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?
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

<table>
<thead>
<tr>
<th>Health status</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor self-assessed health</td>
<td>45</td>
</tr>
<tr>
<td>Reporting at least one chronic condition</td>
<td>73</td>
</tr>
<tr>
<td>Reporting at least one functional disability</td>
<td>31</td>
</tr>
</tbody>
</table>
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.