FACTORS ASSOCIATED WITH THE TREATMENT OUTCOMES AMONG TUBERCULOSIS DRUG RESISTANCE PATIENTS IN BANGLADESH: A RETROSPECTIVE COHORT STUDY

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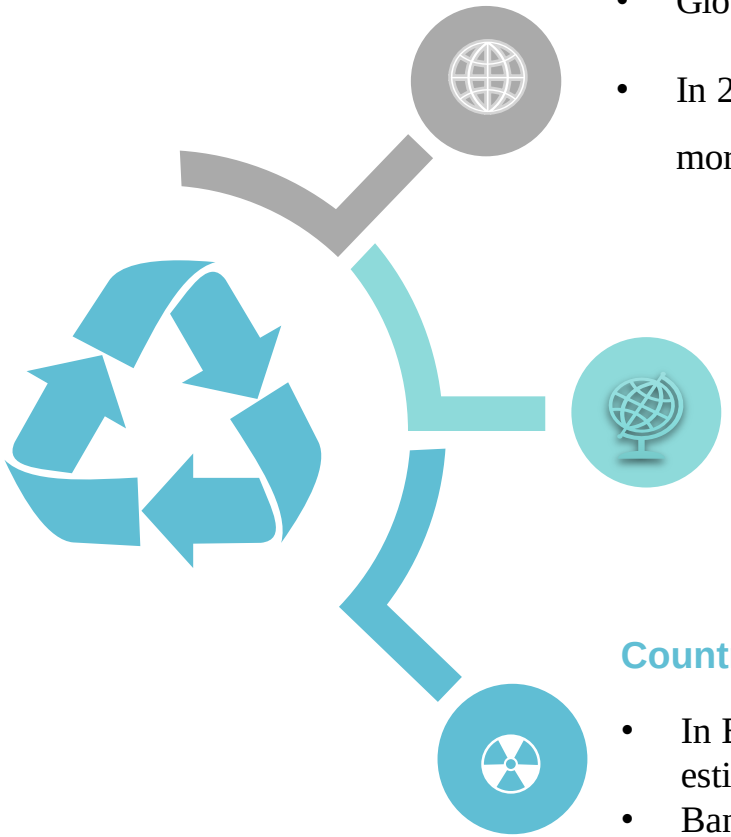
01. INTRODUCTION

Introduction

- Drug-resistant tuberculosis (TB) contribution
- Multi-drug Tuberculosis and it’s global impact.
- Global treatment success rate
- National TB reference laboratory (NTRL) in National Institute of Disease of the Chest and Hospitals (NIDCH), Dhaka
- NTP treatment outcome of MDR-TB patients in 2020
- Present condition of Drug-resistant tuberculosis in Bangladesh
- This study will demonstrate the predictors and factors associated with treatment outcomes of the drug resistance tuberculosis patients in Bangladesh

Justification of the Study



Global context

- Globally men are significantly more at risk of contracting and dying from TB than women
- In 2019, an estimated 4.3 million people fell ill with TB and estimated 632 000 died because of the disease which is more than half of global TB deaths

Regional context

- Treatment success for new and relapse TB cases was 84% (for those initiated on treatment in 2018.
- In South-East Asia, 44% of TB cases were reported in 2018. A total of eight countries including Bangladesh (4%) accounted for two thirds of global tuberculosis

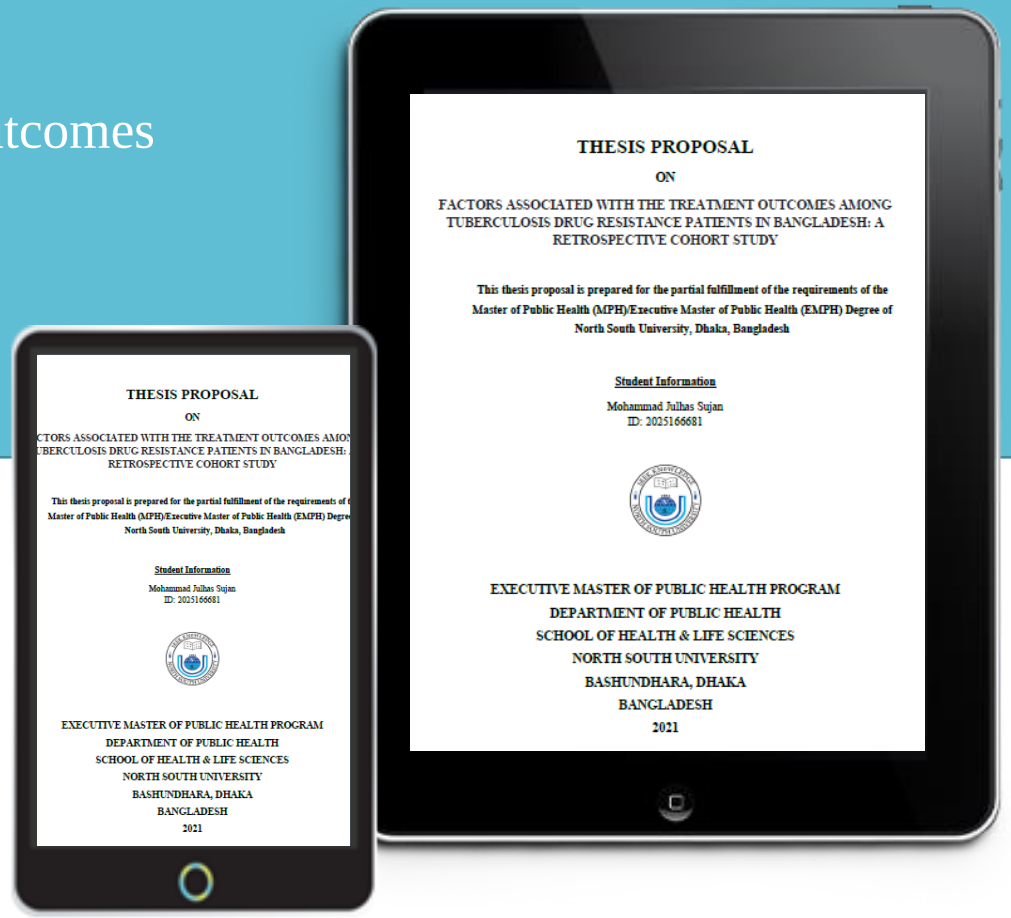
Country context

- In Bangladesh, the estimated incidence rate for all forms of Tuberculosis in 2015 225 per 100 000 population. An estimated 45 per 100 000 people died of TB in the same year
- Bangladesh is one of the WHO highest TB burden countries
- There is no nation-wide retrospective study for drug-resistant TB after 2014.

Objectives

General Objective:

- To explore the factors associated with the treatment outcomes among drug resistant tuberculosis patients in Bangladesh.



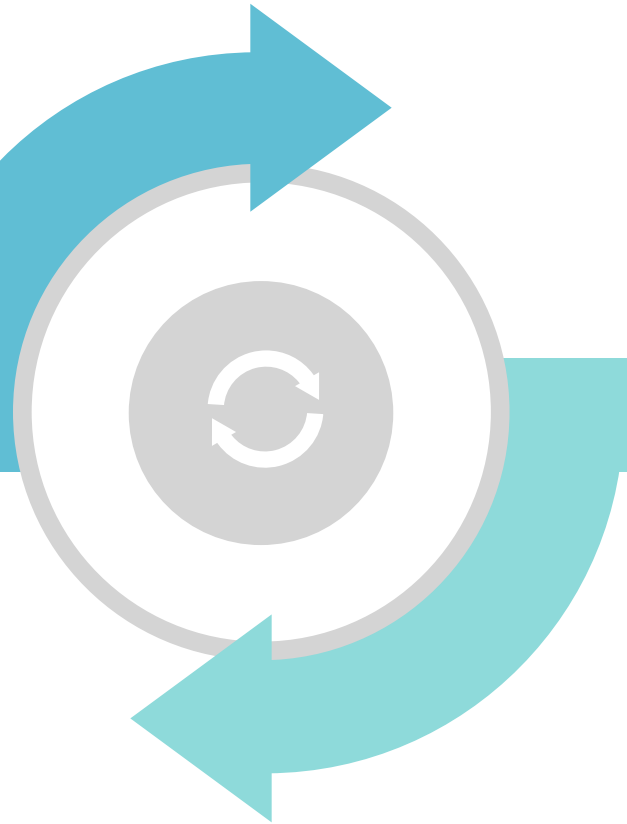
Specific Objectives:

- To understand the sociodemographic characteristics of the patients.
- To explore the factors associated with treatment outcomes among drug resistant tuberculosis patients.

Research question and hypothesis

Research question

- What are the factors associated with treatment outcomes among drug-resistant patients in Bangladesh?

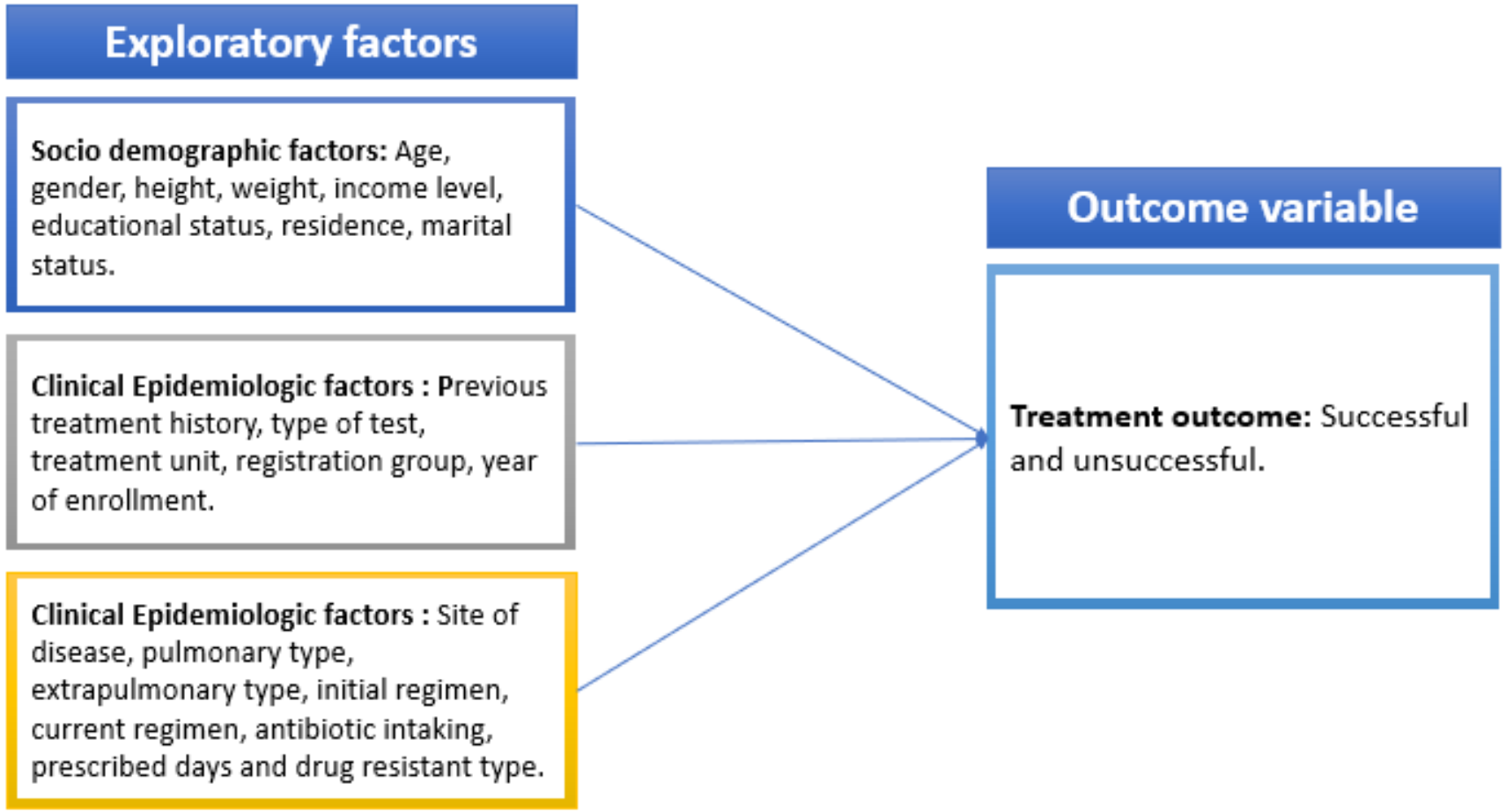


Hypothesis

- There are demographic, clinical and epidemiological factors associated with drug resistance tuberculosis patients treatment outcomes.

II. MATERIALS AND METHODS

Conceptual framework



Materials and Methods

Study Site and Period

- NTP, DGHS, Bangladesh
- Jan 2015-Dec 2019

Sample size & target population

- Convenience sampling
- 3,679 patients
- 9 TB Centers across the country

Inclusion and exclusion criteria

- All DR TB patients
- On treatment, poly resistant

Data collection tool

- Web based surveillance - eTB Manager
- Secondary source of data

Statistical Analysis

- Stata software V-16.0
- Chi-Squared test
- Logistic regression

Quality Control

- Ensured by eTBM
- Reviewed by TB experts

Expected outcomes

- Success and unsuccess rate measurement
- Factors of failure cases
- MDR-TB predictors
- Recommend policy makers

Expected outcomes

01 The completion of this study will help us to understand the drug resistant tuberculosis treatment success and unsuccess rate compared to the 2008-2014 cohort (70.39%) study in Bangladesh under NTP.

02 To find out the factors related to the unsuccessful treatment outcomes.

03 To find out the association among the multi-drug resistance patients earlier treatment history and outcomes.

04 To recommend the policy makers to improve the drug susceptibility test facilities in all the TB centers across the country.

III. SUMMARY AND WORK PLAN

III. CONCLUSION

- Based on the research findings National Tuberculosis Control programs may target to improve service scope, laboratory capacity and quality in the health centers as well as it may need to increase the MDR-TB case detection rate.
- There is another most important part that the private sector's involvement.
- The public-private combined effort for the monitoring, evaluation, data pertaining to the baseline characteristics, and real time data collection can improve the TB program performance.

IV. WORK PLAN

Activities detail	15 June 2021	31 June 2021	15 July 2021	30 July 2021	15 August 2021	31 August 2021	15 Sep 2021	31 Sep 2021
Designing of the study								
Literature review								
Consent letter approval from NTP, DGHS								
Variable selections								
Data extraction, cleaning and importing in Stata software								
Data management and analysis								
Manuscript and report writing and review								
Submission and approval of the thesis								
Printing and Binding								

Thank You

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