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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- 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.

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
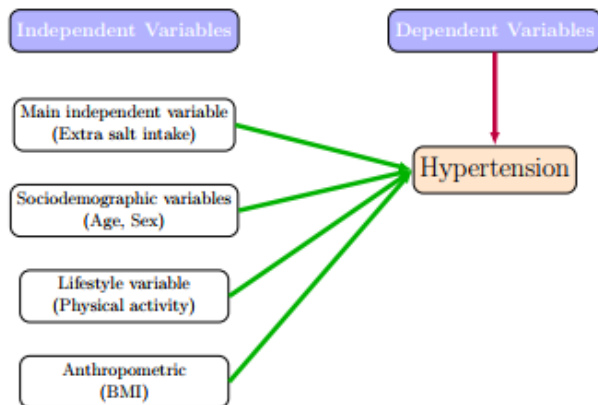
Conceptual Framework

Figure 1: The associations among different variables

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

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
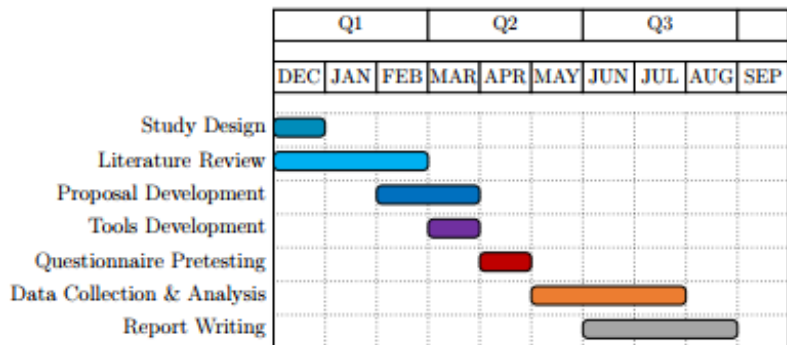- Con. predictors (Age, BMI): t-test (parametric) / Mann–Whitney U test (non-parametric)

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.

	Q1			Q2			Q3		
	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Study Design										
Literature Review										
Proposal Development										
Tools Development										
Questionnaire Pretesting										
Data Collection & Analysis										
Report Writing										

Thank You!

Questions or Comments?

I appreciate your attention.