

TABLE OF CONTENT

COVER	I
RATIFICATION PAGE	II
STATEMENT PAGE	III
TABLE OF CONTENT	IV
LIST OF TABLE	VIII
LIST OF FIGURE	IX
ABSTRAK	X
ABSTRACT	XI
CHAPTER 1 INTRODUCTION	1
A. Background	1
B. Formulation of the problem.....	3
C. Research Purposes.....	4
D. Research benefits.....	4
E. Study originality	5
CHAPTER 2 LITERATURE REVIEW	8
A. Tuberculosis (TB)	8
1. Definition and Etiology.....	8
2. Global and National Epidemiology.....	9
3. Transmission and Pathogenesis.....	10
4. Signs and symptoms.....	12
5. Diagnosis.....	14
6. Therapy.....	18
7. Prognosis	19
B. Diabetes Mellitus.....	20
1. Epidemiology	20
2. Pathogenesis.....	21
3. Signs and symptoms.....	21
4. Diagnosis.....	22
5. Prognosis	22

C. Theoretical Framework	23
D. Conceptual Framework	24
CHAPTER 3 RESEARCH METHODOLOGY	25
A. Research Design	25
B. Time and Place of Research	25
C. Study Population	25
1. Population.....	25
2. Sample.....	26
D. Data Collection Flow	27
E. Data Collection Tools.....	29
F. Study Variable.....	29
G. Operational Definition.....	31
H. Study Plan	32
I. Statistics Analysis	32
J. Ethical Consideration	33
CHAPTER IV RESEARCH RESULT AND DISCUSSION	34
A. Overview of the Research Site	34
B. Characteristics of Research Subjects.....	36
1. Analysis of Potential Confounding Factors: Sex Distribution	39
C. Chest X-ray Findings in Patients with Pulmonary Tuberculosis	40
1. Occurrence of Pulmonary Cavitation.....	42
1.1 Distribution of Pulmonary Cavitation According to Diabetes Mellitus Status.....	42
1.2 Analysis of the Association Between Diabetes Mellitus Status and the Occurrence of Pulmonary Cavitation	43
2. Distribution of Pulmonary Lesions	44
2.1 Distribution of Pulmonary Lesions According to Diabetes Mellitus Status.....	44
2.2 Analysis of the Association Between Diabetes Mellitus Status and Pulmonary Lesion Distribution	45
3. Pulmonary Consolidation.....	46

3.1	Distribution of Pulmonary Consolidation by Diabetes Mellitus Status.....	47
3.2	Analysis of the Relationship between Diabetes Mellitus Status and Pulmonary Consolidation.....	48
4.	Pulmonary Infiltrates.....	49
4.1	Distribution of Pulmonary Infiltrates According to Diabetes Mellitus Status.....	49
4.2	Analysis of the Association Between Diabetes Mellitus Status and Pulmonary Infiltrates.....	50
5.	Pulmonary Fibrosis	51
5.1	Distribution of Pulmonary Fibrosis According to Diabetes Mellitus Status.....	51
5.2	Analysis of the Association Between Diabetes Mellitus Status and Pulmonary Fibrosis	53
6.	Pleural Effusion.....	54
6.1	Distribution of Pleural Effusion According to Diabetes Mellitus Status.....	54
6.2	Analysis of the Association Between Diabetes Mellitus Status and Pleural Effusion.....	55
D.	Discussion	56
1.	Comparison of Chest X-Ray Findings in Pulmonary Tuberculosis Patients with and without Diabetes Mellitus.....	56
1.1	Pulmonary Cavitation and Diabetes Mellitus	57
1.2	Pulmonary Lesion Distribution in Tuberculosis Patients with and without Diabetes Mellitus	60
1.3	Infiltrates and Consolidation in Pulmonary Tuberculosis Patients with and without Diabetes Mellitus	62
1.4	Pulmonary Fibrosis in Tuberculosis Patients with and without Diabetes Mellitus	65
1.5	Pleural Effusion in Pulmonary Tuberculosis Patients with and without Diabetes Mellitus	69

2. Radiological Patterns and Severity in Pulmonary Tuberculosis Patients with and without Diabetes Mellitus.....	71
3. Management of Diabetes Mellitus in Patients with Pulmonary Tuberculosis	74
4. Clinical Implications of Radiological Differences in Pulmonary Tuberculosis Patients with and without Diabetes Mellitus	79
E. The Role of Age, Lifestyle Factors, and Duration of Type 2 Diabetes Mellitus in Tuberculosis.....	81
F. Methodological Strengths and Limitations	83
G. Summary of Findings	85
CHAPTER V CONCLUSIONS AND SUGGESTIONS.....	89
A. Conclusion.....	89
B. Suggestion	89
REFERENCE.....	91
APPENDIX.....	95

LIST OF TABLE

Table 1. Authenticity of research	5
Table 2. Operational Definition of Variables.....	31
Table 3. Demographic Characteristics of Pulmonary TB Patients (n = 198)	37
Table 4. Distribution of Sex by Diabetes Mellitus Status in Pulmonary Tuberculosis Patients	39
Table 5. Combined Radiological Findings in Pulmonary Tuberculosis Patients by Diabetes Mellitus Status	40
Table 6. Distribution of Pulmonary Cavitation According to Diabetes Mellitus Status (n = 198).....	42
Table 7. Distribution of Pulmonary Lesions According to Diabetes Mellitus Status (n = 198).....	45
Table 8. Distribution of Lung Consolidation by Diabetes Mellitus Status (n = 198)	47
Table 9. Distribution of Pulmonary Infiltrates According to Diabetes Mellitus Status (n = 198).....	50
Table 10. Distribution of Pulmonary Fibrosis According to Diabetes Mellitus Status (n = 198).....	52
Table 11. Distribution of Pleural Effusion According to Diabetes Mellitus Status (n = 198).....	55

LIST OF FIGURE

Figure 1. Ghon complex.....	11
Figure 2. Right upper lobe cavitary lesion in a patient diagnosed with TB.....	12
Figure 3. Patchy opacification on the upper right and mid-zone lung.....	14
Figure 4. Dense opacity pleural effusion in the lower left lung.....	14
Figure 5. Pulmonary tuberculosis with cavitation and bilateral lung infiltrates ...	17
Figure 6. Pulmonary tuberculosis with diffuse bilateral lung consolidation and infiltrates.....	18
Figure 7. Theoretical Framework	24
Figure 8. Conceptual Framework of Pulmonary Tuberculosis Diagnosis	24
Figure 9. Flow diagram of study subjects	27
Figure 10. Research flow	32
Figure 11. X-Ray data collection and analysis procedures at Dr. Sardjito General Hospital Yogyakarta.....	35
Figure 12. Distribution of Pulmonary Tuberculosis Patients by Gender.....	37
Figure 13. Distribution of Pulmonary Tuberculosis Patients by Diabetes Status.	39
Figure 14. Chest X-ray Findings in a Patient with Bacteriologically Confirmed Pulmonary Consolidation	47
Figure 15. Chest X-ray Findings in a Patient with Bacteriologically Confirmed Pulmonary Infiltrates	49