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Background

• Increased longevity w/o quality of life is an empty prize

• Recent focus on multiple health measures and measurement

• Yet, does good health equate to a good quality of life?
  • vice versa
Background

• Cognitive impairment incidence decreasing, but overall prevalence increasing
  • CI expected to have major impact on quality of life

• Can people be happy even when cognitively impaired? If so, for how long?
  • CI and happiness do coexist, and HapLE exceeds CogLE (Bardo & Lynch)

• Are these findings robust to different CI and happiness measurement?
  • CI thresholds and missing cognition and happiness information
Background: CI Measurement

• MMSE is one common instrument used in survey-based research
  • lack agreement surrounding thresholds

• CON: concordant diagnoses with neuropsychological assessment
  • range 0 to 27 [excludes orientation and naming items]; impaired < 12

• EPI: distributional approach
  • range 0 to 35; impaired < 25th percentile [impaired < 18]

• HW: foundational approach (Herzog & Wallace, 1997)
  • range 0 to 35; impaired < 9
Background: Missing Cognition and Happiness Information

• MMSE and happiness only asked of self-respondents
  • CI common reason for using a proxy

• CI sometimes based on IADL limitations, proxy-reported memory, and interviewer assessment of difficulty completing the interview

• No standard for replacing missing happiness information
  • risk over/under estimating years to be lived happy
  • need to reflect extreme lower and upper bounds
Data: Health and Retirement Study

- Panel with biennial waves from 1998-2014 (RAND version P)

- Only respondents age 65-years and older

- Only one person per household

- Data sets consist of 46,828 spells
Analytic Approach

- 19-dimensional multinomial logit model
  - bootstrap approach

- Compare results from different cognitive and happiness measurement approaches

Note: results from covariate profile:
NH-white, non-south, married, female
Results: Total Life Expectancy

- Sanity check

- Changing cognitive measurement and happiness missing data strategies doesn’t fundamentally alter TLE

- Important to account for proxy respondents
Results: Cognitive Life Expectancy

- CON & EPI approaches yield relatively similar CogLE estimates

- HW approach ~ 3-yrs > CogLE
Results: Happy Life Expectancy

• LOB best guess for missing happiness information

• Extreme unhappy bounds ~ 2-yrs < HapLE

• What about CogHapLE?
Results: Cognitive and Happy LE

- A substantial number of years can be expected to be lived both cognitively healthy and happy.

- There is some variation by measurement method.

- Variation suggests we look at ImpHapLE.
Results: Impaired but Happy LE

- Happiness and CI appear to coexist
- Even when considering extreme lower bounds
- Less so for higher CI threshold (i.e., HW)
- Suggests we look at ratio of unhappy vs. happy years within impairment
Results: ImpHapLE / ImpLE

- LOB is our best guess
- Not much different from upward bounds
  - except HW
- Possibly over estimate HapLE
- Lower bounds 20 points less (CON & EPI)
- Concern w/ severe CI (HW)
Conclusions

• Findings largely robust to different CI and happiness measurement
  • less certain with regard to severe CI

• Good health does not equate to good quality of life, nor vice versa
  • What does it mean to be unhealthy but happy?

• Need to simultaneously examine health and well-being expectancies
  • WHO definition of health + QoL ≠ absence of a negative