"A STUDY TO ASSESS THE KNOWLEDGE ON DOTS, UTILIZATION OF DOTS THERAPY AND ITS COMPLIANCE AMONG TUBERCULOSIS PATIENTS IN SELECTED COMMUNITY AREAS AT BANGALORE WITH VIEW TO DEVELOP A HEALTH INFORMATION BOOKLET."

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ABSTRACT

Background: Communicable diseases are the major public health problems in India. These are the deadly diseases, which affect the common population today. Tuberculosis is also one of the major communicable disease and chronic condition, it requires continuous medical care. The environment and socio- economic risk associated with this condition are severe in developing countries like India. Tuberculosis is one of the primary causes of mortality in India, its spread can, however, be checked by early detection and regular follow-up of patients. The aims of the study is to Assess the Knowledge On DOTS, Utilization of DOTS Therapy and Its Compliance Among Tuberculosis Patients In Selected Community Areas at Bangalore

Materials and Methods: Quantitative Research approach and non-experimental descriptive survey research design was used for the study. The target population for the study were tuberculosis patients under DOTS therapy in selected community areas at Bangalore with view to develop a health information booklet. The population was selected by purposive sampling technique. The total samples under the study were 60 tuberculosis patients. Data collection was made through structured interview schedule which was designed to assess the knowledge of tuberculosis patients regarding DOTS therapy, its utilization and compliance. The results were described by using descriptive and inferential statistics.

Results:In the present study, the overall findings of the study showed that the mean knowledge score was found to be higher (77%) in the aspect of utilization of DOTS therapy, followed by 70.5% in clinical manifestation and diagnosis, 61.85% in the compliance of DOTS therapy and 58.75% in causes, risk factors and mode of transmission. Further, the less knowledge score (51.57%) found in the area of prevention and treatment. Majority (48.4%) of the respondents had moderate knowledge, 28.3% of the respondents had adequate knowledge and remaining of 23.3% had inadequate knowledge.

Conclusion: The study conclude that if the patients are provided with some sort of educational interventions such as information guide sheet, teaching programmes, on tuberculosis, DOTS therapy, its utilization, compliance will definitely update their knowledge, improve the utilization and compliance which in turn contribute to improve the total quality of one's health.

Keyword: DOTS therapy , Utilization, Compliance ,Tuberculosis

INTRODUCTION

Tuberculosis is a specific infectious disease caused by M.tuberculosis. The disease primarily affects the lungs and causes pulmonary tuberculosis. It can also affect the intestine, meninges, bones and joints, lymph glands, skin and other tissues of the body. Tuberculosis is a worldwide public health problem despite the fact that the causative organism was discovered more than 100 years ago and highly effective drugs and vaccine are available making tuberculosis a preventable and curable disease. Despite the fact that TB is a treatable disease, it has assumed epidemic proportions in India[3].

Tuberculosis is the second most important cause of adult death worldwide due to infectious disease, after HIV/AIDS [4]. Roughly 13.2 million (new and old cases), new cases 9.2 million every year is affected globally. About one-third of the world's population is infected with tuberculosis (TB) [1]. Approximately one in every 10 of these people will develop TB disease, which typically consists of a chronic cough, severe weight loss, night sweats and progressive, irreversible lung damage [4]

Incidence of TB in India is 168/lakh population and prevalence is 288/lakh population. Mortality due to TB is 3.3 million every year, around 900 deaths every day, 2 deaths in every 3min. MDR-TB is 2-3% among new TB cases and 12-15% among retreatment cases. Prevalence of HIV among new TB cases is 5-19%, it varies from state to state. HIV prevalence in TB is more in Karnataka (Bijapur, Bagalkote), Andrapradesh, Tamilnadu[1].Though there are a variety of drugs to treat TB, many people still lack access to proper diagnostic tools, consistent and adequate supplies of anti-TB treatment, and trained health workers. Mortality is high in developing countries nearlyall (between 95% and 99%) live in developing countries where these resources are inadequate.

Tuberculosis is one of the primary causes of mortality in India, its spread can, however, be checkedbyearlydetection and regular follow-up of patients. India is one of the 22 high-burden countries. One-fifth of the world's TB cases are in India[6].

Globally, the DOTS (Directly observed treatment, short course) strategy has been recognized as the best cost-effective approach to tuberculosis control, to reduce the disease burden and to reduce the spread of infection. DOTS is the only means by which a cure can also be ensured. The challenge is to expand the coverage of DOTSso that the most patients get effective treatment[1]. There are more than 1 million TB patients who have no access to treatment throughout India, a quarter of whom live in North India. In the state of Delhi, where Operation ASHA's 34 DOTS centers currently serve 1,200 patients, there are nearly 20,000 more patients who still do not receive care. Delhi alone would need 200 more centers, and North India, thousands more, to properly serve its population. There are special groups of people who are highly vulnerable to infection by the TB bacterium, and there are whole communities where disease spreads like wildfire[6].

OBJECTIVES OF THE STUDY

1. To assess the knowledge on DOTS among tuberculosis patients.
2. To assess the utilization of DOTS among tuberculosis patients.
3. To assess the compliance of DOTS therapy among tuberculosis patients.
4. To find out the association between the levels of knowledge on DOTS with selected demographic variables.

HYPOTHESIS

H^1: There will be significant increase in the knowledge on DOTS therapy, its utilization and compliance

H^2: There will be significant association between the levels of knowledge scores with selected demographic variables

MATERIALS AND METHODS

Quantitative Research approach and non-experimental descriptive survey research design was used for the study. The target population for the study were tuberculosis patients under DOTS therapy in selected community areas at Bangalore with view to develop a health information booklet. This population was selected by purposive sampling technique. The total samples under the study were 60 tuberculosis patients. The data collection was made through structured interview schedule which was designed to assess the knowledge of tuberculosis patients regarding DOTS therapy, its utilization and compliance. The results were described by using descriptive and inferential statistics.

RESULTS AND DISCUSSION

Characteristics of demographic variables

In the present study, Majority (51%) of the respondents were in the age group of 15-29 years and higher respondents were males (66.6%). Majority (36.7%) of the respondents had primary school education and graduates were only 11.7%. Highest of the respondents(48.3%)were coolie workers. Most of the respondents (26%)belonged to the income group of below Rs. 2000/- per month. Majority (71.7%) of respondents were from nuclear family. Majority (78.4%) of the respondents do not have any family history of illness. Highest number (80%) of the respondents had the duration of illness below six months. Majority (85%) of the respondents gained information regarding DOTS therapy from health personnel.

Table 1: knowledge score regarding DOTS therapy, itsUtilization and compliance among respondents

Aspect wise Mean knowledge Scores of Respondents

n=60

No.	Aspects	Max Score	Range Score	Knowledge score		
				Mean	Mean (%)	SD (%)
I	Causes,riskfactors and mode of transmission	8	0-8	4.70	58.75	2.24
II	Clinicalmanifestation and diagnosis	6	1-6	4.23	70.5	1.30
III	Preventionand treatment	19	4-15	9.80	51.57	3.68
IV	UtilizationofDOTS therapy	8	3-8	6.16	77	1.48
V	ComplianceofDOTS therapy.	7	1-7	4.33	61.85	1.65
	Combined	48		29.22	60.87	10.35

The data presented on the table 1 reveals that the overall mean knowledge score was found to be 60.87% with SD as 10.35%. The mean knowledge score was found to be higher(77%) in the aspect of utilization of DOTS therapy, followed by 70.5% in clinical manifestation and diagnosis, 61.85% in the compliance of DOTS therapyand 58.75% in causes, risk factors and mode of transmission. Further, the less knowledge score (51.57%) found in the area of prevention and treatment.

Table 2: Knowledge level of respondents on DOTS therapy its utilization and compliance

n=60

Knowledge level	Respondents	
Category	Frequency	Percentage
Inadequate	14	23.3
Moderate	29	48.4
Adequate	17	28.3
Combined	60	100.0

The data presented on the table 2 depicts that 14(23.3%) of the patients had inadequate knowledgelevelascomparedto29(48.4%)respondentswithmoderateknowledgeleveland17(28.3%) respondents with adequate knowledge regarding DOTS therapy, its utilization and compliance

Association between the levels of knowledge scores with selected demographic variables

Among the demographic variables analysed in this study, age, education, occupation and income, were found to have significant association with knowledge scores. There was no significant association between gender, type of family, family history, duration of illness and source of information knowledge scores

DISCUSSION

Association between knowledge levels and demographic characteristics

The demographic variables analyzed in this study were age, gender, educational status, occupation, income, type of family, family history of tuberculosis, duration of illness, source of information. The association between the demographic variables and knowledge scores was computed using χ^2test at 0.05% (5% level)

There is a significant association between age and knowledge level of respondents (14.29*).

There is no significant association between knowledge level of respondents and gender (0.07 [NS]).

The above finding is contradicted by a study done by Allinger. The study states that tuberculosis has resurged as a major public health problem in United states, using data from the National health interview survey supplement, this study examined knowledge and perceived risk of tuberculosis. Results demonstrated that some general knowledge about tuberculosis, several misconceptions and low concern regarding their risk of contracting TB. Respondents reported perceived knowledge of TB at a high level, while their actual knowledge was lower. Gender, Education, income and ethnicity were associated with knowledge and perceived risk[62].

There is significant association between knowledge level of respondents and their educational status (38.1*).

The above findings are supported by a study conducted by **Singh M M, Bano T, Pager D, Sharma N, Devi R, Mehra M(2002)** to assess the knowledge and attitudes on tuberculosis among the 208 adults (114 males and 94

females) aged 16-70 years selected by systematic random sampling method in loknayak colony Delhi. Literates were more aware than illiterates regarding some signs and symptoms of tuberculosis[36].

There is significant association between knowledge level and occupation of the respondents of the respondents (24.06*).

The above findings are supported by a cross-sectional descriptive study conducted by **Lertmaharit S, Kamol-ratankulP,SawertH,Jittimane S, Wangmanee S,** to assess the level of compliance and associated factorsamong tuberculosis patients in Thailand. A total of 487 adult newlydiagnosed TB patients with positive sputum smear were interviewed by trained health personnel with structured questionnaires. The finding showed that the type of treatment (DOT and SS), gender, working, experience of contacting TB patient, perception in health status, attitude, knowledge and social support were significantly associated with the compliance[52].

There is significant association between knowledge level of respondents and monthly income of the respondents (32.81*).

The above findings are supported by a study conducted by **Mushtaq MU, MajroohMA, Ahamed W, Rizwan M, Luqman MQ, Aslam MJ et al,** to explore knowledge, attitudes and practices regarding TB in general population of two districts of Punjab province, and the effect of socio- economic determinants. The results shows that 42% of the surveyed population had good knowledge about TB, which was associated with better education, high income and good housing[29].

CONCLUSION: The focus of this study is "A study to assess the knowledge on DOTS, utilization of DOTS therapy and its compliance among Tuberculosis patients in selected community areas at Bangalore with view to develop a health information booklet ''. The study conclude that if the patients are provided with some sort of educational interventions such as information guide sheet, teaching programmes, on tuberculosis, DOTS therapy, its utilization, compliance will definitely update their knowledge, improve the utilization and compliance which in turn contribute to improve the total quality of one's health

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