

**KNOWLEDGE OF CARE GIVERS ON TUBERCULOSIS AMONG RURAL
POPULATION: AN ACTION FRAMEWORK.**

Principal Investigator

Dr. Ravindra HN,

Professor, Sumandeep Nursing College,
Sumandeep Vidyapeeth Deemed to be University,
Piparia, Waghodia, Vadodara ,Gujarat, India,

Co Authors:

Makwana Jaimini², Undergraduate Nursing student, Sumandeep Nursing College,
Sumandeep Vidyapeeth Deemed to be University, Vadodara, Gujarat

Mali Laxmi³, Undergraduate Nursing student, Sumandeep Nursing College, Sumandeep
Vidyapeeth Deemed to be University, Vadodara, Gujarat

Parekh Sakshi⁴, Undergraduate Nursing student, Sumandeep Nursing College, Sumandeep
Vidyapeeth Deemed to be University, Vadodara, Gujarat

Corresponding Author

Dr. Ravindra H N

Professor & HOD, Department of Medical Surgical Nursing

Sumandeep Nursing College,

Sumandeep Vidyapeeth deemed to be University,

Piparia, Waghodia, Vadodara, Gujarat-391760

Ph .No: +91-7567253559

E-mail: ravindrahn23@rediffmail.com

ABSTRACT

BACKGROUND OF THE STUDY: Tuberculosis continues to be a major health problem in the world particularly in the developing countries. The high incidence of TB is a cause for concern and huge threat to public health globally. The delays in case detection, diagnosis, health seeking, non adherence to treatment are some of the reason for high Tuberculosis burden globally. According to WHO, it was estimated that 10.4 million of new TB cases in the world and 10% are living with HIV. 95% were adults of whom 65% were males, 74% of these people live in Africa and almost 64% of the total were in seven countries (India, Indonesia, Philippines, Russia, Pakistan, Nigeria and South Africa). Investigator strongly believes that, knowledge of the family care takers may influence the prevention and control of TB. Hence, it can reduce the Tuberculosis burden at global level.

AIM OF THE STUDY: Lack of knowledge of the care givers on tuberculosis is one of the major problems in preventing, controlling and ending tuberculosis, Therefore we assessed the knowledge of tuberculosis among family care givers in rural area.

MATERIAL AND METHOD: We conducted a descriptive study in which 100 family care givers in rural area were interviewed to assess the knowledge regarding Tuberculosis. Data were collected using a pretested structured questionnaire. The collected data was tabulated and analyzed by using descriptive statistics.

RESULTS: The result revealed that 45% of the samples had poor, 38% of the population had average and 17% of them had good knowledge.

CONCLUSION: Results of the study reveals that, important knowledge gap among the care givers of T.B patients exist, they are in need of Tailored, periodic tuberculosis education to boost up the knowledge. This calls the health care workers to initiate the strict action plan.

KEYWORDS: Action frame work, Care givers, Knowledge, Tuberculosis

INTRODUCTION

Ensuring affordable and quality healthcare to the population is a priority for the government and we are committed to achieving zero T.B deaths and therefore we need to re-strategize, think afresh and have to be aggressive in our approach to end T.B by 2025¹. According to WHO, it was estimated that 10.4 million of new TB cases in the world and 10% are living with HIV. 95% were adults of whom 65% were males, 74% of these people live in Africa and

almost 64% of the total were in seven countries (India, Indonesia, Philippines, Russia, Pakistan, Nigeria and South Africa), India accounts for about a quarter of the global Tuberculosis burden². Tuberculosis remains as an important public health problem in India. Awareness about the disease, its diagnosis, and treatment among public will help in controlling the killer disease.³

Tuberculosis patients are treated in early stages at the hospital or local level through directly observed treatment short course (DOTs) (Arora et al., 2003). When patients are diagnosed with MDR- TB or XDR-TB, they are given in-patient treatment for many days. In this process, a family member has to stay as a caregiver to take care of the patient. Thus, the family and the family caregiver plays vital role in care giving of the tuberculosis patient⁴.

When a patient gets treatment at the hospital, he expects psychosocial and physical assistance from a family member who is responsible enough to take care of him (Rajeswari et al). The caregiver has an important role in Tuberculosis patients care from the adverse drug effect, gastrointestinal disturbances, and other clinical problems such as a skin disease and low blood pressure (Hypotension). In addition, the family members monitor the patient's medication compliance and help to maintain the patient's drug schedule. The responsibility of caregiver is to ensure safe hygiene and nutritious food, thus in such condition family assistance is inevitable for the betterment of the patient.

The patients and caregivers were having problems while taking treatment in the hospital. This occurred even when family members lacked the knowledge and skills necessary to care for seriously ill patients. It is also seen that when a member of such family who is carrying out other duties besides providing care to patients face many difficulties. Thus, creating awareness at a community level could play a vital role in control and prevention of Tuberculosis. The assessment of family care giver's current knowledge about tuberculosis provides a basis for developing an informed outreach program and monitoring future progress in implementation⁵.

The World Health Organization (WHO) had set the 2020 milestones of the End TB Strategy, 35% reduction in the absolute number of TB deaths and 20% reduction in the TB incidence rate, compared with levels in 2015. WHO stressed the importance of knowledge, attitude and practice of TB caretakers to ascertain success in Tuberculosis control.⁶ A survey in India found that only 45.0% caregivers of patients had knowledge regarding mode of spread of TB infection to others, 68.9% had knowledge regarding DOTs⁷.

Several studies revealed that majority of rural residents in Waghodia were having less information about various aspects of health and illness. Hence, the investigator had shown

interest on rural population to assess the awareness on Tuberculosis. ⁽⁸⁻¹²⁾

AIM OF THE STUDY: Lack of knowledge of the care givers and a negative attitude towards tuberculosis is one of the major problems in preventing, controlling and ending tuberculosis, Therefore we assessed the knowledge towards tuberculosis among family care givers in rural area.

REVIEW OF LITERATURE

Luba TR, Tang S, Liu Q, Gebremedhin SA, Kisasi MD, Feng Z. (2019) conducted a population based study aimed to assess the knowledge, attitude and associated factors towards TB in the general population of Lesotho. A cross-sectional analysis from the Lesotho Demographic and Health Survey (LDHS) 2014 was carried out among 9247 respondents. Chi-square test as well as univariate and multivariate logistic regression analyses were used to assess the associations of socio-demographic variables with respondent knowledge of and attitude towards TB. The study result revealed that the overall knowledge of TB in the general population of Lesotho was adequate (59.9%) and a higher proportion of respondents (72.8%) had a positive attitude towards TB. The study concluded that Strategies to improve the knowledge of Lesotho's people about TB should focus on males, young residents, those who are illiterate, those who are unmarried and farmers. Special attention should be given to males, young residents, rural residents, those who are illiterate and farmers to improve their attitude towards TB in Lesotho¹³.

Pengpid S, Peltzer K. (2019) carried out Demographic and Health Survey with the aim of assessing knowledge, attitudes, and practices regarding tuberculosis (TB) in the general population in Timor-Leste. The methodology used for the research was Demographic and Health Survey, carried out among 4622 men (aged 15-59 years) and 12 607 women (aged 15-49 years) were randomly selected in Timor-Leste by using stratified multistage sampling and interviewed. The result shows Overall, 66.9% of men and 62.8% of women were aware of TB, 4.4% of men and 12.6% of women had Tuberculosis courtesy stigma, and 83.3% of men and 88.6% of women reported intention to receive Tuberculosis treatment. This study identified socio-demographic risk factors for deficiencies in population-based Tuberculosis knowledge in Timor-Leste; these findings should be considered when designing TB communication, prevention, and control strategies¹⁴.

METHODOLOGY

The present study was conducted by using descriptive research design. The population in the study consisted of all the care givers of tuberculosis patients living in rural areas at Waghodia (India). Out of whom 100 care givers were selected as a sample by using non-probability convenient sampling technique. The study included the samples who were residing in Waghodia and aged between 18 – 60 years. Tuberculosis patients and health care professionals were excluded.

The data collection tool included two sections, the first one consists socio demographic characteristics such as Age, Gender, Occupation, Family income, marital status, and dietary pattern of the samples and the second one was structured knowledge questionnaire for measuring the knowledge of TB. The total score was calculated by summing up the answers given to the questions and categorised as good, average and poor knowledge. The reliability of the self structured questionnaire was measured by using split half correlation. The correlation coefficient for these data is +0.85. The split half correlation of +.80 or greater generally considered good internal consistency.

DATA COLLECTION AND ANALYSIS PROCESS

A demographic door to door survey was conducted to identify the tuberculosis patients in rural areas of Waghodia. A structured questionnaire was completed through face to face interview among the identified family care givers, who gave their consent to participate in the study after explanation of its purpose and instructions. Data collection process was extended up to two months and completed when the desirable samples (100) were obtained. Data were analysed by using descriptive statistics (The mean and standard deviation) .

RESULTS

A total of 100 care givers were included in the final study for analysis. The mean age of study participants was 50 years and majority 63% were male, 48% belongs to business occupation, and 65% participants had family income Rs.10000-20000. Majority of the samples were married (80%). Almost three fourth (73%) were vegetarians. **(Table No: 1)**

Distribution of knowledge scores of care givers of TB patients (Table No: 2)

The result pertaining to knowledge revealed that 45% of the samples had poor, 38% had average and 17% of them had good knowledge. It is found that the knowledge level is poor in

care givers of T.B patient.

Distribution of mean, standard deviation and mean percentage of aspect wise knowledge score of care givers of Tuberculosis patients. (Table No. 3)

- Among the respondents, about 45% were answered correctly for the “cause of developing TB”.
- Almost 53.66% of the respondents were aware about “home care and follow up of TB”.
- The mean percentage of the respondents regarding “signs and symptoms” of TB was 36.5%,
- It was found ,38% respectively on the aspect of “diagnosis” and “adherence to treatment”
- Among the family care givers, 46.66% were having knowledge regarding prevention of TB transmission
- The study results revealed that, there was minor difference in the knowledge amongst of all the six aspects of TB. The overall mean percentage score was 42.35% with the SD of 4.34.

DISCUSSION

The current study revealed that the overall knowledge about Tuberculosis was 42.35% which is lower than the study conducted in North Mecha¹⁵ in which 54% of the participants had good knowledge. In present study only 45% of respondents knew that TB is caused by microorganism which is higher than the findings in Vietnam (22%)¹⁶

The study results depicted that only 38% of respondents had knowledge on adherence to anti TB drugs which is relatively less among the care givers of Tuberculosis patients. As care givers are playing a vital role in providing care at home settings, it is essential to have adequate information regarding benefits of adherence and effects of non drug adherence to anti TB drugs. This result is agreed with the study conducted in China¹⁷, shown that the factors which hinders to the drug adherence of TB. Another study carried out in Kilimanjaro¹⁸ found the method to break the hindrances of drug non adherence.

Early Symptom Identification and diagnosis is the key factor in the management and prognosis of TB. On contrast, lack of awareness may further devastate the health status of TB patients. The present study reveals the mean percentage 36.5% & 38% which is considerably less among the care givers of Tuberculosis. A South African study¹⁹ says, providing adequate knowledge

and skill required to support and improve the competencies of family care providers.

The current finding indicates that 46.66% respondents had knowledge related to transmission and prevention of Tuberculosis. Family care givers are in close contact (living together/working together) with people suffering from TB and having more risk of developing Tuberculosis. It is coinciding with the study reported by Verver et al.²⁰ on transmission of TB within the households. A case control study conducted in Karachi²¹ found that structured counselling resulted in improving patient knowledge and patient outcomes. Similar research conducted by Rami Kiran et. Al²² out of 151 patients, more than 50% patients were aware of person to person transmission of TB and 62 (41.05%) patients knew mode of spread of Tuberculosis Almost 99 (65.56%) patients knew about DOTS clinic. Only 90 (59.6%) patients believed that TB was curable.

The KAP study conducted among sandstone quarry workers in Rajasthan by Yadav SP et.al showed that literate people was having significantly higher level of awareness and knowledge regarding TB.²³ In Kar et al only 20% replied cough or sputum as a mode of spread of TB and rest 80% didn't have knowledge or wrong knowledge about mode of spread of TB.²⁴ In a study conducted by Gopu GS, Rao VB, Vadivet J at Chennai, reveals that the patient and care givers had less knowledge, concludes that the direct and indirect methods of health education significantly enhance the awareness about the nature, spread and prevention of tuberculosis²⁵ Several studies analysed that the general population has low level knowledge about TB compared to TB patients and their families. This could be due top health education and counselling services. Therefore health education should be accelerated to raise the awareness of the general population using the health education media.

Another important aspect of control and treatment outcome of TB depends on proper home care and regular follow up^(26,27). This study mentioned that only 53.66% of family care givers were aware about home care and follow up which is significantly low. On the same context the study carried out in Ethiopia²⁸ reveals, spatial variations towards poor TB treatment outcome that was related to underlying socioeconomic status and knowledge about TB.

CONCLUSION

This study was undertaken to assess the knowledge of care givers of Tuberculosis patient regarding tuberculosis on Causative factors, Sign and symptoms of tuberculosis, Importance of diagnostic tests, Adherence to anti Tuberculosis drugs, Prevention of transmission and Home care and follow up and generally found fairly low. Addressing the inadequate knowledge of

rural family care givers about tuberculosis is an essential intervention. Hence, the action framework may include the measures to improve the knowledge of family care givers to focus on various aspects of TB. Therefore, this action frame work applied on family care givers will contribute in early identification of symptoms and diagnosis, prompt treatment, prevention and elimination of TB at large which will emphasize the strategy of WHO to eradicate TB.

Ethical approval

Since the study involved human subjects, a formal ethical approval received from institutional ethical committee.

Informed Consent

Informed consent was obtained from participants and assured for anonymity.

Declaration of Interest

The author declares that there is no financial and personal relationship with other people and organizations.

Conflict of Interest

The author declares that they have no conflicts of interest.

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