National and State Trends in the Well-Being of Older Persons in the United States

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March 26, 2020
Research Letter | Public Health

Trends in Mental and Physical Health-Related Quality of Life in Low-Income Older Persons in the United States, 2003 to 2017

David H. Rehkopf, ScD, MPH; Frank F. Furstenberg, PhD; John W. Rowe, MD

Introduction

• Several studies have documented increases in morbidity and mortality and decreases in mental health status in the United States for those aged 35 to 59 years.

• This cross-sectional study examines time trends in general health and in physical and mental health measured in US adults aged 60 years and older.
Methods

• The study population data were drawn from the Behavioral Risk Factor Surveillance System, a telephone survey.
Results

• In the study sample of 2,432,609 respondents, 62% were women, 6.5% were black individuals, 3.2% were Latinx individuals, 41% had a household income of less than or equal to $35,000 per year, and 10% of the sample had less than a high school education. These proportions were generally stable from 2003 to 2017.
General Health by Category, 2003-2017

A General

![Graph showing general health by category from 2003 to 2017.](image)
Physical Health by Category, 2003-2017
Mental Health by Category, 2003-2017
Mental Health Trends Among Individuals 60 Years and Older by Gender
2003 - 2017

By gender

Illness in Days per Month

Year

2003 2010 2017

Female

Male
Mental Health Trends Among Individuals 60 Years and Older by Income 2003 - 2017

![Graph showing mental health trends by income.]
Mental Health Trends Among Individuals 60 Years and Older by Education
2003 - 2017

By education

Less than high school

High school

College

Illness in Days per Month

Year

2003 2010 2017
Discussion

• Individuals in groups aged 60 to 64 and 65 to 69 years shared a pattern of decreasing mental health well recognized in individuals aged 35 to 59.

• Decreases in mental health were greater for those with lower income or lower education than those with higher income or higher educational level. These decreases, however, began before the Great Recession of 2007 to 2009.

• These trends will likely have important implications for future life expectancy, disability, and the capacity of older persons to engage productively in society.
State-Based Differences in the Well-Being of Older Persons in the United States
What is known

• Society-level characteristics can have major positive or negative effects on the health and well-being of older persons.
• These effects are mediated through limitation or enhancement of access to effective health care, through providing supports that enhance function and restrict dependency, by assuring financial security and opportunities for older persons to effectively engage in society.
• The United States is a policy diverse country, with a large amount of state variability in economic opportunity, social structures and well-being, along with substantial demographic differences between states in terms of age distributions, race/ethnicity and economics.
• Prior work suggests some urban areas are better for successful aging than other urban areas.
• Previous work has shown the importance of metrics for countries in terms of information about how their attributes promote health aging. Emphasize validity of this prior work.
What is unknown

• U.S. policymakers continue their preoccupation with the future solvency of Medicare and Social Security to the neglect of broader issues.

• We must move beyond the archaic old-age dependency ratio and metrics, such as GDP, which neglect many of the critical factors that influence societal function.

• Prior work looking at regional differences in aging have not been balanced across the domains of successful aging.

• No prior work has attempted to rank states.

• No prior work has looked at how these state rankings have changed over time.

• No prior work has attempted to examine the drivers of these changes.
What we contribute

• We create a 5 domain index of state and state population characteristics that are based on the Aging Society Index adapted for relevance to U.S. states.
• This is an examination of state context and population attributes, not individuals
• The five domains are 1) productivity and engagement, 2) security, 3) equity, 4) cohesion, and 5) well-being.
• We focused the items for these domains on characteristics that are variable over time.
• By focusing on establishing a dynamic index even states that are lower achieving at a particular time-point can be shown to make progress over time.
• This state ranking can be used as an endpoint (or outcome) for policy based studies to examine how states can impact their ranking for successful aging.
• We examine how changes in 20 potential drivers impact changes in state rankings.
To be useful an Index of Societal Aging must:

• Include reliable and sensitive indicators that permit accurate assessment of both current conditions and likely future trajectory of society.

• Serve both as a guide to the implementation of policies and a tool by which we can assess their effectiveness over time and across countries.
There are five domains in the State Aging Index

1. **Productivity and Engagement**: measures connectedness within and outside the workforce

2. **Well-being**: measures the state of being healthy

3. **Equity**: measures gaps in well-being and economic security between the haves and have nots

4. **Cohesion**: measures tension across generations and social connectedness

5. **Security**: measures support for retirement and physical safety
Weighting Strategy

• The Aging Society Network, an interdisciplinary group of a dozen scholars with deep expertise in aging was used as a source of weights.
  – Weighting was done for individual measures within the five domains
  – Weighting was done across five domains: productivity and engagement, well-being, equity, cohesion and security
**DOMAIN: PRODUCTIVITY & ENGAGEMENT**
Measures connections within and outside the workforce

<table>
<thead>
<tr>
<th>Measures</th>
<th>Network weights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Labor force participation rate for people aged 65+</strong></td>
<td>45</td>
</tr>
<tr>
<td>The proportion of population age 65+ in the labor force, <em>American Community Survey</em></td>
<td></td>
</tr>
<tr>
<td><strong>Participating in community organizations for people aged 65+</strong></td>
<td>15</td>
</tr>
<tr>
<td>The proportion of population age 65+ participating in the community, <em>CPS Civic Engagement Supplement</em></td>
<td></td>
</tr>
<tr>
<td><strong>Participating in service/civic organizations for people aged 65+</strong></td>
<td>15</td>
</tr>
<tr>
<td>The proportion of population age 65+ Participating in service/civic organizations, <em>CPS Civic Engagement Supplement</em></td>
<td></td>
</tr>
<tr>
<td><strong>Average hours volunteering for people aged 65+</strong></td>
<td>25</td>
</tr>
<tr>
<td>Average hours of volunteering per day, <em>CPS Civic Engagement Supplement</em></td>
<td></td>
</tr>
</tbody>
</table>
## DOMAIN: WELL-BEING

Measures objective and subjective health status

<table>
<thead>
<tr>
<th>Measures</th>
<th>Network weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age standardized mortality rate for people aged 65+</td>
<td>50</td>
</tr>
<tr>
<td>Healthy life expectancy at aged 65, <strong>Compressed Mortality File</strong></td>
<td></td>
</tr>
<tr>
<td>Physical health for people aged 65+</td>
<td>25</td>
</tr>
<tr>
<td>Physical well-being based on life satisfaction at aged 65, <strong>BRFSS</strong></td>
<td></td>
</tr>
<tr>
<td>Mental health for people aged 65+</td>
<td>25</td>
</tr>
<tr>
<td>Mental well-being based on life satisfaction at aged 65, <strong>BRFSS</strong></td>
<td></td>
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</tbody>
</table>
DOMIAN: EQUITY

Measures gaps in well-being and economic security between the haves and have nots

<table>
<thead>
<tr>
<th>Measures</th>
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</tr>
</thead>
<tbody>
<tr>
<td>State income inequality* for people aged 65 and older</td>
<td>50</td>
</tr>
<tr>
<td>Ratio of people whose income falls below the poverty line, taken as half the median household income of the total population, <strong>Sam Houston State University</strong></td>
<td></td>
</tr>
<tr>
<td>Education tertiary* for people aged 65 and older</td>
<td>25</td>
</tr>
<tr>
<td>Proportion of the population aged 65+ that has attained tertiary or higher education, <strong>American Community Survey</strong></td>
<td></td>
</tr>
<tr>
<td>Attained at least high school education for people aged 65+</td>
<td>25</td>
</tr>
<tr>
<td>Proportion of the population aged 65+ that has attained high school or higher education, <strong>American Community Survey</strong></td>
<td></td>
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</tbody>
</table>
## DOMAIN: COHESION
Measures tension across generations and social connectedness

<table>
<thead>
<tr>
<th>Measures</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Frequency of eating dinner with household for people aged 65 and older</td>
<td>50</td>
</tr>
<tr>
<td>The proportion of population age 65+ who eat dinner with the household, CPS Civic Engagement Supplement</td>
<td></td>
</tr>
<tr>
<td>Frequency of talking with neighbors for people aged 65 and older</td>
<td>25</td>
</tr>
<tr>
<td>The proportion of population age 65+ who speak with neighbors, CPS Civic Engagement Supplement</td>
<td></td>
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<tr>
<td>Frequency of doing favors for neighbors for people aged 65 and older</td>
<td>25</td>
</tr>
<tr>
<td>The proportion of population age 65+ who do favors for neighbors, CPS Civic Engagement Supplement</td>
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**DOMAIN: SECURITY**

measures safety and support for retirement, including economic and physical factors

<table>
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<tbody>
<tr>
<td>Pension wealth* for people aged 65 and older</td>
<td>15</td>
</tr>
<tr>
<td>Annual Survey of Public Pensions</td>
<td></td>
</tr>
<tr>
<td>State GDP* for people aged 65 and older</td>
<td>15</td>
</tr>
<tr>
<td>U.S. Bureau of Economic Analysis</td>
<td></td>
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<tr>
<td>Poverty for people aged 65 and older</td>
<td>25</td>
</tr>
<tr>
<td>American Community Survey</td>
<td></td>
</tr>
<tr>
<td>Food security for people aged 65 and older</td>
<td>15</td>
</tr>
<tr>
<td>CPS Food Security Supplement</td>
<td></td>
</tr>
<tr>
<td>Violent crime rate* for people aged 65 and older</td>
<td>15</td>
</tr>
<tr>
<td>Uniform Crime Reporting Statistics</td>
<td></td>
</tr>
<tr>
<td>Property crime rate* for people aged 65 and older</td>
<td>15</td>
</tr>
<tr>
<td>Uniform Crime Reporting Statistics</td>
<td></td>
</tr>
</tbody>
</table>
1. All individual measures are standardized with a score of zero for the worst performing state and a score of 100 for the best performing state where higher values indicate better outcomes. Thus “poverty risk in the elderly” is expressed as “the proportion not at risk of poverty”

- eg. In the measure “Labor force participation aged 65+ (%)” the lowest state is West Virginia at 13%, which was given a score of zero for that measure. The highest state was Alaska at 24%, which was given a score of 100 for that measure. Indiana, with a labor force participation of 17%, was thus given a score of 36 as it was 36% of the way between West Virginia and Alaska.
State Aging Index, age 65 and over, 2017
State Aging Index, age 65 and over, 2017
Maps of State Aging Index, age 65 and over, 2017

**Productivity and Engagement**

State Productivity and Engagement Ranking, 2017
Age 65+, weighted

**Security**

State Security Ranking, 2017
Age 65+, weighted
Maps of State Aging Index, age 65 and over, 2017

Equity

State Equity Ranking, 2017
Age 65+, weighted

Cohesion

State Cohesion Ranking, 2017
Age 65+, weighted
Maps of State Aging Index, age 65 and over, 2017

Well-Being

State Well-being Ranking, 2017
Age 65+, weighted
State Rank of Aging Index for Productivity and Engagement, age 65 and over, 2017
State Rank of Aging Index for Security, age 65 and over, 2017
State Rank of Aging Index for Equity, age 65 and over, 2017
State Rank of Aging Index for Cohesion, age 65 and over, 2017
State Rank of Aging Index for Well-Being, age 65 and over, 2017
State Aging index rank change per year, age 65 and over, 2003-2017
Overall Rank of Alabama, Arkansas, Louisiana and Mississippi from 2003 to 2017
Correlation of Domains, 2003
Correlation of Domains, 2017
Weighted versus unweighted ranking, age 65 and over, 2017
Age 65+ a compared to age 75+
state ranking, 2017
Comparison of state rankings leaving out one of the domains, age 65 and over, weighted, 2017
Ranking of the drivers of the change in overall state rank from 2003 to 2017
Conclusions

• State Aging Society Index highlights the core domains of a successful aging society
• Robust to different weighting schemes
• There is substantial variability across states and regions as well as trends over time
• Using other States as a benchmark can highlight potential for improvements and emulate their strengths
• In exploratory descriptive work, we identify that changes in state rank are correlated with changes in political party control
• Future work should examine the causes of the rankings to provide guidance for how U.S. State policy could lead to environments that promote a successful aging society
Thank you