

# Trends in the self-rated health, chronic diseases and disability of Dutch 60-85-year-olds

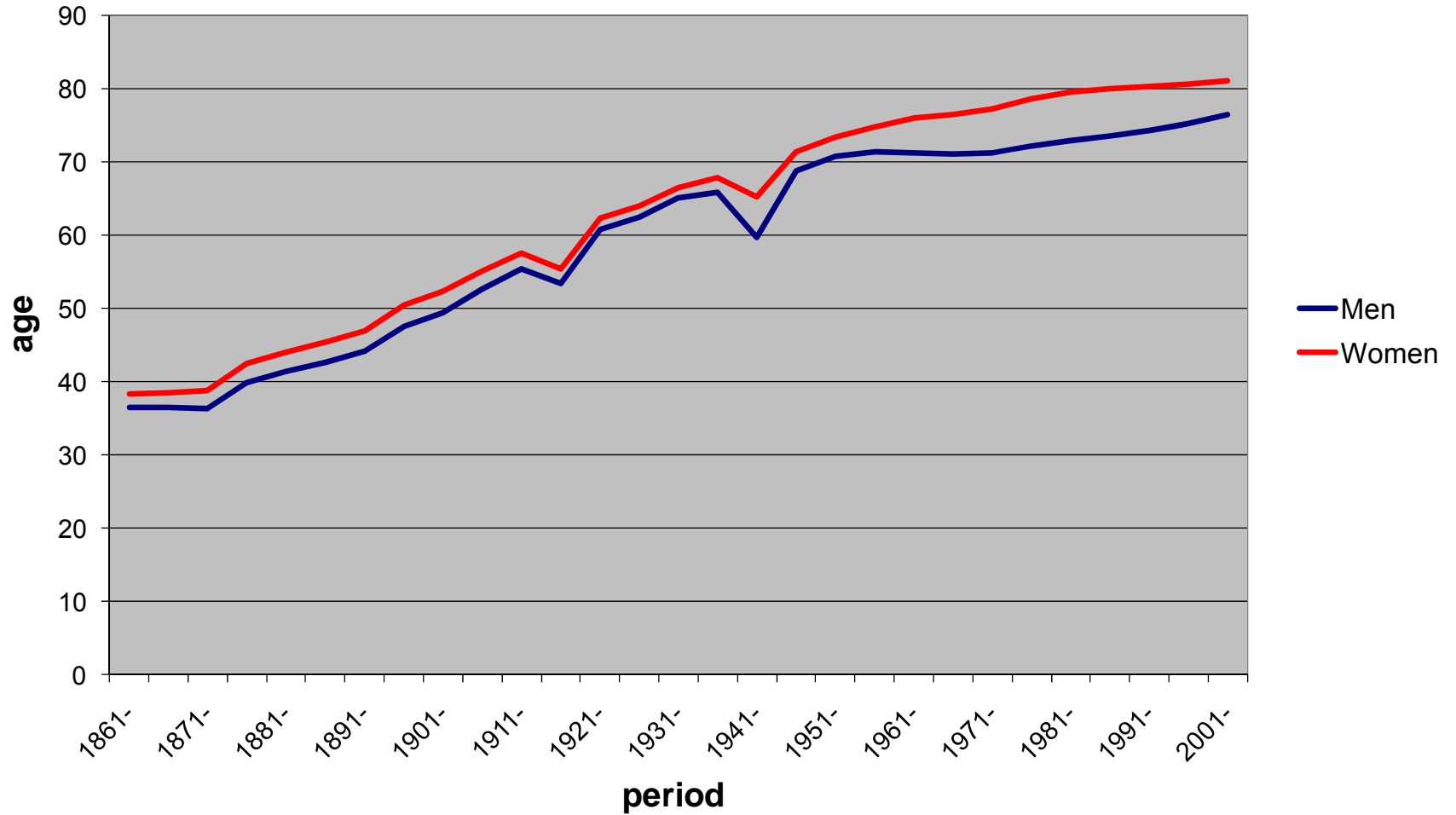
The Longitudinal Aging Study Amsterdam, 1992-2009

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# Life expectancy in The Netherlands



## In this presentation:

- Is a better life expectancy associated with being in better health *or feeling healthier?*
  1. Depends on definition of 'health'
  2. Factors that influence how we feel about our health may change over time

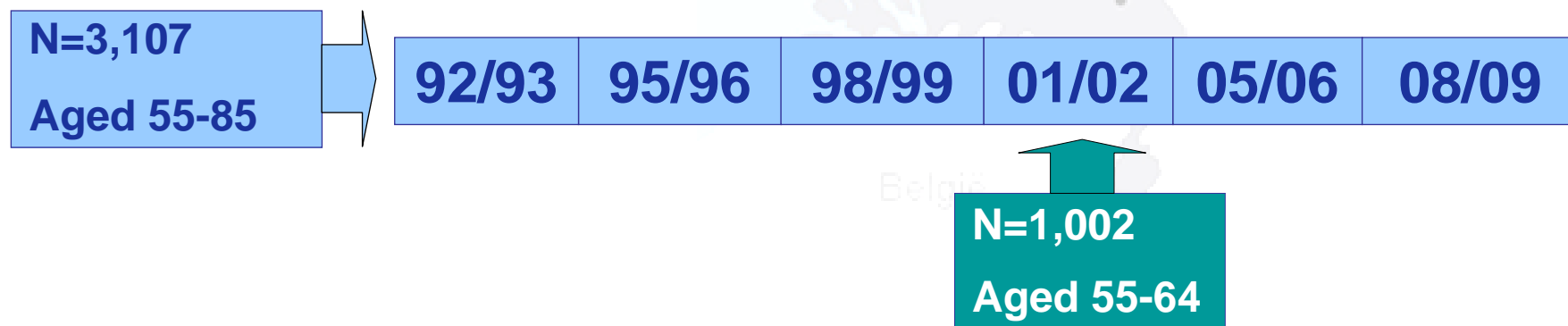
# Self-rated health (SRH)

- ‘How is your health in general?’
  - Predictor of morbidity, functional limitations, mortality
- Trends in self-rated health ↑ ↓
  - Salomon et al., 2009, Jang & Kim, 2010, Doblhammer & Kytir, 2001
- Context of trends in determinants of SRH:
  - Chronic diseases ↑
  - Disability ↑ ↓
  - (Crimmins & Béltran-Sánchez, 2011, Parker & Thorslund, 2007, Uijen & van de Lisdonk, 2008; Freedman et al., 2002; 2004)

## ➤ Changing associations?

# Methods

- LASA
- 6 measurement waves
- N=4,109
- Aged 60-85 → N=4,009



# Health indicators

- Self-rated health

- 'fair'; 'sometimes good, sometimes poor'; 'poor' → Poor SRH
- Vs.
- 'Very good'; 'good' → Good SRH

- Chronic diseases

- Lung disease, cardiac disease, peripheral atherosclerosis; diabetes; stroke; arthritis; cancer
- Multimorbidity:  $\geq 2$  chronic diseases

- Disability

- 6 daily activities
- **Mild:** difficulty with  $\geq 1$  activity, but able to perform all activities independently
- **Severe:** unable to perform  $\geq 1$  activity independently

# Analysis

## 1. Prevalence

- Weighted by 5-year age groups and gender
- By age (75-85 vs. 60-74), gender, level of education (primary or less vs. secondary or higher)

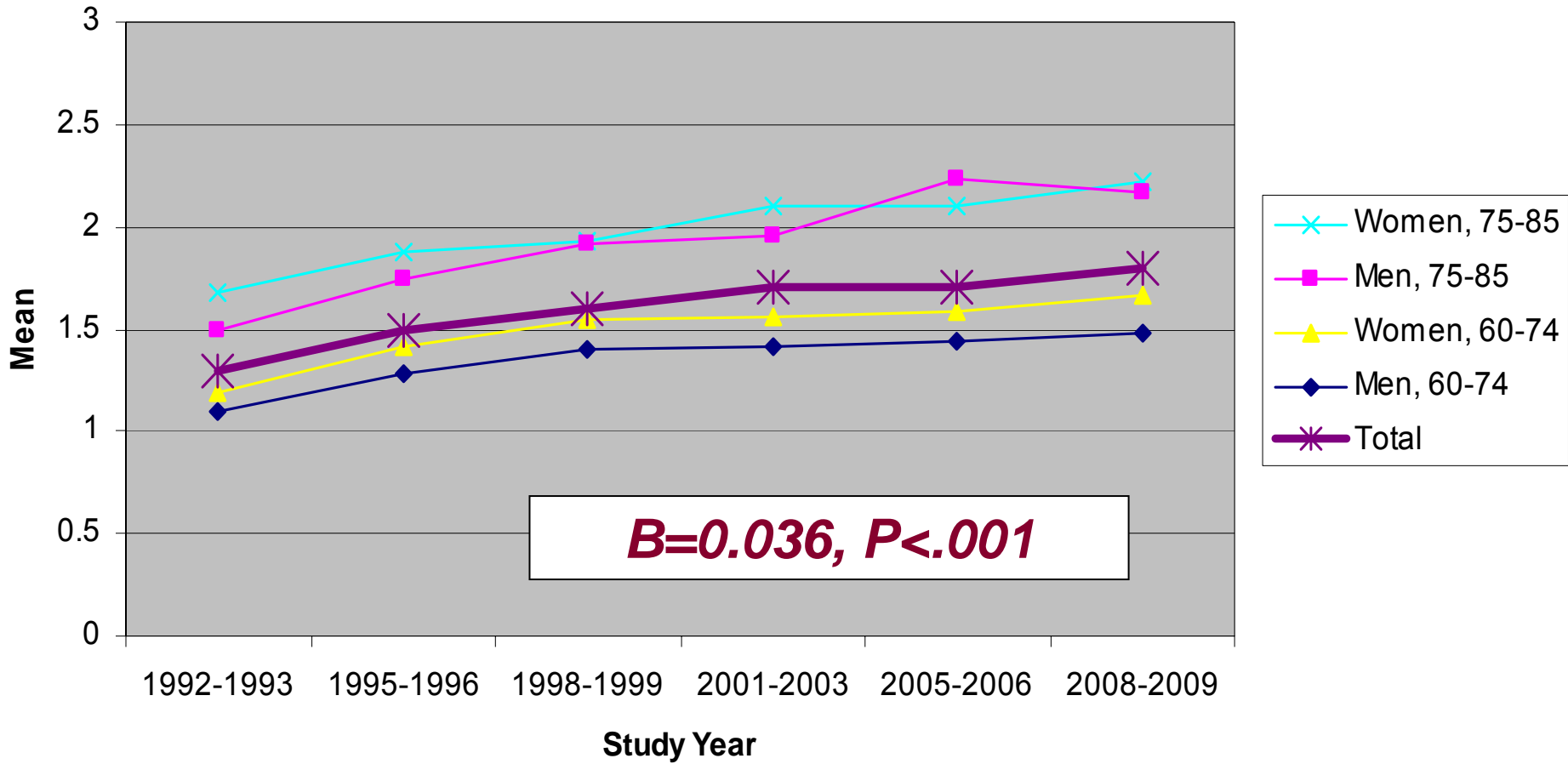
## 2. Generalized Estimating Equations (GEE)

- Effect time in years on diseases, disability and SRH
- Effect time in years on associations (interactions)
  - Chronic diseases → SRH
  - Disability → SRH
  - Chronic diseases → Disability

## 3. Population attributable risks to poor SRH

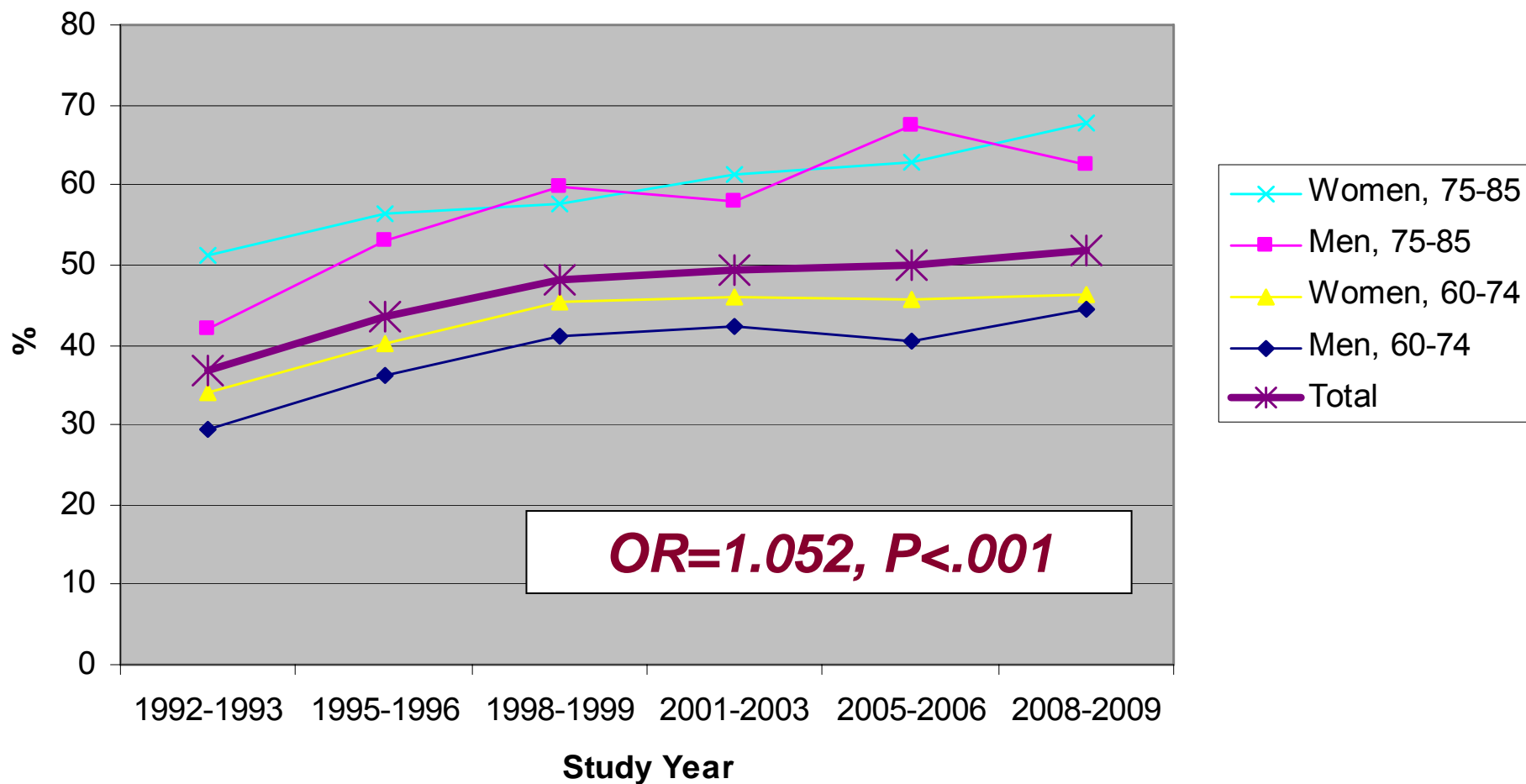
- Combining the prevalence with the impact on poor SRH for each wave

# Trend in mean number of diseases

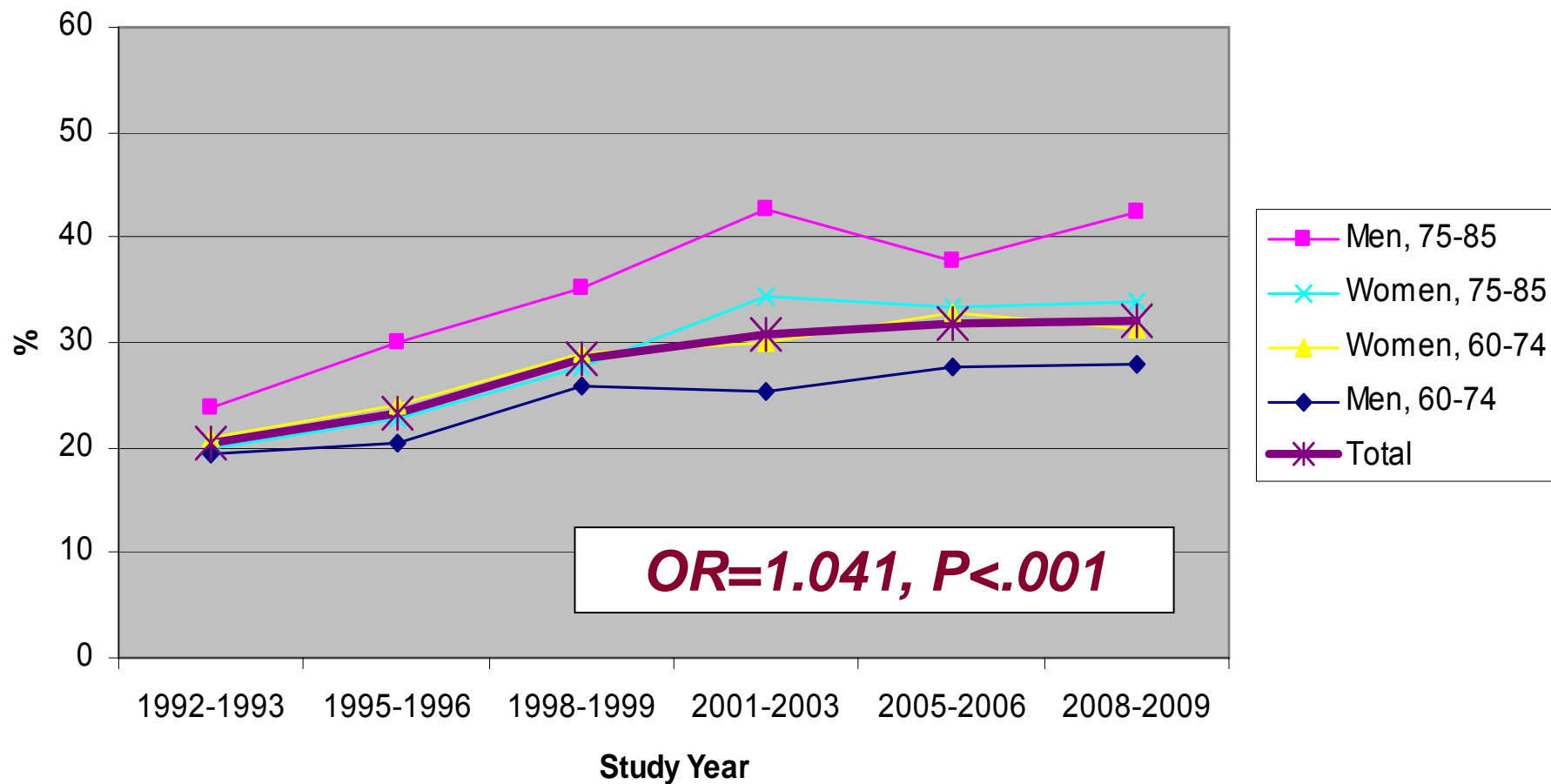




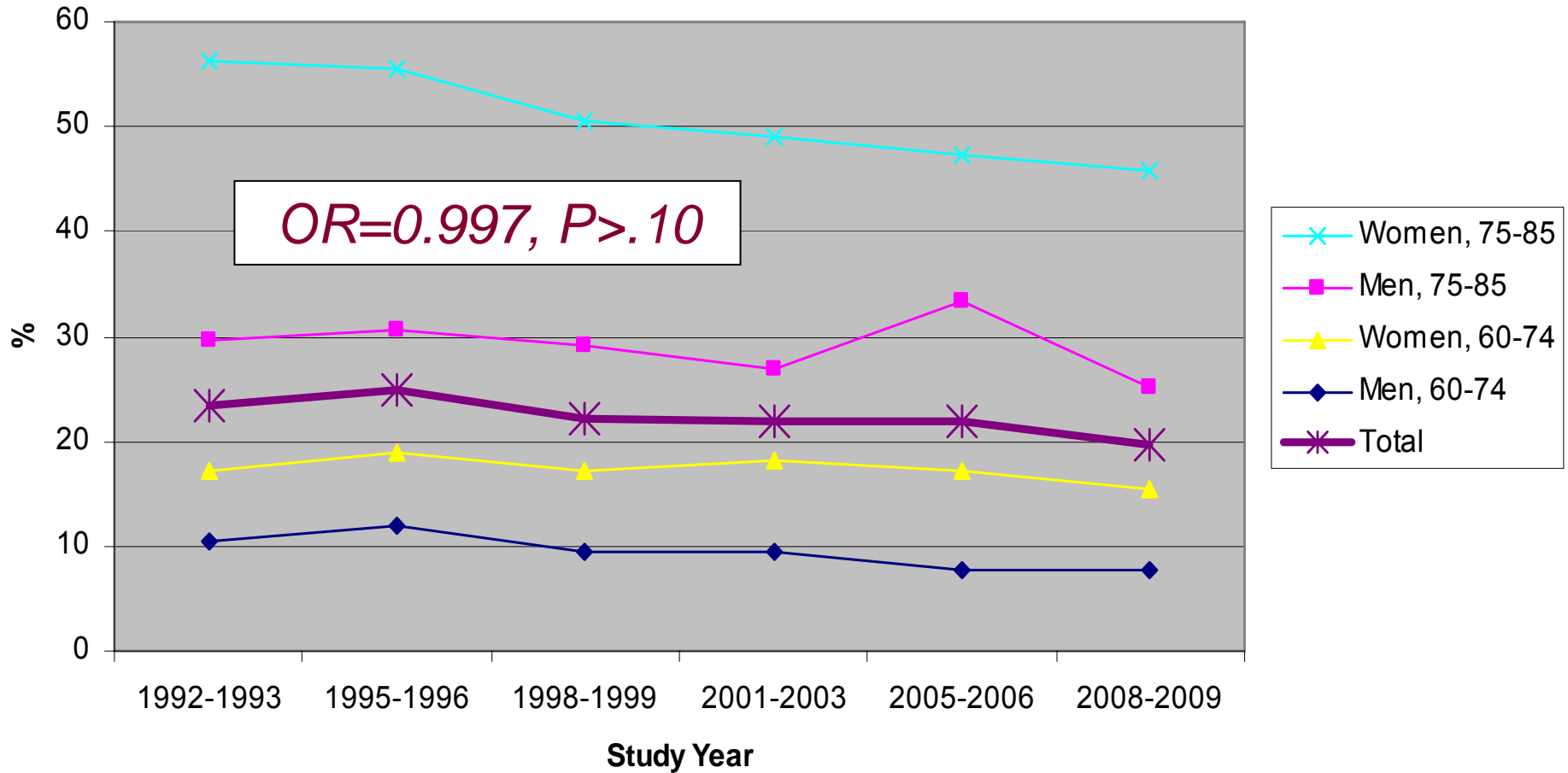
# Trend in % multimorbidity



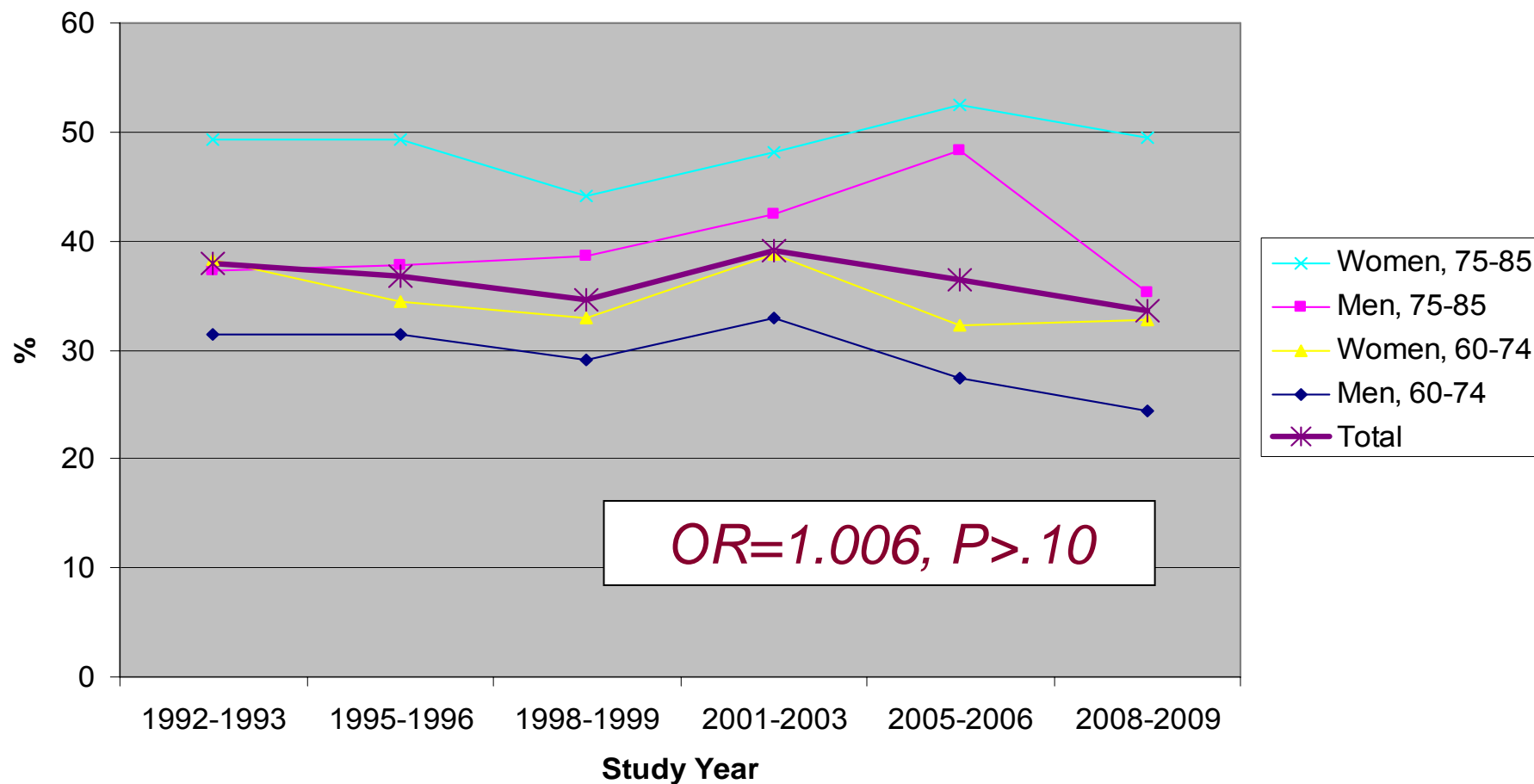
# Trend in % mild disability



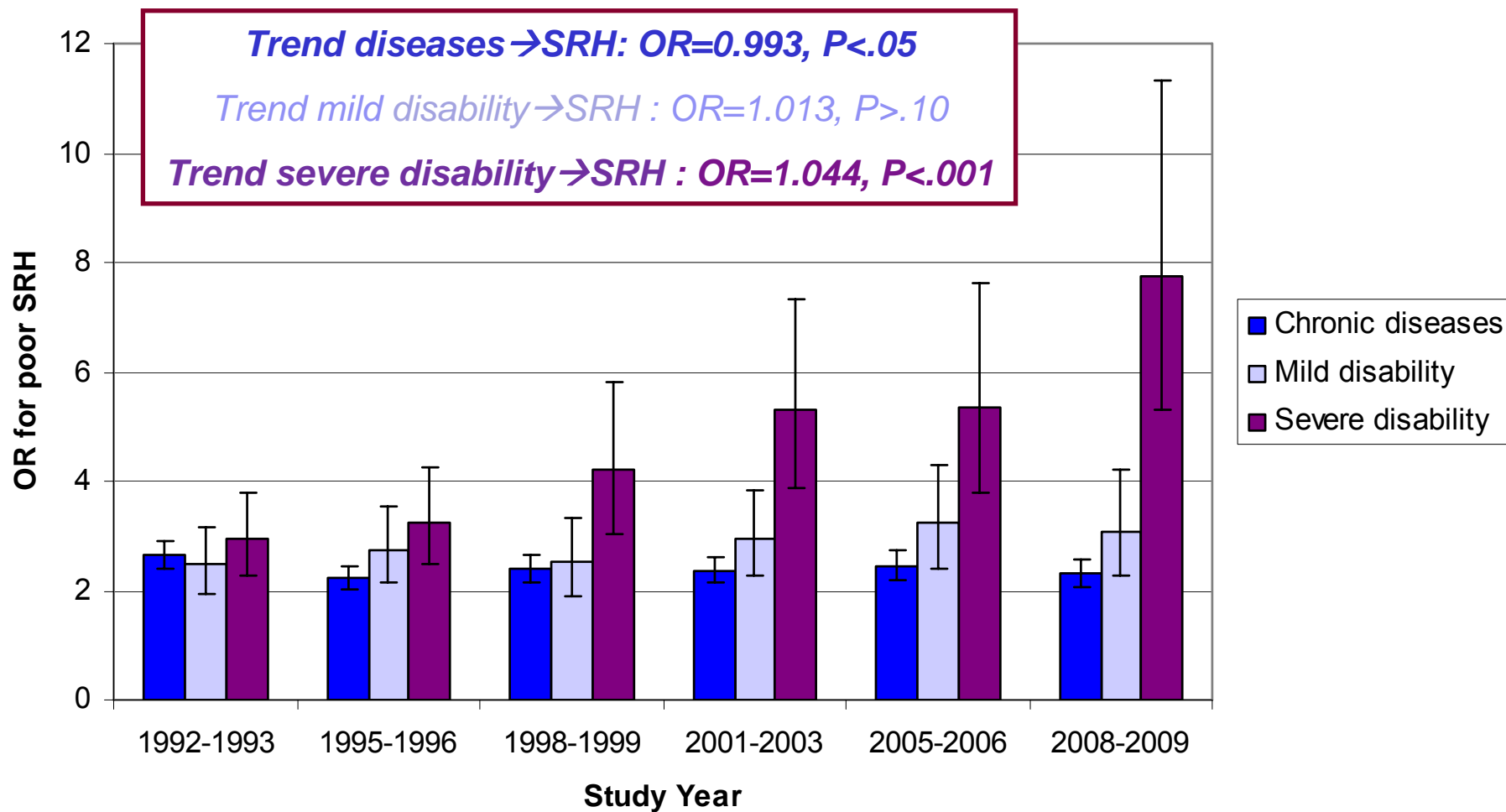
# Trend in % severe disability



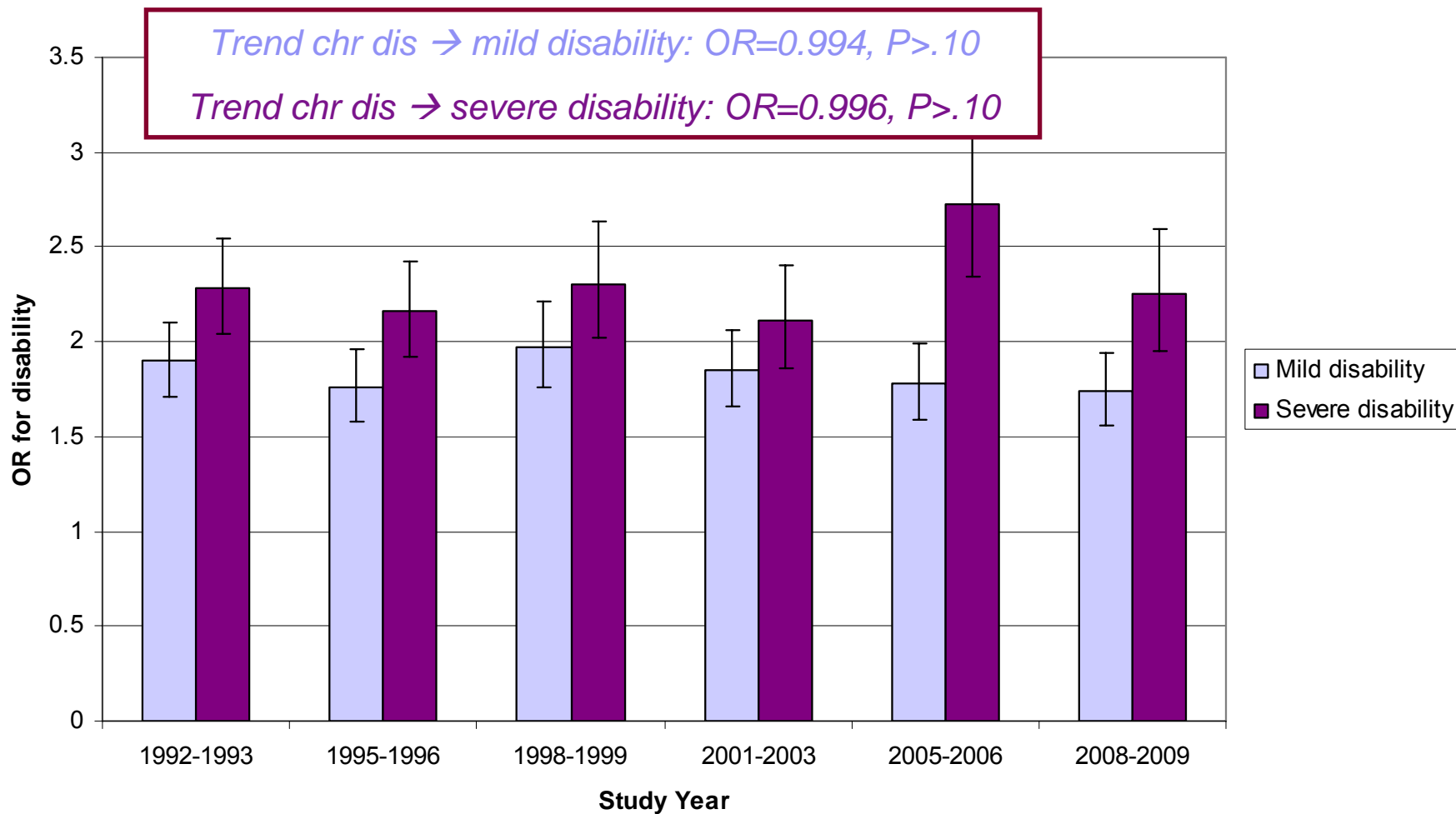
# Trend in % poor SRH



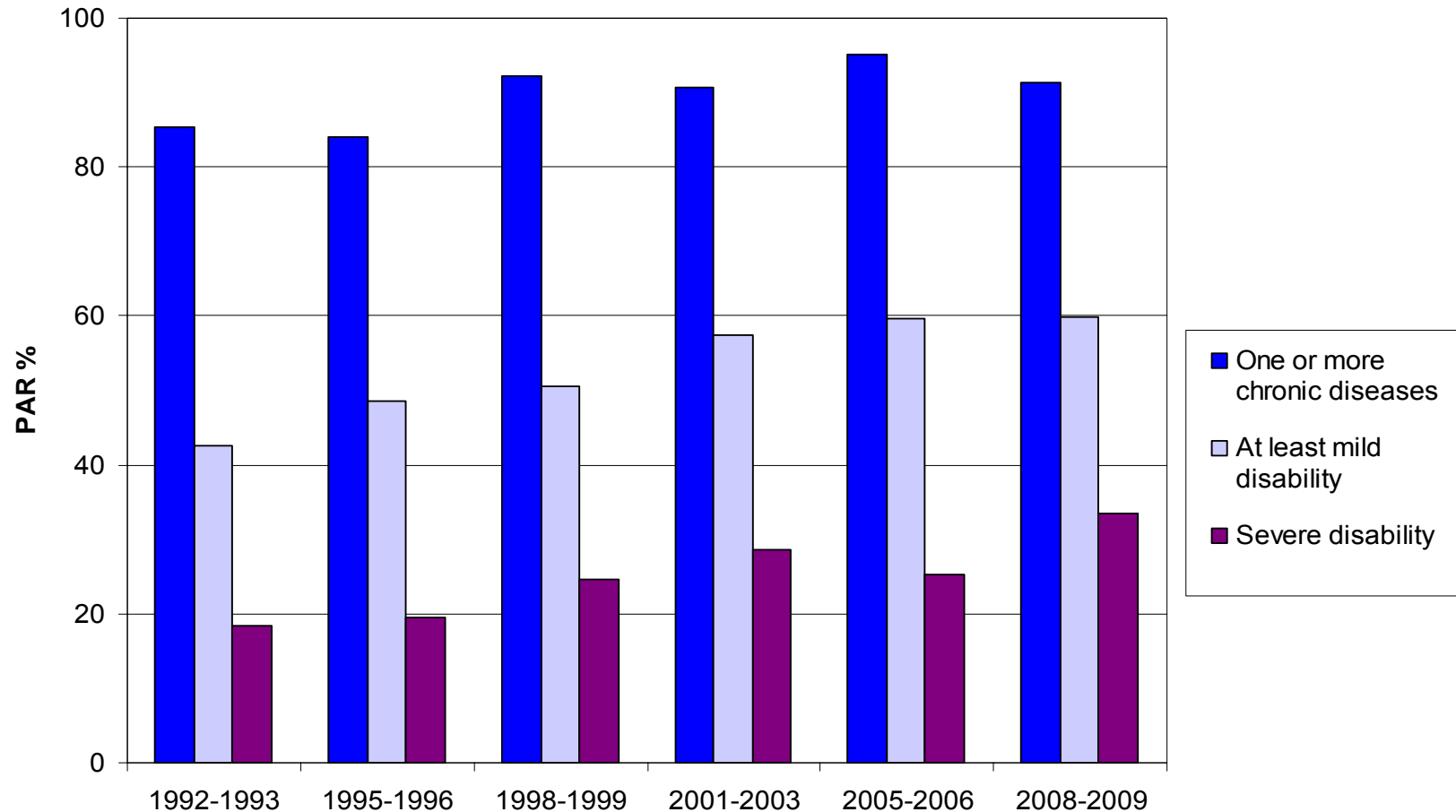
# Trends in associations with SRH



# Chronic diseases and disability



# Population Attributable Risk for poor SRH



## Socio-demographic subgroups

- **75-85 years (vs. 60-74)**
  - Stronger increases in number of chronic diseases and poor SRH
- **Men (vs. women)**
  - Stronger increase in number of chronic diseases
- **Low educated (vs. higher educated)**
  - Stronger increases in number of chronic diseases and poor SRH



## Summary

- Is a better life expectancy associated with being in better health or feeling healthier?
  - Chronic diseases: -
    - Less important for SRH
  - Prevalence mild disability: -
  - Prevalence severe disability: =
    - More important for SRH
  - Prevalence poor SRH: =
- Associations have changed

# Discussion

- Health trend is dependent on indicator
- Number of chronic diseases
  - Improved diagnosis and screening
  - Improved survival
  - Multimorbidity
  - Inequalities

# Discussion

- **Disability**

- Distinction between mild and severe
  - Mild disability increased; severe disability remained unchanged
- Are diseases less disabling?
  - Dynamic equilibrium (Manton, 1982)

- **Stable trend in self-rated health**

- Association with determinants
  - Adaptation to increased prevalence of chronic diseases
  - Decreased acceptance of severe disability?

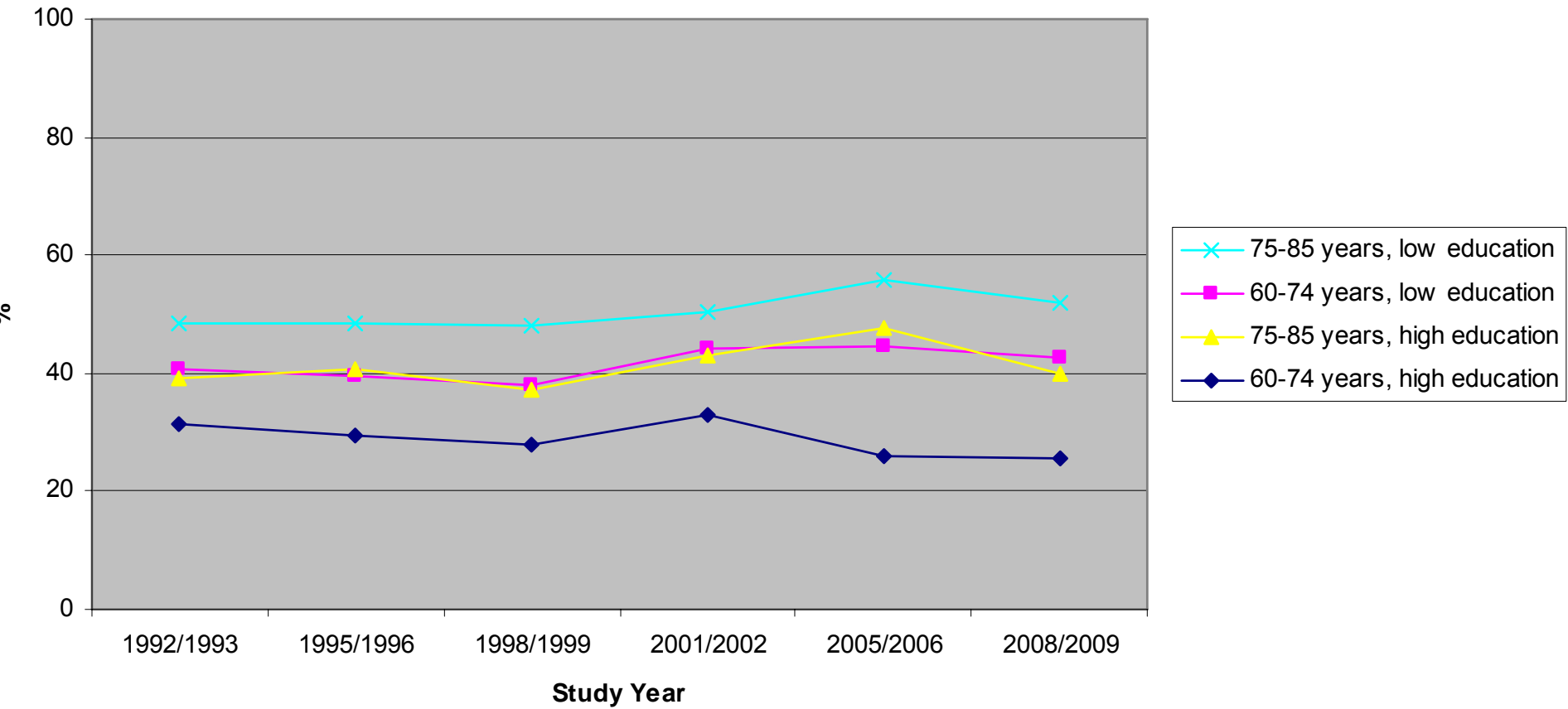
➤ **Stability of self-rated health hides underlying changes in health**

# Questions?

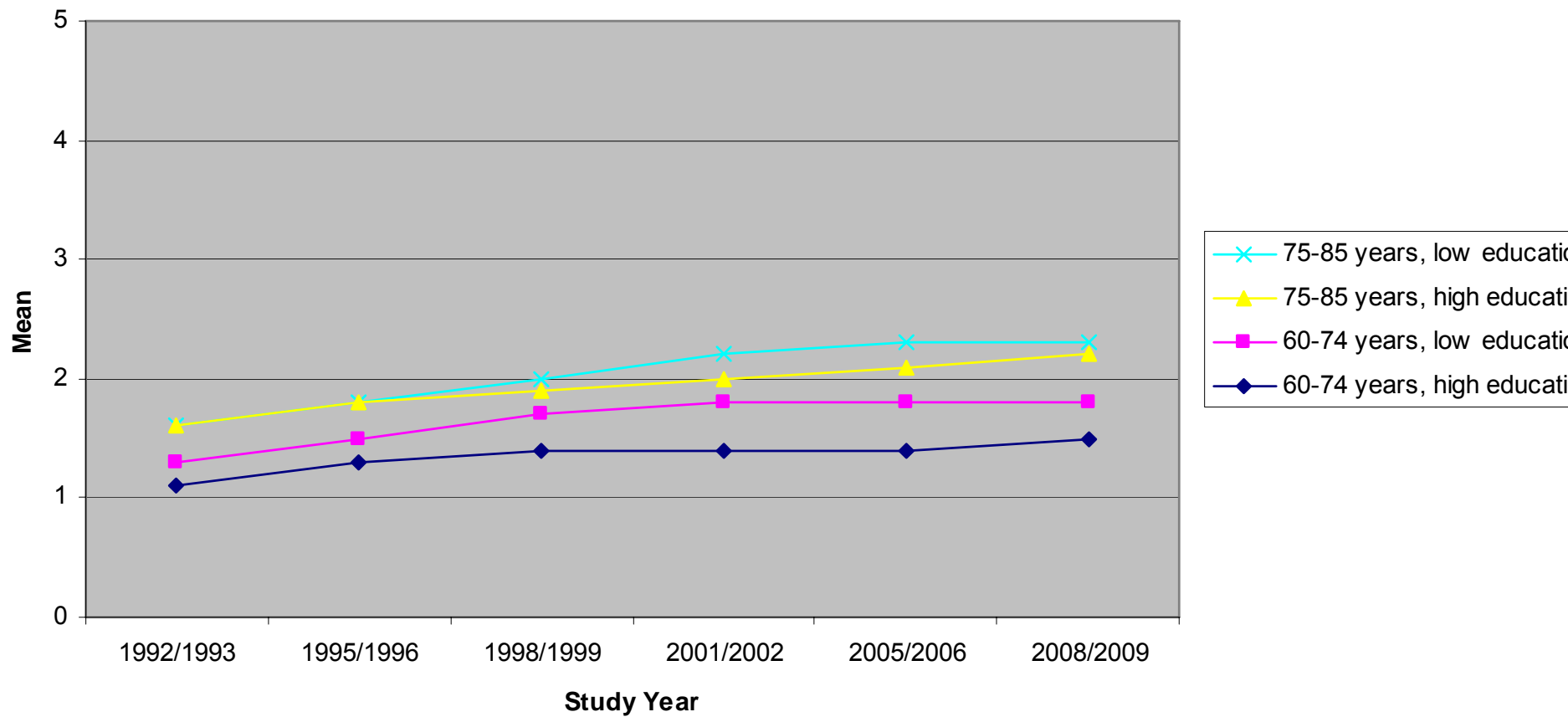
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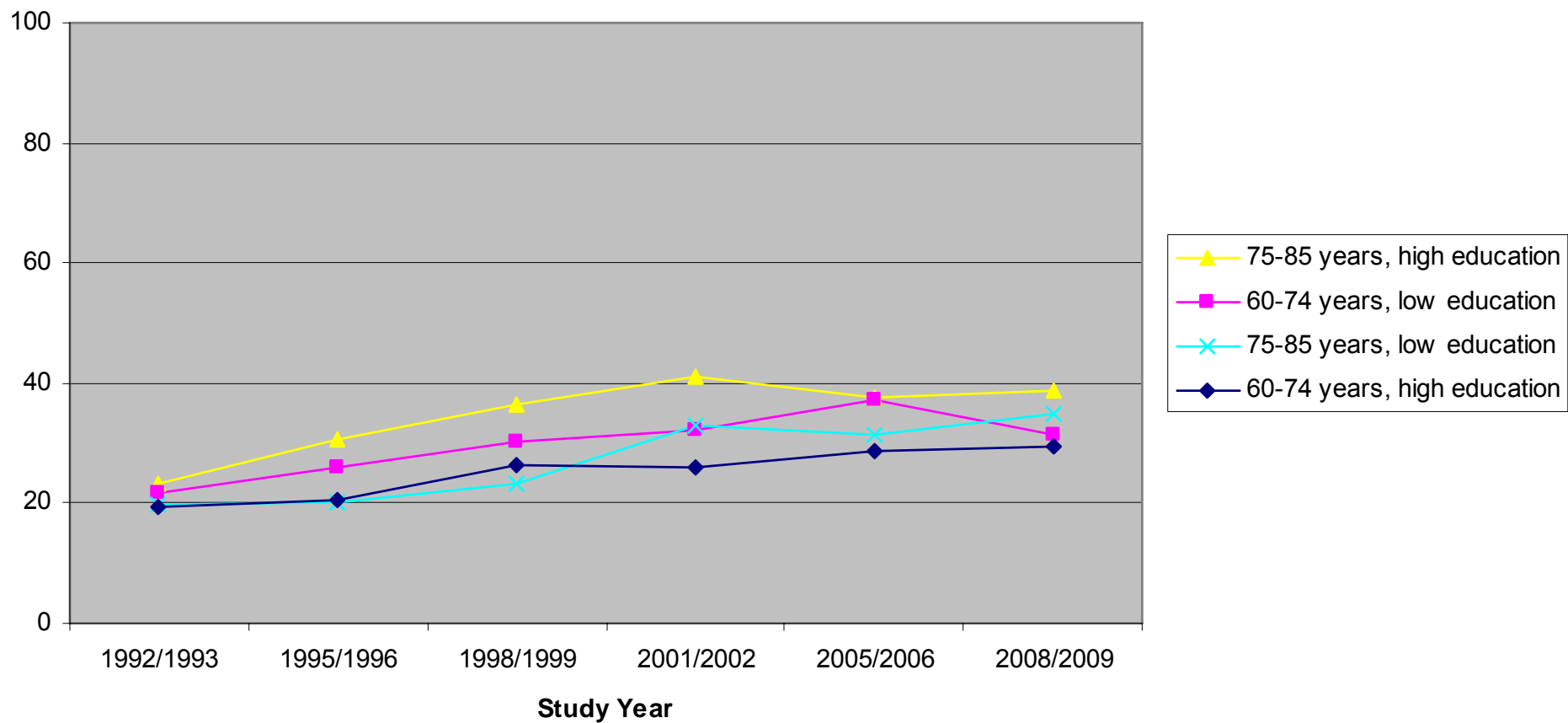
**% with poor SRH**



### Number of diseases

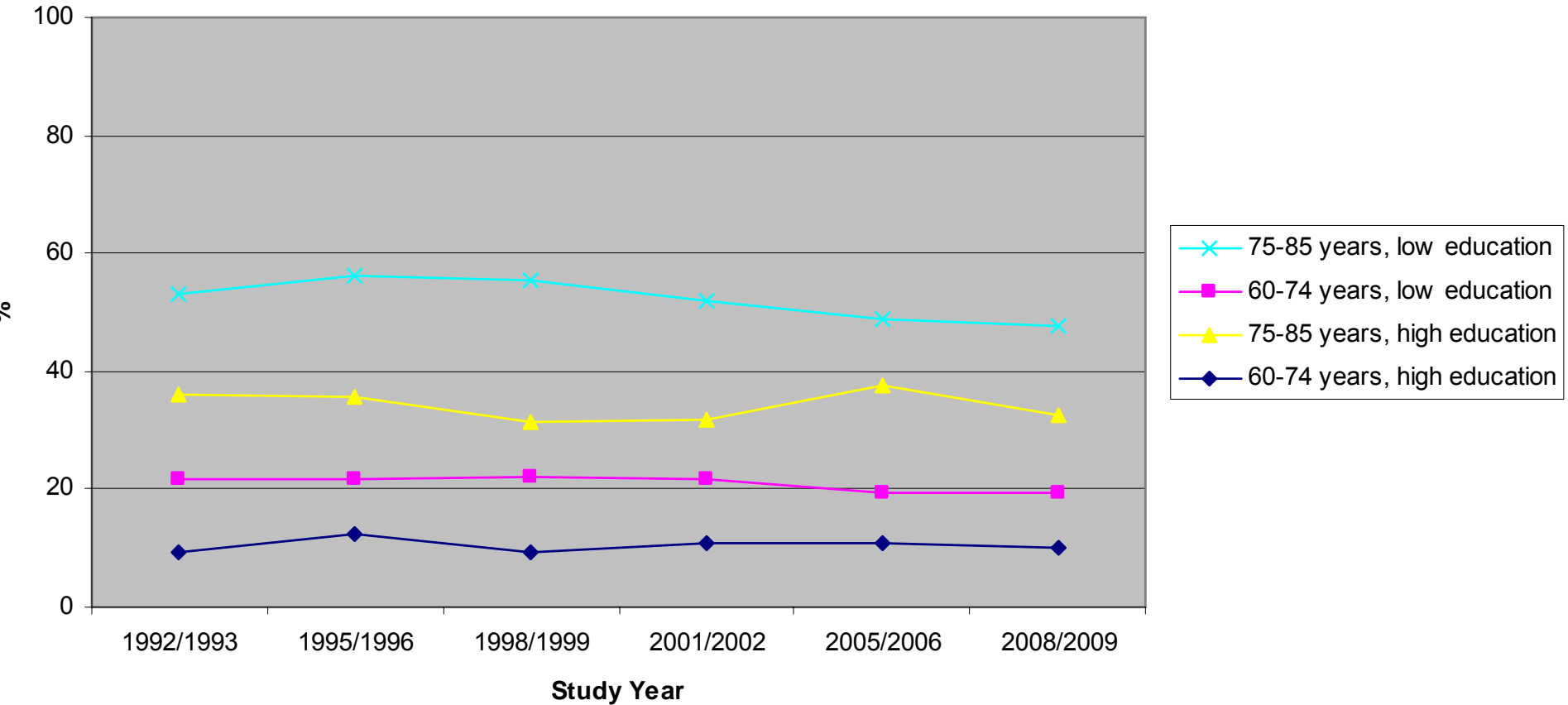


**% with mild disability**





**% with severe disability**



# Trends in gezondheid

- 3 theorieën:
  - Expansie van morbiditeit/ongezondheid
    - Gruenberg, 1977
  - Compressie van morbiditeit/ongezondheid
    - Fries, 1980
  - Dynamisch equilibrium
    - Manton, 1982