Deconstructing gender differences in experienced well-being among older adults in the developing world: The roles of time use and activity-specific affective experiences. 

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Background

- Population aging is a global trend that affects countries of all income levels.
- The World Health Organization (WHO) defines “Healthy Ageing” as the process of developing and maintaining the functional ability that enables well-being.
- Women often remain disadvantaged compared to men, especially in the developing world.

Objectives of our study

1. Assess gender differences in “Healthy Ageing” as measured through old-age gender differences in emotional well-being/experienced utility.
2. Explore the importance of
   A. Gender differences in time use;
   B. Gender differences in affective experiences; and
   C. Gender differences in individual characteristics and life circumstances for overall gender differences in experienced utility.

Data and measures

- We use cross-sectional data on persons aged 50 and older from the first wave of the WHO’s Study on Global Ageing and Adult Health (SAGE), 2007-2010.
- Five study sites: Ghana, India, China, South Africa and Russia for a combined sample size of 21,488 (2,005 in South Africa to 9,106 in China).
- Outcome measure: Experienced utility, which captures the affect component of subjective well-being as the continuous flow of individuals’ “pleasures and pains”.
- In SAGE, experienced utility is measured based on an abbreviated version of the Day Reconstruction Method (DRM).
  - The DRM is a diary-based method for measuring subjective well-being by linking time use with affective experiences across activities.
  - Time use data on 21 activities aggregated into five activity groups: Work, housework, travel, leisure, self-care.
  - Activity-based measurement of positive and negative affects: Calm/relaxed, enjoying, worried, rushed, irritated/angry, depressed, tense/stressed.

Key results and conclusions

- In the SAGE countries, older women have lower levels of experienced utility than older men.
- Gender differences in experienced utility are only significant in the age-adjusted models, but attenuate and become insignificant in the fully-adjusted models.
- The gender differences in age-adjusted experienced utility are mainly linked to “saddening effects”, which are largely attributable to lower levels of health and income among older women compared to older men (results not shown).

Illustration of DRM-based measurement of experienced utility

Experienced utility corresponds to the area under the curve: Integrated “happiness” (momentary affective experiences) over time

DAILY ACTIVITY

- In mathematical notation, we measure experienced utility as
  \[ U_i = \sum \alpha_{a_i} t_{a_i} \]
  with \( \alpha_{a_i} \) being the time share of activity a and
  \[ \bar{t}_{a_i} = \frac{\sum \alpha_{a_i} t_{a_i}}{\alpha_{a_i}} \]
  being the average affective experience of activity a.
- Experienced utility is standardized based on its country-specific distribution such that partial effects can be interpreted in standard deviation units.
- Main explanatory variable: Gender
  - Other control variables: Age, household composition, partnership status, education, household assets, subjective economic status, health (WHODAS-12, self-rated pain), community characteristics.

Methods

- Partial effects of gender in age-adjusted and multivariable linear regression models for overall experienced utility and activity-specific net affect and in age-adjusted and multivariate fractional regression model of time use.
- Counterfactual thought experiment to isolate the impact of disability-related differences in affective experiences ("saddening effects") and differences in time use ("time composition effects") for overall differences in experienced utility.
  - “Saddening effects”:
    \[ \frac{\partial U}{\partial a} = \sum b_i \times \delta_{a_i} \]
    with \( \delta_{a_i} = \frac{\partial U}{\partial a} \) being among
  - “Time composition effects”:
    \[ \frac{\partial U}{\partial t} = \sum \bar{a}_i \times \delta_{a_i} \]

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