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Research Article

**RELATIONSHIP OF ANTI-TUBERCULOUS THERAPY  
COMPLIANCE WITH SEVERAL DEMOGRAPHIC FACTORS**Dr. Muhammad Tahir<sup>1</sup>, Dr. Ali Haidar Bhatti<sup>2</sup>, Dr. Muhammad Sohail Babar khan<sup>3</sup><sup>1</sup> Punjab Medical College, Faisalabad<sup>2</sup> Nishtar Medical University, Multan<sup>3</sup> Yangtze University Hubei China

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**Abstract:****Objective:** To see the relationship between TB treatment and various demographic variables.**Methods:** This was a retrospective follow-up study of 100 more patients with registered pulmonary tuberculosis in the Medicine Unit II of Nishtar Hospital Multan for one year duration from February 2019 to February 2020. All enrolled patients were older than 15 years and previously had tuberculosis or fever, cough, weight loss, night sweats, etc. Patients without tuberculosis were excluded from the study. The treatment was carried out in two stages. Patient compliance was assessed for age, gender, occupation, socioeconomic status, pre-treatment test result and immigrant status. Data analysis was carried out using SPSS-18 computer software.**Results:** Out of 100 pulmonary tuberculosis patients included in the study, 56 were male and 44 were female. The ratio of men to women was 1.2: 1. The age range was 15-70. Overall compliance was 53% at the end of the six-month treatment. While 45.5% in the 15-30 age group completed the 6-month treatment, in the 31-45 age group 68.4% of patients and 61-75 years completed the 6-month treatment. 59.1% of women and 48.2% of men completed 6 months of treatment. At the end of treatment, patient compliance was better at home with 58.3%, and then in the army, where 57.1% ended treatment. Compatibility among employees was 47.1%. The p-value was 0.9993 (negligible) 72.1% of patients with AFB positive sputum and 38.6% of patients with negative sputum before the end of 6-month treatment. (P value was 0.3187). 67.5% of home patients and 43.3% of migrant patients discontinued treatment. The p value was 0.5106.**Conclusion:** The following factors are associated with good fit: age group 61-75 years, female gender, male service, positive sputum and natural state.**Key words:** tuberculosis, adaptation, gender**Corresponding author:**

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**INTRODUCTION:**

The proper prescription of anti-tuberculosis drugs is essential for the "treatment" of a TB patient. Studies have shown that more information about the diagnosis of tuberculosis and more information about the timing of taking anti-tuberculosis drugs results in higher expectations about the effectiveness of taking medicines, and these are anti-tuberculosis drugs<sup>1-2</sup>. Non-compliance with tuberculosis treatment regimens with many drugs is an important cause of acquired drug resistance, which requires longer and more expensive treatment, as well as initial treatment and failure of the relapse.<sup>3-5</sup> In this study, we discussed the relationship of compatibility with various demographic variables.

**PATIENTS AND METHODS:**

This study is a retrospective follow-up study of 100 more patients with pulmonary tuberculosis, registered in the Medicine Unit II of Nishtar Hospital Multan for one year duration from February 2019 to February 2020. All enrolled patients were over 15 years old and had tuberculosis or fever, coughing, weight loss, night sweats etc. He had a history. After selection, a detailed history and physical examination were performed, and patients were scanned for AFB and chest X-rays. Patients without tuberculosis were excluded from the study. The treatment was carried out in two stages. The initial intensive phase lasts two months and the ongoing phase lasts four months. The drugs used are isoniazid, rifampin, pyrazinamide and ethambutol. In the first stage, four drugs were given. In the follow-up phase, two drugs were given, namely

isoniazid and rifampin. For the purposes of this study, an incompatible patient was identified as a patient who lost two consecutive months of treatment. Patient compliance was assessed for age, gender, occupation, socioeconomic status, pre-treatment test result and immigrant status. Data analysis was carried out using SPSS-18 computer software. To assess the significance of the relationship between different demographic indicators and compliance with tuberculosis treatment, the Chi square probability test was used.

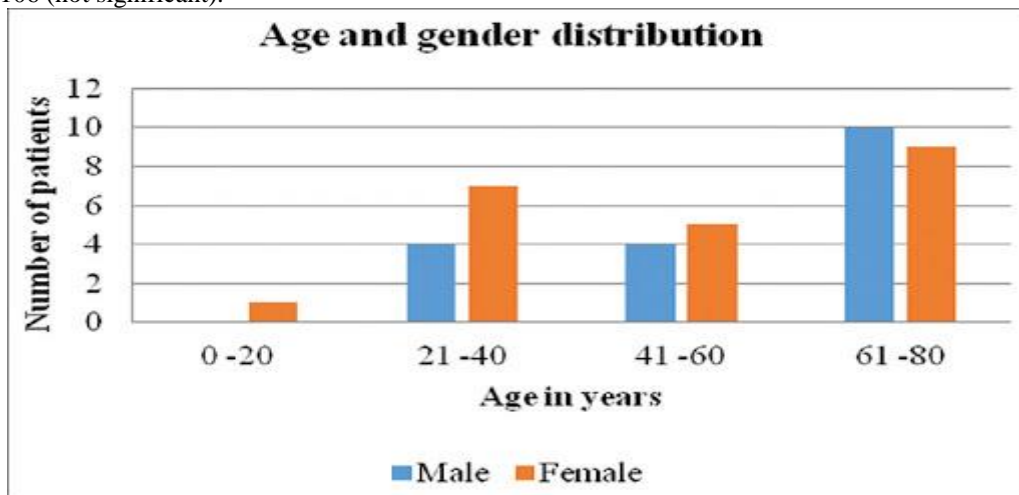
**RESULTS:**

For every 100 patients with pulmonary tuberculosis included in this study, 56 were male and 44 women. The ratio of men to women was 1.2: 1. The age range was 15-70. Most patients (83%) in this study belonged to the lower socioeconomic class. Most patients return home (36%) followed by employees (34%). 60% of patients had disease duration from 6 months to 1 year. 43% of patients had AFB positive and the rest had negative sputum. 85% of patients had a positive result in culture. In 82% of patients heterogeneous turbidity was found in chest radiography. The Montoux test was positive in 86% of patients and negative in the remaining 14%. Overall compliance was 53% at the end of the six-month treatment. In the 15-30 age group, 45.5% completed 6-month treatment, while 61.4% and 61-75 years in the 31-45 age group, 63.6% completed 6-month treatment. The p value was 0.9998 (not significant). At the end of six months of treatment, compliance was better in women. 59.1% of women and 48.2% of men completed 6 months of treatment.



The P value was 0.9150 (not significant). Compliance was better at home with 58.3% at the end of treatment, and then the military ended treatment with 57.1% as per patient care. 52.2% of the unemployed completed a 6-month treatment. Compatibility among employees was 47.1%. The P value was 0.9993 (not significant). 68.7% of the

lower class took the drug for up to 4 months, and 51.8% discontinued treatment. In the middle class, 64.3% received medication at month 4, and 57.1% completed treatment. 66.7% of the upper class completed a 6-month treatment. P value was 0.9996 (not significant) According to pre-treatment sputum results, compliance was better in patients with positive sputum AFB. While 43% of all patients had AFB positive sputum, the rest had negative sputum. 72.1% of patients with AFB-positive sputum and 38.6% with negative sputum before treatment ended the 6-month treatment. The p-value was 0.3187 (not significant), 60% of all patients were immigrants according to the status of settlement, the rest was natural. At the end of treatment, compliance was better for local patients than for immigrants. 67.5% of home patients and 43.3% of migrant patients discontinued treatment. The p-value was 0.5106 (not significant).



#### DISCUSSION:

Studies have shown that treatment failure has many related factors. Smoking, occupation, patient compliance history, and lung involvement were predictors of incompatibility<sup>6-8</sup>. Migrant status also implies the presence of latent tuberculosis infection and lack of compliance. Other studies have shown that a lower percentage of TBDM patients experienced treatment failure (19.8%) and TB resistance (1.4%) than non-diabetic patients<sup>9-10</sup>. Women have been shown to be less compatible than their response to TB treatment. Pakistani research shows that our social and demographic factors leading to incompatibility remain stationary and constantly expose our children to the risk of tuberculosis. Hispanics were less likely to end treatment of black people, those with children, and single charges (drug prisoners against prisoners). DOT users are more likely to end treatment than those who use self-administration. POTs who are treated in the DOT area are more likely to end treatment than at the DOT clinic or mixed clinic and in the field<sup>11-12</sup>. Another study showed that the following variables were associated with: incompatibility: previous incompatibility when the father was a child and did not live as a father taking illegal drugs. . Among those living further from the center, patients under 30 years of age were more irregular during the observation period, there was no statistically significant relationship between non-compliance with tuberculosis treatment and the patient's age, clinical form, therapeutic mode or place of residence. Bashour showed that although women reported more obstacles in seeking care,

treatment compliance was higher for women than for men, and the success rate for treatment was much higher. Despite increased stigma and discomfort, Balasubramanian has documented that women have access to healthcare more often than men, are informed as part of DOTS, and follow treatment<sup>13</sup>. Although diagnosed with women with pulmonary tuberculosis, an average of 2 weeks on average after men because of delays medical entity<sup>14</sup>. Goncalves emphasized that many factors are important for compliance: sociodemographic features, cultural factors, popular beliefs, cost-benefit ratio, physical and chemical aspects of drugs, doctor-patient relationships and family participation in treatment. A study from Nepal showed that lack of involvement is associated with treatment failure<sup>15</sup>.

#### CONCLUSION:

Our study showed that correction in the 31-45 age group is more common. While almost 60% of women sleep, almost half of men sleep. Patients at home were the most consistent, i.e. about 60%, and the lowest among employees. Social status was not so important from the point of view of compliance.

#### REFERENCES:

1. Sarfaraz, S., Iftikhar, S. and Salahuddin, N., 2020. Frequency, clinical characteristics, risks, and outcomes of Paradoxical upgrading reactions during anti-tuberculosis treatment in tuberculous lymphadenitis. *Pakistan Journal of Medical Sciences*, 36(1), p.S27.
2. Al-Qarni, A., Abouammoh, M.A., Almousa, A.N., Mousa, A. and El-Asrar, A.M.A., 2019.

- Presumed tuberculous uveitis in a university-based tertiary referral center in Saudi Arabia. *International ophthalmology*, 39(2), pp.317-333.
3. Wen, L., Li, M., Xu, T., Yu, X., Wang, L. and Li, K., 2019. Clinical features, outcomes and prognostic factors of tuberculous meningitis in adults worldwide: systematic review and meta-analysis. *Journal of neurology*, 266(12), pp.3009-3021.
  4. Safwat, T.M., Fattah, E.B.A. and Soliman, A.G., 2019. Gender differences in pulmonary tuberculosis in Abbassia Chest Hospital. *Egyptian Journal of Bronchology*, 13(3), p.408.
  5. Sharma, S., Sarin, R., Sahu, G. and Shukla, G., 2019. Demographic profile, clinical and microbiological predictors of mortality amongst admitted pediatric TB patients in a tertiary referral tuberculosis hospital. *Indian Journal of Tuberculosis*.
  6. Deguchi, M., Nishida, K., Enokiya, T. and Ooi, K., 2019. Risk factor analysis of the decrease in gait speed among Japanese older outpatients with polypharmacy. *Journal of pharmaceutical health care and sciences*, 5(1), p.23. Thakur, R., Iqbal, M.S. and Schezan, F., 2019. Clinical Profile of Patients with Disseminated Tuberculosis (DTB) in Human Immune Deficiency Virus (HIV) Infection. *International Journal of Medicine and Public Health*, 9(4).
  7. Yadav, V., Sharma, J.B., Kachhawa, G., Kulshrestha, V., Mahey, R., Kumari, R. and Kriplani, A., 2019. Obstetrical and perinatal outcome in pregnant women with extrapulmonary tuberculosis. *Indian Journal of Tuberculosis*, 66(1), pp.158-162.
  8. Manyelo, M.C., Solomons, R.S., Snyders, C.I., Stanley, K., Walzl, G. and Chegou, N.N., 2019. Potential of host serum protein biomarkers in the diagnosis of tuberculous meningitis in children. *Frontiers in pediatrics*, 7, p.376.
  9. Liu, Q., Dong, C., Wei, B., Zhang, G., Mu, Y., Lu, X. and Wang, Q., 2019. Analysis of risk factors for drug resistance in tuberculosis patients. *Prevention and treatment*, 11, pp.1-5.
  10. Alshukairi, A.N., Moalim, H.M., Alsaedi, A., Almansouri, W.Y., Al-Zahrani, M., Aljuaid, A., Alraddadi, B.M., Altorkistani, H.H., Alrajhi, A.A. and Al-Hajoj, S.A., 2020. Family cluster of multi-drug resistant tuberculosis in Kingdom of Saudi Arabia. *Journal of Infection and Public Health*, 13(1), pp.154-157.
  11. Rohlwink, U.K., Figaji, A., Wilkinson, K.A., Horswell, S., Sesay, A.K., Deffur, A., Enslin, N., Solomons, R., Van Toorn, R., Eley, B. and Levin, M., 2019. Tuberculous meningitis in children is characterized by compartmentalized immune responses and neural excitotoxicity. *Nature communications*, 10(1), pp.1-8.
  12. Mohamed, N.A.S., 2019. *Evaluation of Serum Uric Acid Levels at Sudanese Hypertensive patients in Khartoum State (March to July 2019) A* (Doctoral dissertation).
  13. Bardhan, M., Shandilya, A. and Panda, R.K., 2019. *Scholars Journal of Applied Medical Sciences*.
  14. de Melo, M.G.M., Mesquita, E.D.D., Oliveira, M.M., Silva-Monteiro, C.D., Silveira, A.K., Malaquias, T.S., Dutra, T.C., Galliez, R.M., Kritski, A.L., Silva, E.C. and Rede-TB Study Group, 2019. Imbalance of NET and alpha-1-antitrypsin in tuberculosis patients is related with hyper inflammation and severe lung tissue damage. *Frontiers in immunology*, 9, p.3147.
  15. Kumar, S.R., Dolla, C., Vasantha, M., Menon, P.A., Venkatesan, G. and Venkatesan, P., 2020. Strategies for smoking cessation (pharmacologic intervention versus enhanced motivation vs. standard motivation) in TB patients under treatment in the RNTCP, India-A cluster-Randomized trial. *Indian Journal of Tuberculosis*.