

Age, Cohort, and Gender Variations in Problem Sleep

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Age and Sleep

- Sleeping well is essential for health and well-being
- Poor sleep in old age is associated with
 - Chronic diseases
 - Cognitive decline
 - Mortality
- Estimates from cross-sectional studies show that approximately one-fifth to 40% of older adults report at least one symptom of insomnia (Foley, Monjan, & Brown et al., 1995; Lauderdale, Schumm, & Kurina et al., 2014)

Age-Related Changes in Sleep

- Along with the physical changes that occur as we get older, changes to our sleep physiology are a part of the normal aging process (Klerman & Dijk, 2008; Skeldon, Derks, & Dijk, 2016)
- As people age they tend to report having a harder time falling asleep and more trouble staying asleep than when they were younger
- It appears to be self-evident that problem sleep increases with age

Age-Related Changes in Sleep

- However, the general hypothesis of increasing problem sleep with age may overlook the role of many factors in shaping age growth trajectory of problem sleep
 - Health changes
 - Experience and transitions over the life course
- Not considering these factors may overlook potential disparities in trajectories of problem sleep among the general population of older adults

A Life Course Perspective

- Changes in problem sleep may mirror change in an individual's social life
- Individuals from the same birth cohort experience and expose to common social conditions and events at the same time point
 - It is expected age growth trajectory of problem sleep differs by cohort

Gendered Life Course

- Life course is gendered
 - Men and women expose to different social roles and life transitions
 - Previous studies show that women usually play the role of caregiver in their families, and this role is considered a unique social risk factors for problem sleep that disproportionally affects women (Burgard, 2011; Venn, Arber, Meadows, & Hislop, 2008)
 - It is expected the gendered life course lead to differences in age growth trajectory of problem sleep between men and women

Health and Retirement Study (HRS)

- A nationally representative, longitudinal survey of US older adults (50 years old or older) starting from 1992
 - Follow every two years
 - A new cohort of elderly 50 years every six years
- Measures of problem sleep available in 2002, 2004, 2006, 2010, 2014
- A total of 91,302 person-year observations (38,464 for men and 52,838 for women)

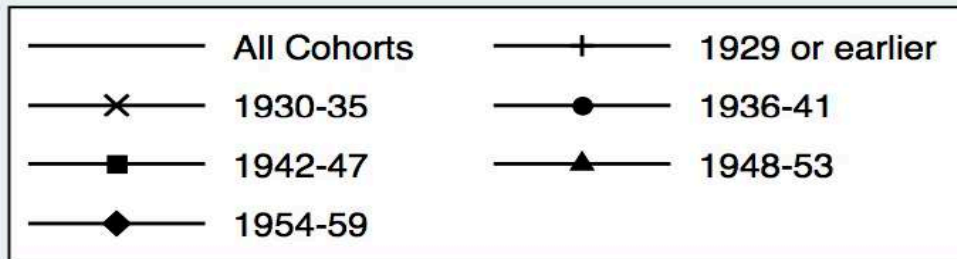
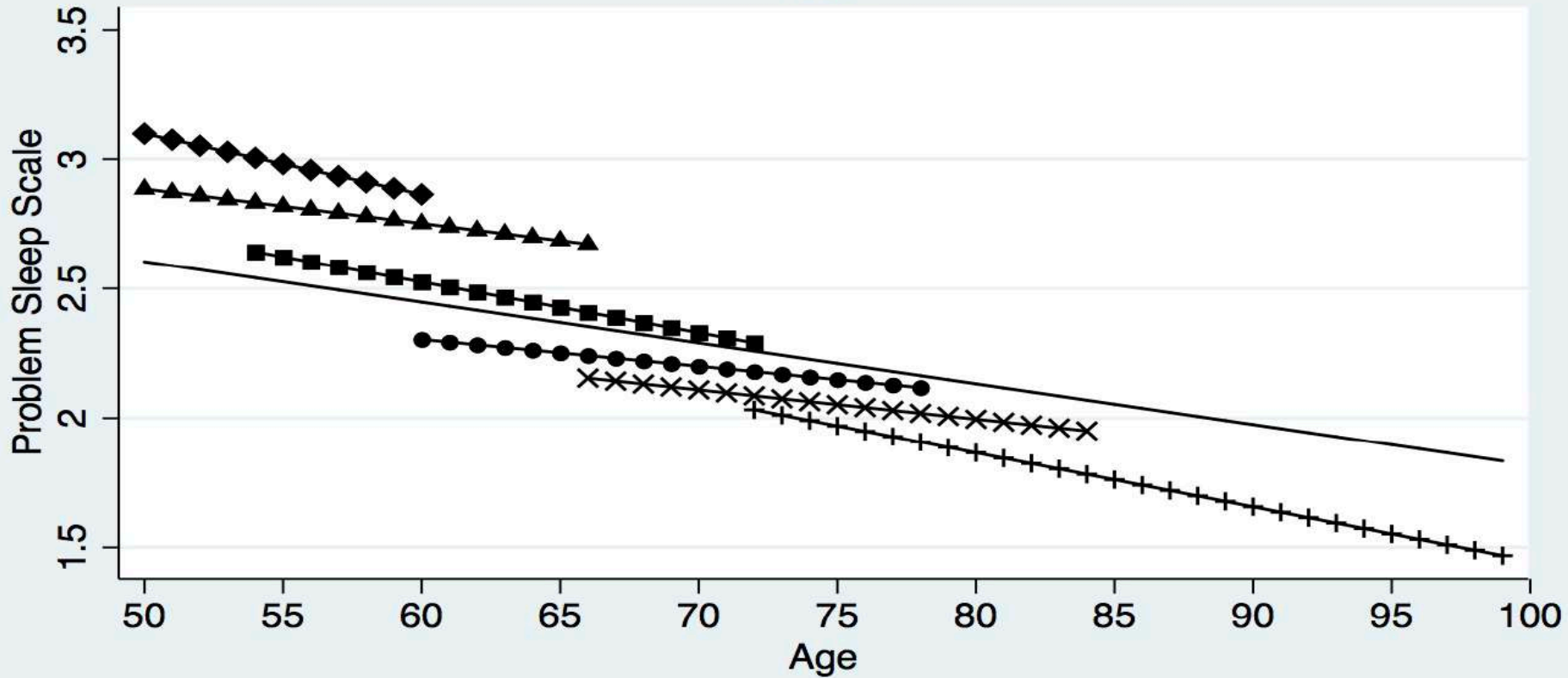
Measures of Problem Sleep

- Four questions concerning sleep
 - “How often do you have trouble falling asleep?”
 - “How often do you have trouble with waking up during the night?”
 - “How often do you have trouble with waking up too early and not being able to fall asleep again?”
 - “How often do you feel really rested when you wake up in the morning?”
- Answers range from “most of the time”, “sometimes”, “rarely or never”
 - A scale is created (ranging from 0-8)

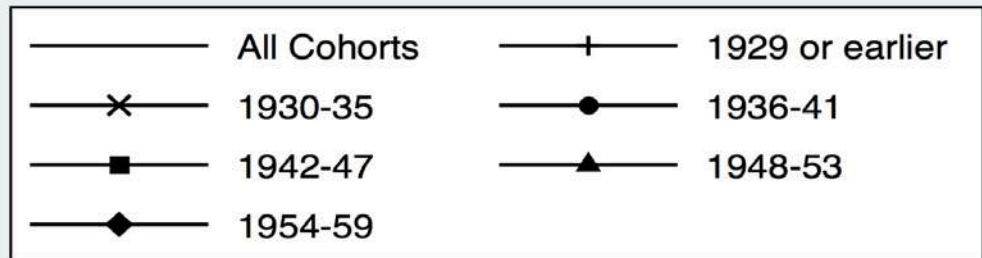
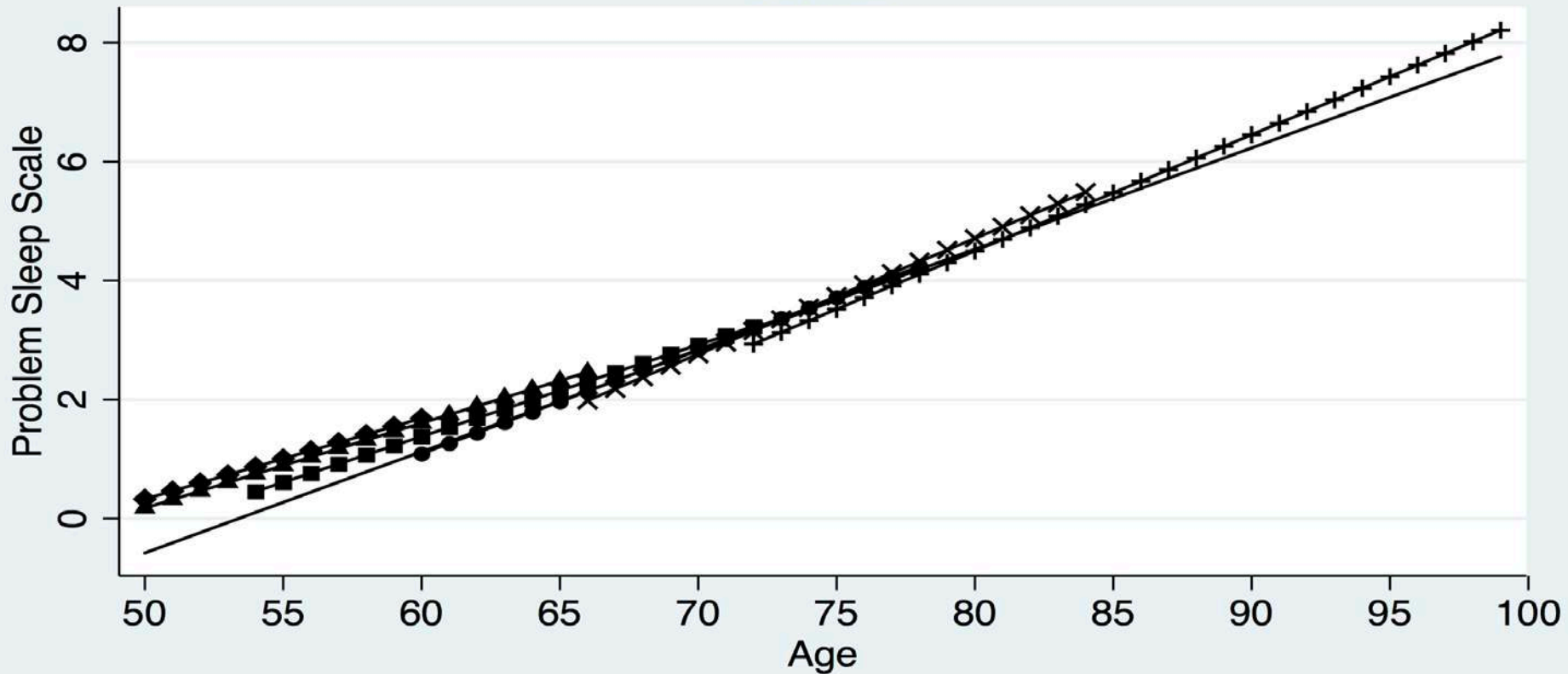
Analytical Strategy

- Organizing life histories of sample members into six cohorts
 - Born 1929 and earlier
 - Born 1930-1935
 - Born 1936-1941
 - Born 1942-1947
 - Born 1948-1953
 - Born 1954-1959
- Using 2-level multilevel model
 - First level: survey wave
 - Second level: individuals

Men



Women



Conclusion

- My study reveals gender differences in age growth trajectory of problem sleep
- For men
 - Problem sleep does not increase with age
 - There is no cohort difference in problem sleep
- For women
 - Problem sleep increase with age
 - Younger cohorts increase at a faster pace
 - Younger cohorts also begin with higher level of problem sleep than older cohorts

Implications

- The results contradict the general hypothesis that age is an independent risk factor for problem sleep for the general population of older adults
- Problem sleep is not destiny for individuals in old age, efforts can be made to improve sleep health and reduce health disparities
- Gender difference in survival may partly explain the gendered patterns

Next Steps

■ Research & Collaboration

- Identifying mechanisms that produce gender and cohort differences
- Examining consequences of cohort and gender disparities in sleep
- Collecting new data with more sleep measures and pooling data for further analysis

■ Funding

- NIH “Mechanisms and Consequences of Sleep Disparities in the US” (R01, R21)