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## **Assess the impact of pulmonary tuberculosis on the life style of affected persons and the coping strategies adopted by them at the selected hospital in Rajasthan with a view to develop an information booklet regarding self-care management of pulmonary tuberculosis**

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### **Abstract**

The present study has been undertaken to assess the impact of Pulmonary Tuberculosis on the life style of affected persons and the coping strategies adopted by them, at the selected Hospital in Rajasthan with a view to develop an information booklet regarding self-care management of pulmonary tuberculosis. The research design used for study was descriptive research design in nature. The tools for the study was self- structured knowledge questionnaire with consist of 5 parts, Part-I consist of socio-demographic data, Part-II structured interview schedule for with likert scale, Part-III knowledge questionnaire, Part-IV structured interview scheduled by using survey method. The data was analyzed by using descriptive and inferential statistical method. The most significant findings was that the majority of adult persons affected by PTB were males and productive age group (18-40 years) were affected more. I was distributed the information booklet regarding self-care management of pulmonary tuberculosis to improve their life style of affected person.

**Keywords:** Tuberculosis, pulmonary tuberculosis, lifestyle, coping, social support.

### **Introduction**

The causative organism for tuberculosis was discovered more than 100 years ago, which led to the discovery of highly effective drugs and vaccines. Advent of vaccine and drugs made tuberculosis a preventable and curable disease. No doubt that technologically advanced countries have achieved spectacular results in the control of tuberculosis. But despite of the above fact, tuberculosis still remains a world-wide public health problem.

Pulmonary tuberculosis is an adult disease. Population in 0-19 years (comprising 50% of total population) contain only 7% of total prevalence cases. Remaining 93% of cases are distributed in population aged 20 and above. In the first of the longitudinal surveys, in rural area, the proportion of cases above 40 years in age was around 50% in a population constituting about 20%. In another 30% of population, those in 20-39 years are group, 43% of cases were distributed. Prevalence rates of cases and suspect cases, reveal almost no change over a period of 20 years from different surveys in different areas.

### **Need of the study**

From the past experience of working with patients suffering from tuberculosis, the researcher found that there is a need to find out what impact can the tuberculosis make on the life style of the patients suffering from it and how do they cope up with this impact. Nurses while planning the nursing care for pulmonary tuberculosis patients can incorporate the knowledge of this impact and help these patients to develop coping strategies to combat with impact of tuberculosis on their life style as per their requirements.

### **According to WHO 2017**

27% of world's new Tuberculosis infections in India: WHO global report of the 10 million new cases reported in 2017, 2.74 million were from India, a marginal decrease from the 2.79 million that the country.

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In January-August 2018, as many as 3,32,149 patients have been notified to the government from the private sector as compared to the total number of patients (3,83,784) notified in 2017. TB is one of the top 10 causes of death and the leading cause from a single infectious agent. Millions of people continue to fall sick with TB each year.

An estimated 558,000 people worldwide in 2017 were resistant to rifampicin, the most effective first-line TB drug, and of these, 82% had MDR-TB that is resistant to more than one drug.

### Problem Statement

An exploratory study to assess the impact of Pulmonary Tuberculosis on the life style of affected persons and the coping strategies adopted by them, at the selected Hospital in Rajasthan with a view to develop an information booklet regarding self-care management of pulmonary tuberculosis.

### Objectives of the study

1. To assess the impact of PTB on the life style of persons affected by PTB, as perceived by them through structured interview schedule.
2. To identify the coping strategies adopted by the person affected by PTB through structured coping strategy.
3. To determine the association between level of impact of PTB on life style and the level of coping of adult persons affected by PTB.
4. To determine the association of level of impact of PTB on life style with their selected demographic variable *viz.*, age, gender, education, occupation, income, place of residence, duration of illness, presence of complications due to PTB and number of health educative sessions attended with regard to PTB.

### Hypothesis

**RH<sub>0</sub>:** There will be no significant association between the level of impact of PTB on life style scores and level of coping of adult persons affected by PTB.

**RH<sub>1</sub>:** There will be significant association between the level of impact of PTB on life style scores and level of coping of adult persons affected by PTB.

**RH<sub>2</sub>:** The level of impact of PTB on life style of adult persons affected by PTB will have significant association

with their selected demographic variables.

### Assumption

#### Assumptions of the study

- PTB will have some impact on the life style of persons affected with it.
- Life style of the person and coping strategies the person adopts will be interrelated.

### Methodology

Descriptive exploratory survey approach is used in this present study. Purposive sampling technique was used to obtain a sample of 100 adult persons affected by PTB. Structures interview schedule was prepared to collect the data which consisted of 5 parts. Part I had demographic data, part II had impact of PTB life style, part III had coping strategies adopted by adult person affected by PTB, part IV social support, and part V presence of complication due to PTB. The content validity of the tools was established by 7 experts and reliability was established by using SPLIT HALF METHOD  $r = 0.80$  respectively to the above mentioned parts of the structured interview schedule. The data were collected personally by the investigator and data were interpreted in terms of objectives and research hypothesis using descriptive and inferential statistics.

### Analysis and Interpretation

Majority (78%) of person were affected by PTB and majority were males. The maximum number (76%) of persons affected by PTB were having income below 10000/- per month. Almost all (98%) have never attended health education sessions regarding PTB. The impact of PTB was moderate. The impact on financial front was higher than the other areas. The critical ratio between mean percentage scores of positive coping strategies and negative coping strategies adopted by adult persons affected by PTB was not found significant at 0.05 level of significance. So respondents used both kind of coping strategies equally. They were receiving high level of social support and there was no significant association found between impact and social support. Majority (81%) were suffering from complication due to PTB and it was found that the complication related to pulmonary origin and other was related to the level of impact of PTB on their lifestyle.

**Table 1:** Frequency and percentage distribution of persons affected by PTB according to their personal variables (I), N=100

| Personal Variables         | Frequency/Percentage (%) |
|----------------------------|--------------------------|
| <b>1. Age</b>              |                          |
| i) 18-40 years             | 78                       |
| ii) 41-50 years            | 10                       |
| iii) 51-60 years           | 8                        |
| iv) 61 years and above     | 4                        |
| <b>2. Gender</b>           |                          |
| i) Male                    | 67                       |
| ii) Female                 | 33                       |
| <b>3. Marital Status</b>   |                          |
| i) Single                  | 16                       |
| ii) Married                | 73                       |
| iii) Separated/Divorced    | 6                        |
| iv) Widower                | 5                        |
| <b>4. Education status</b> |                          |
| i) Illiterate              | 58                       |
| ii) Primary education      | 34                       |
| iii) Secondary education   | 6                        |

|  |    |
|--|----|
| iv) Graduate, PG/any other                           | 2  |
| <b>5. Religion</b>                                   |    |
| i) Hindu   | 69 |
| ii) Muslim   | 29 |
| iii) Christian                                       | 2  |
| iv) Others   | 0  |
| <b>6. Occupation</b>                                 |    |
| i) Farmer  | 42 |
| ii) Coolie worker/ Labourer                          | 34 |
| iii) Teaching  | 6  |
| iv) Business   | 11 |
| v) Any other   | 13 |
| <b>7. Income of the family per month (In Rupees)</b> |    |
| i) Below 10000                                       | 76 |
| ii) 10001-15000                                      | 19 |
| iii) 15001-20000                                     | 5  |
| iv) Above 2000                                       | 0  |

**Table 2:** Frequency and percentage distribution of persons affected by PTB according to their personal variables-(ii), N=100

| Simple characteristics                                  | Frequency/Percentage% |
|---|-----------------------|
| <b>8. Type of family</b>                                |                       |
| i) Nuclear  | 62                    |
| ii) Joint   | 37                    |
| iii) Single   | 1                     |
| <b>9. Place of residence</b>                            |                       |
| i) Rural  | 56                    |
| ii) Semi urban  | 29                    |
| iii) Urban  | 15                    |
| <b>10. Type of house</b>                                |                       |
| i) Kaccha   | 17                    |
| ii) Semi pucca  | 65                    |
| iii) Pucca  | 18                    |
| <b>11. Number of family member living in the house</b>  |                       |
| i) 24   | 26                    |
| ii) 5-7   | 50                    |
| iii) 8-10   | 6                     |
| iv) Above 10  | 18                    |
| <b>12. Duration of illness</b>                          |                       |
| i) 15 days-1year  | 79                    |
| ii) 1-3years  | 17                    |
| iii) 3-5years   | 2                     |
| iv) Above 5 years                                       | 2                     |
| <b>13. Number of previous hospitalizations</b>          |                       |
| i) Never  | 80                    |
| ii) Only once   | 18                    |
| iii) 2-3 times  | 0                     |
| iv) 4-6 times   | 2                     |
| v) Above 6 times  | 0                     |
| <b>14. Proximity of health care services available</b>  |                       |
| i) 1km  | 7                     |
| ii) 2-4 km  | 12                    |
| iii) 4-6km  | 53                    |
| iv) More than 6 km                                      | 28                    |
| <b>15. Number of health education sessions attended</b> |                       |
| i) Never  | 98                    |
| ii) Once  | 2                     |
| iii) Twice  | 0                     |
| iv) More than twice                                     | 0                     |

**Table 3:** Frequency and percentage of persons affected by PTB according to the level of impact of PTB on lifestyle, N=100

| Level of impact of PTB on lifestyle | F / % |
|-------------------------------------|-------|
| Mild impact                         | 28    |
| Moderate impact                     | 69    |
| Sever impact                        | 3     |

**Table 4:** Frequency and percentage distribution of level of coping of adult persons affected by PTB, N=100

| Level of coping | F/% |
|-----------------|-----|
| Low             | 0   |
| Moderate        | 8   |
| High            | 92  |

**Table 5:** Chi-square values between level of impact of PTB on lifestyle and level of coping of persons affected by PTB, N=100

| Level of coping | Level of impact of PTB on lifestyle |                           | Chi-square Value | DF | Level of significance | Table Value |
|-----------------|-------------------------------------|---------------------------|------------------|----|-----------------------|-------------|
|                 | Mild impact                         | Moderate to severe impact |                  |    |                       |             |
| Moderate        | 1                                   | 8                         | 0.174 #          | 1  | 0.05 level            | 3.841       |
| High            | 22                                  | 69                        |                  |    |                       |             |

# = Yates correction

**Table 6:** Chi-square values between levels of impact of PTB on lifestyle with their selected personal variables, N=100

| Variables  | Impact of PTB on lifestyle |                           | Chi square value | DF | Level of significance | Table Value |
|--|----------------------------|---------------------------|------------------|----|-----------------------|-------------|
|  | Mild impact                | Moderate to severe impact |                  |    |                       |             |
| <b>1. Age</b>  |                            |                           |                  |    |                       |             |
| 18-40 years  | 21                         | 57                        | 79.37*           | 2  | 0.05 level            | 5.991       |
| 41-50 years  | 5                          | 5                         |                  |    |                       |             |
| 51 years & above                                       | 7                          | 6                         |                  |    |                       |             |
| <b>2. Gender</b>                                       |                            |                           |                  |    |                       |             |
| Male   | 17                         | 50                        | 216.17*          | 1  | 0.05 level            | 3.841       |
| Female   | 11                         | 22                        |                  |    |                       |             |
| <b>3. Education</b>                                    |                            |                           |                  |    |                       |             |
| Illiterate   | 14                         | 44                        | 4.725            | 2  | 0.05 level            | 5.991       |
| Primary  | 14                         | 16                        |                  |    |                       |             |
| Higher education                                       | 5                          | 7                         |                  |    |                       |             |
| <b>4. Occupation</b>                                   |                            |                           |                  |    |                       |             |
| Farmer   | 20                         | 22                        | 2.74             | 2  | 0.05                  | 5.991       |
| Coolie   | 13                         | 21                        |                  |    |                       |             |
| Others   | 7                          | 17                        |                  |    |                       |             |
| <b>5. Income</b>                                       |                            |                           |                  |    |                       |             |
| Below 5000   | 15                         | 61                        | 25.04*           | 1  | 0.05                  | 3.841       |
| 5000 & Above   | 13                         | 11                        |                  |    |                       |             |
| <b>6. Place of residence</b>                           |                            |                           |                  |    |                       |             |
| Rural  | 8                          | 48                        | 27.33*           | 1  | 0.05                  | 3.841       |
| Urban  | 20                         | 24                        |                  |    |                       |             |
| <b>7. Duration of illness</b>                          |                            |                           |                  |    |                       |             |
| 15 days - 1 year                                       | 15                         | 64                        | 0.381            | 1  | 0.05                  | 3.841       |
| Above 1 year   | 5                          | 16                        |                  |    |                       |             |
| <b>8. Number of health educative sessions attended</b> |                            |                           |                  |    |                       |             |
| Never  | 27                         | 71                        | #0.51            | 1  | 0.05                  | 3.841       |
| Once   | 1                          | 1                         |                  |    |                       |             |
| <b>9. Level of Social Support</b>                      |                            |                           |                  |    |                       |             |
| Moderate   | 2                          | 13                        | #4.68*           | 1  | 0.05                  | 3.841       |
| High   | 16                         | 69                        |                  |    |                       |             |
| <b>10. Presence of complications due to PTB</b>        |                            |                           |                  |    |                       |             |
| Pulmonary complications                                | 18                         | 23                        | 288.86*          | 1  | 0.05                  | 3.841       |
| Others   | 14                         | 26                        |                  |    |                       |             |

\*= Significant at 0.05 level of significance

#= Rates Corrected

**Interpretation and Conclusion**

- The majority of adult persons affected by PTB were males and productive age group (18-40 years) were affected more.
- Majority of adult persons affected by PTB were facing moderate impact on their lifestyle in all the areas expect in spiritual aspect. The impact on financial front was higher than the other areas.
- Respondent used both positive and negative coping strategies equally. There was no significant association between level of impact of PTB on life style and the level of coping strategies adopted by adult persons affected by PTB.
- Adult person affected by PTB were receiving high level of social support. The support from family and friends was higher than the support from significant others.
- Study revealed the most (81%) of adult person affected by PTB were facing complication due to PTB which indicate that, complication whether related to pulmonary origin or other kind can affect the lifestyle of adult persons affected by PTB.
- Significant association was found between level of impact of PTB on lifestyle with age, gender, income and place of residence, indicating that level of impact of PTB is influenced by these selected personal variables.

There was no significant association found between levels of impact of PTB on lifestyle with educational status, occupation, duration of illness and number of health educative session attend which indicate that, impact of PTB on lifestyle.

This study explored the impact of PTB on lifestyle and the coping strategies adopted by adult person affected by PTB revealed that having PTB it is consider as a social stigma to the society. Even though majority of adult persons affected by PTB had moderate to severe impact on their lifestyle, they tried the coping strategies in effective manner to overcome the impact.

Despite of high level of social support, the impact of PTB on lifestyle was found more, and presence of complication have increased the impact of PTB on lifestyle. Findings also revealed that there was lack of health education rendered by all the health workers and lack of motivation and awareness among PTB patients regarding protection, prevention and management of PTB which has perhaps had increase the impact of PTB on lifestyle. Hence, the effort towards improvement of health education programmes and motivation is essential to lessen the impact of PTB on lifestyle of patients with PTB.

### Delimitations

#### The study is delimited

- a) Persons affected by PTB who are attending either OPD or who are admitted as inpatient at the selected study hospital, and has been diagnosed as PTB at least 15 days prior to the data collection.
- b) Persons affected by PTB who can communicate either in Hindi or English
- c) Only those subjects who have no other illness other than PTB.

### Conflict of Interest

Not available

### Financial Support

Not available

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