Socioeconomic Status and Health among Older Singaporeans

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Background

- Socioeconomic differences in mortality risks have been widely documented.
- Fewer studies have focused on socioeconomic inequalities in other aspects of health status among older adults.
- Little consensus on whether impact of socioeconomic factors diminish with age. Diminish vs. continue?
- Can we add “life” to the years of socio-economically disadvantaged older adults?

Research Aim

- We examine socioeconomic inequalities in health status among older adults in Singapore, controlling for demographic variables, and whether these inequalities diminish with age.
- We use three measures of health status:
  - Perceived health status
  - Presence of chronic illnesses
  - Presence of functional disability

The Singapore Case

- Fertility decline and increasing longevity have led to a rapid aging of Singapore's population.
- Currently 7% of population 65+, by 2030 → 19%.
- Older adults use a larger proportion of medical resources compared to younger adults.
- Need to anticipate health care needs.

Data and Methods

- 1999 *Transitions in Health, Wealth, and Welfare of Older Singaporeans*
- Sample = 59+ (n=1,977).
- Separate multivariate logistic regressions for each health measure; perceived health, chronic illness, and functional disability.
  - Run for full sample, n=1977
  - Separately for 3 age groups; 59-73, 74-83, and 84+

Our health measures

- Self reported health
- Number of chronic conditions
- Functional disability

Percentage of Older Adults Reporting a Particular Health Problem

Health status	Percentage
Poor self-assessed health	45
Reporting at least one chronic condition	73
Reporting at least one functional disability	31

Our independent variables

- Socioeconomic characteristics:
  - Education, income level, perceived income adequacy, homeownership, assets.
- Demographic characteristics:
  - Age, sex, ethnicity, marital status

Socio-economic characteristics of older Singaporeans

- 60% have no formal education, 26% completed primary school, and 13% completed secondary school.
- 69% own their own home.
- Average monthly income: 31% less than $1,000, 69% more than $1,000.
- 53% possess assets (mainly savings).
- 83% perceive their income as adequate or more than adequate.

At the bivariate level we see socioeconomic differences in perceived health status

- More likely to report poor self-assessed health if:
  - Lower monthly income
    (Odds ratio = 1.5, $p < 0.000$).
  - Inadequate perceived income
    (Odds ratio = 2.4, $p < 0.000$).
  - No education
    (Odds ratio = 1.6, $p < 0.01$).
  - Do not own home
    (Odds ratio = 1., $p < 0.08$).

At the bivariate level we see socioeconomic differences in the presence of at least one chronic illness if:

- More likely to report a chronic illness if:
  - Perceived income is inadequate
    (Odds ratio = 1.8, $p < 0.000$).
  - Lower education
    (Odds ratio = 1.5, $p < 0.03$)
  - Do not own assets
    (Odds ratio = 0.8, $p < 0.07$)

At the bivariate level we see socioeconomic differences in the presence of at least one functional disability if:

- More likely to report a functional disability if:
  - Lower income

    (Odds ratio = 1.5, $p < 0.002$)
  - Inadequate perceived income

    (Odds ratio = 1.5, $p < 0.001$)

Conclusion at the bivariate level:

- Perceived health status is most affected by socioeconomic variables.
- Strong demographic effects: Older age, being female associated with poorer health status on all health measures.

Multivariate results for perceived health

- Lower income, lower perceived income adequacy, lower education → poorer perceived health.
- Not currently married, minorities, older respondents and females report poorer perceived health.

Multivariate results for presence of at least one chronic illness

- Lower perceived income adequacy, lower education, and no assets → at least one chronic illness.
- Older ages and being female → at least one chronic illness.

Multivariate results for presence of at least one functional limitation

- Lower income, inadequate perceived income adequacy → at least one functional limitation.

- Minorities, older respondents, females → at least one functional limitation.

Do the effects of socioeconomic factors decline with age when predicting perceived health status?

- At ages 59-73 what matters?
  - Income, perceived income adequacy, education, owning assets, being a minority, gender.
- At ages 74-83 what matters?
  - Income, perceived income adequacy, being a minority.
- At ages 84+ what matters?
  - Perceived income adequacy, being a minority, gender.

Do the effects of socioeconomic factors decline with age when predicting the presence of a chronic illness?

- At ages 59-73 what matters?
  - Perceived income adequacy, education, gender.
- At ages 74-83 what matters?
  - Perceived income adequacy.
- At ages 84+ what matters?
  - Gender.

Do the effects of socioeconomic factors decline with age when predicting the presence of a functional limitation?

- At ages 59-73 what matters?
  - Income, perceived income adequacy, being a minority, gender.
- At ages 74-83 what matters?
  - Nothing
- At ages 84+ what matters?
  - Being a minority, gender.

Conclusions

- The effect of socioeconomic characteristics is strongest when predicting perceived health.
- Across all health measures, the perception of income adequacy proves the most important predictor of health.
- Separate regressions by age point to a decrease in the importance of socioeconomic characteristics as one ages.

The perception of how well you are doing and health status

- The perception of income adequacy inversely related to health status.
- Level of stress reported strongly positively related to poor health status.