# The Impact of Family Members on Elderly Self-reported Health in Rural Bangladesh

**M. Omar Rahman, MD, MPH, DSc**
Director
Center for Health, Population & Development
Independent University, Bangladesh

Adjunct Associate Professor of Demography
Harvard School of Public Health

# The Road Map

- Introduction
- Design and Methods
- Results
- Discussion

# Introduction

- Do spouses and children matter for elderly self-reported health?

- Spouses matter for elderly mortality but little is known about children and morbidity
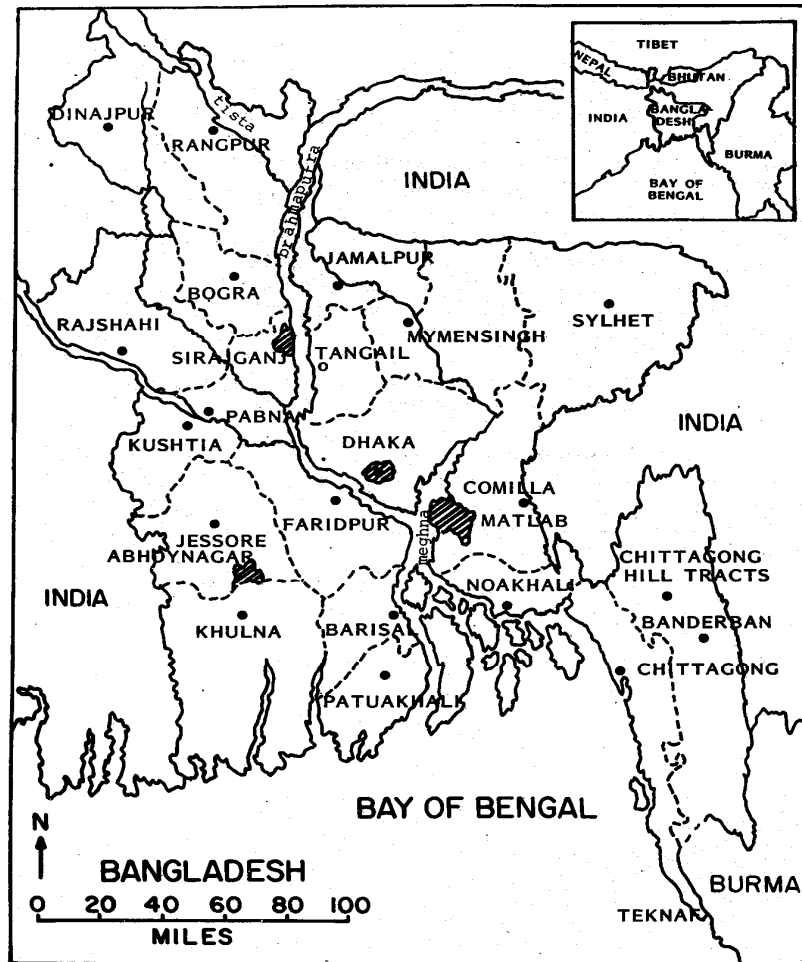
- **Interaction among family members unexplored

# Design & Methods

- Data came from 1996 Matlab Health and Socio-Economic Survey (MHSS) conducted in rural Bangladesh

- Sample size: 765 women, 979 men age ≥60 with atleast 1 surviving child

- Binary logistic regression adjusted for clustering

# Location of Study Area



Key: ▨ Study areas

# Country Setting

- Population: 140 million (rural:75%)
- Poverty: High (per capita income $370/yr)
- Education: 50% illiterate (15 and above)
- Health: Low access, 4071 persons/phy, 17,446 persons/reg. nurse
- Old Age: 7% over age 60, life exp at age 60 is 20 years

# Variables

- Outcome=poor vs good/fair health
- Predictors:
  - Various spouse-child combinations
- Control variables:
  - Age, no. of children, assets, education
  - Significant chronic disease

# Results- Table 1

## Demographic characteristics

| Spouse-child combinations | Female (N=765) Percent | Male (N=979) Percent |
|---|---|---|
| Spouse+≥1son +≥1 dtr | 32.48 | 84.70 |
| Spouse+Just sons | 04.00 | 05.24 |
| Spouse+Just dtrs | 01.06 | 02.06 |
| No spouse+ ≥1son +≥1 dtr | 52.14 | 06.87 |
| No spouse+Just sons | 06.10 | 00.34 |
| No spouse+Just dtrs | 04.22 | 00.53 |

# Results- Table 2

## Logit Regression (Women 60+)

| Spouse-child combinations | Log Odds (S.E) | 95% C.I. |
|---|---|---|
| REF: Spouse+ one each | | |
| Spouse+just sons | 1.35* | (0.12, 2.59) |
| Spouse+just dtrs | 1.63 | (-0.70, 3.95) |
| No spouse+1 each | 0.67* | (0.20, 1.13) |
| No spouse+ just sons | 0.25 | (-0.58, 1.07) |
| No spouse+ Just dtrs | 0.97 | (-0.37, 2.31) |
| Age in years | 0.04 * | (0.01, 0.07) |
| # Children | -0.04 | (-0.14, 0.06) |

# Results- Table 3

## Logit Regression (Women 60+)

| Spouse-child Combinations | Model 4 Log Odds (s.e.) | Model 5 Log Odds (s.e.) |
|---|---|---|
| REF: Spouse+ one each | | |
| All other spouse child comb. | 0.42 (0.33) | *0.56(0.24) |
| Age in years | 0.04 (0.02) | *0.05(0.02) |
| # Children | -0.04 (0.05) | -0.02(0.05) |
| Major disease | 1.00 (0.37) | *1.27(0.21) |
| Major disease *all other spouse-child comb. | 0.36 (0.45) | - |
| Household assets | - | 0.32(0.30) |
| No education | - | 0.28(0.35) |

# Summary Results

- No stat diff between different non-reference sp-child combinations—Thus aggregated into one meta non-optimal sp-child combination with significant increase in risk of poor self-reported health for women—(OR=1.73)

- No interactions between chronic disease and aggregated non-optimal sp-child group for women

- Spouse child combinations do not affect SRH among elderly men

# Discussion

- Roles of spouse, son and daughter may be non-substitutable for self reported health among elderly women in rural Bangladesh

- Daughters may be more reliable care-givers than daughter in laws. They may also provide economic help—proximity not important

# Discussion

- Need for gender diversity in children has implications for sustainable fertility decline
- With final family size of two children, 50% of the time will have children only of one gender. Thus three children may be a better bet.
- Need for increasing substitutability of sons and daughters
- Need for non-family alternatives to old-age security