Prevalence of Hypertension and It's Association with High Salt Intake among Individuals Aged 40 Years or above in Sathkhira District

Course Title: NCD Epidemiology

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Background

- Hypertension affects 1.3 billion people worldwide.
- In Bangladesh, prevalence is around 20% among adults (range: 26.4% to 40.7%)
- High salt intake is a major modifiable contributor to hypertension.
- Studying this age group (40 years or above) allows identification of early trends and risk factors in a population that is particularly susceptible.

Objectives

General Objective

- To determine the association between extra salt intake and hypertension among individuals aged 40 years or above

Specific Objectives

- To estimate prevalence of hypertension among study individuals
- To assess the unadjusted association between extra salt intake and hypertension
- To determine the adjusted association after controlling for confounders

Conceptual Framework

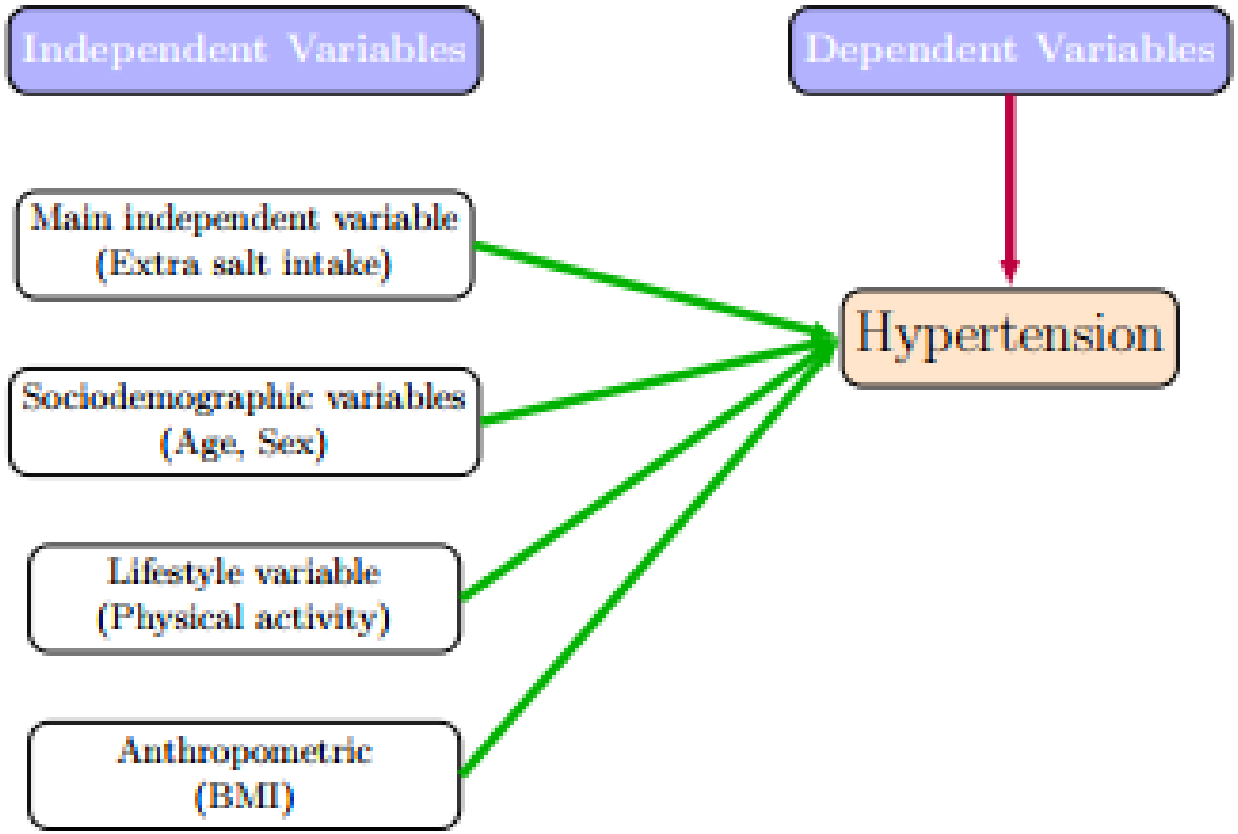


Figure 1: The associations among different variables

Research Methodology

- **Study Design:** Cross-sectional
- **Sample Size:** 714
- **Study Population:** Adults aged 40 years or above
- **Study Area:** Satkhira district
- **Study Period:** 9 months (Dec 2025 – Aug 2026)

Research Methodology (cont.)

Inclusion Criteria

- Age 40 years or above
- Resident in study area for at least 6 months
- Provided informed consent

Exclusion Criteria

- Pregnant or lactating women
- Patients on dialysis or with chronic kidney disease
- Individuals with acute or severe illness

Statistical Analysis

Univariate Analysis

- Cont. variables (Age, BMI): mean $\pm$ SD, median (IQR), histogram/boxplot
- Cat. variables (Sex, Physical Activity, Salt Intake): frequency (%), bar chart

Bivariate Analysis for Blood Pressure (High vs Low)

- Cat. predictors (Salt, Physical Activity): Chi-square test / Fisher's exact test
- Con. predictors (Age, BMI): t-test (parametric) / Mann–Whitney U test (non-parametric)

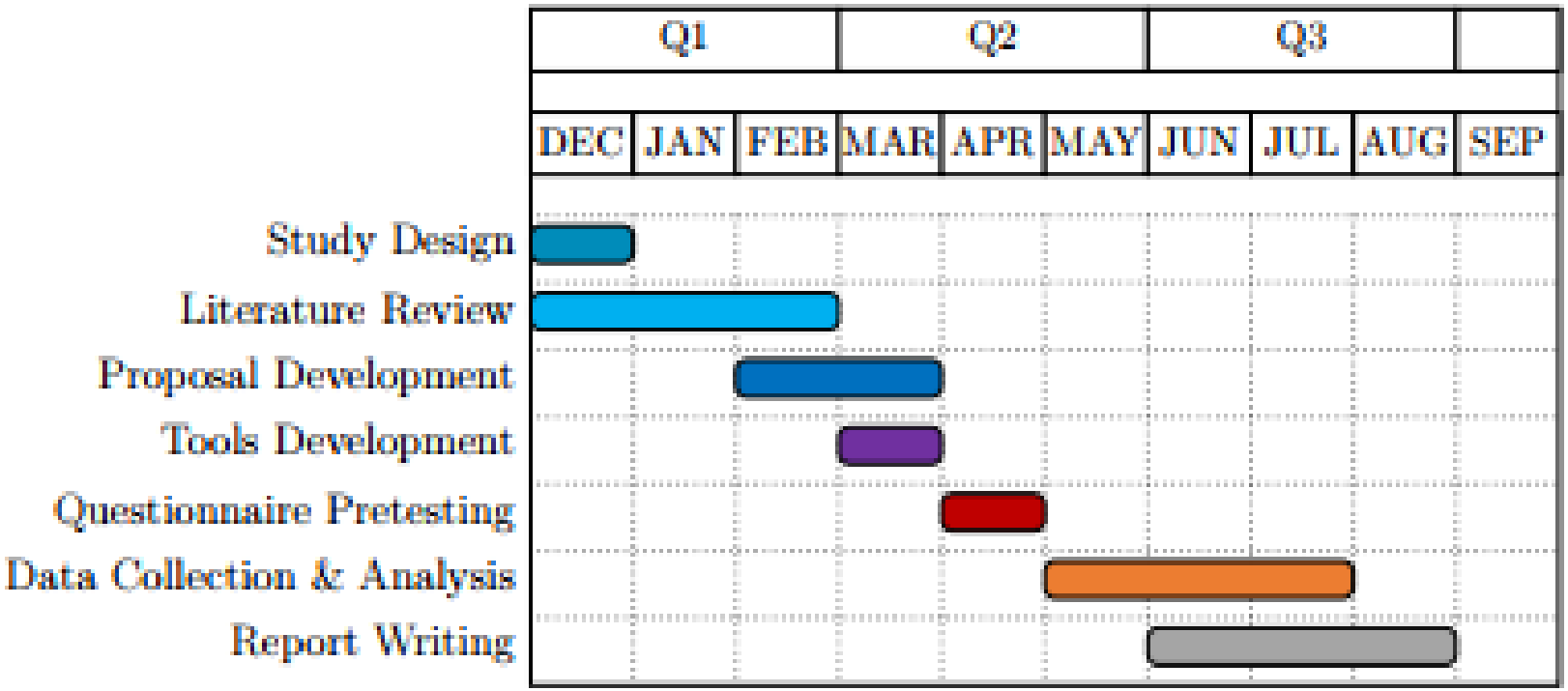
Multivariate Analysis

- $\text{Odds(High BP)} = e^{\beta_0+\beta_1\text{Salt}+\beta_2\text{Age}+\beta_3\text{Sex}+\beta_4\text{BMI}+\beta_5\text{PA}}$

Ethical Considerations

- Ethical approval will be obtained from the **Institutional Review Board (IRB) of North South University**.
- All procedures will comply with NSU ethical standards and national research guidelines.
- Participants will provide written informed consent prior to data collection.

Study Timeline



Thank You!

Questions or Comments?

I appreciate your attention.