study reveals that mean post test score is high in all the categories of level of knowledge. Mean pre-test inadequate knowledge score was 5.8 where as mean post-test inadequate knowledge score was 13.8, Mean pre-test moderately adequate knowledge score was 16.0 where as mean post-test moderately adequate knowledge score was 21.2 and pre-test adequate knowledge score was 0 where as mean post-test adequate knowledge score was 28.1

It was observed that paired mean pre-test post-test knowledge score difference was -19.80 with standard deviation of the difference was 4.91 which highly significant as its p-value was less than 0.0001 indicates that VAT was effective in increasing TB patients knowledge of study participants regarding DOT'S utilization of DOT‟S therapy, and its compliance.

It was shown that means pre test knowledge score was 6.3 and means post test knowledge score was 26.1. The difference between pre-test post-test knowledge score was 19.8 with percentage gain knowledge score was 75.8 which was significantly high.

It was observed that paired mean pre-test post-test knowledge score difference was --17.30with standard deviation of the difference was 4.79 which highly significant as its p-value was less than 0.0001 indicates that SIM was effective in increasing the knowledge of study participants regarding malaria control programme.

It was observed that, there was no association between level of knowledge and selected socio-demographic variables such as age, religion, types of family, residence and occupation but there was high association between gender and level of knowledge regarding DOT'S utilization of DOT‟S therapy, and its compliance.

CONCLUSION

This study helps the nurse researcher to develop an appropriate health education tools for educating patients regarding DOT'S utilization of DOT‟S therapy, and its compliance according to their Socio – demographic, Socio – economic, cultural and political characteristics.

The findings play a strong emphasis on extensive need to evaluate the effectiveness of VATP regarding DOT'S utilization of DOT‟S therapy, and its compliance. A nurse can also conduct research study on the DOT'S utilization of DOT‟S therapy, and its compliance. An experimental study could be conducted to find out the effectiveness of SIM/ information booklet. Research should be done on different aspects of clinical complications among different samples in different settings.

The findings of this study emphasis the importance of further studies and need of educating the student nurses.

Limitations of the study

- The study sample was confined to 60 TB patients in selected PHC at Vijayapur district.
- The study is limited to assessment of knowledge of patients DOT'S utilization of DOT‟S therapy, and its compliance
- The study did not have a control group.

RECOMMENDATIONS

- The similar study can be repeated on larger scale for better generalizations of the findings.
- A similar study can be undertaken by utilizing other domains like attitude and practice.
- The study can be conducted in various settings.
- A comparative study may be conducted to find out the knowledge of B Sc Nursing students and other health care workers.
- An experimental study can be conducted with control group.
- A study can be carried out to evaluate the efficacy of various teaching strategies like self-instructional module, Structured Teaching Programme, Planned Teaching programme.

The study emphasizes the significance of short term service education programmes for the student nurses and peripheral health workers related to health education of mothers regarding DOT'S utilization of DOT‟S therapy, and its compliance. The curriculum should lay emphasis on DOT'S utilization of DOT‟S therapy, and its compliance and their complications for the student nurses when posted to clinical set ups

Declaration by authors

Ethical Approval: Institutional ethical clearance approved.

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