

Today's Research on Aging

PROGRAM AND POLICY IMPLICATIONS

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Research on Health and Well-Being Aims to Improve Quality of Life in Later Years

As older Americans live longer, researchers are exploring the connections between health and well-being in order to improve the overall quality of life in later years. This newsletter highlights recent research by National Institute on Aging-supported researchers and others who are examining two aspects of well-being—how older people *evaluate* their daily lives and how they *experience* their daily lives.

This line of research, known as subjective well-being, goes beyond traditional measures of physical and cognitive health to understand the emotional dimension of older adults' lives—whether people perceive their day-to-day existence as positive (satisfying and enjoyable) or negative (unsatisfying and distressing). By surveying subjective well-being, researchers may be better able to identify particularly vulnerable groups of older adults who are at risk for poor health. An understanding of how health care practices influence the well-being of older people could help health professionals design improved treatment strategies. Similarly, insight into the interaction between well-being and daily activities could help health professionals design interventions to promote the health and well-being of older adults and their caregivers. Researchers are also discussing whether national surveys should begin tracking

well-being as an indicator of social progress and a target for policymaking.

Defining and Measuring Well-Being

Well-being may be assessed objectively—by determining whether an individual's basic needs for food, shelter, economic security, social relationships, and health care are being met. In contrast, subjective well-being is a reflection of how an older adult evaluates and experiences his or her life (see table, page 2). Most researchers have examined two main aspects of subjective well-being:

- **Life satisfaction or evaluative well-being** refers to an individual's judgments about how satisfying his or her life is over an extended period of time. Typical survey questions ask respondents to generalize; for example, "taking all things together, how satisfied are you with life these days?" Survey participants usually rate their life satisfaction on a "ladder" with 11 steps, the first rung representing the "worst possible life for you" and the top representing "the best possible life for you." Some studies also measure satisfaction with specific aspects of life such as relationships, community, health, or work.

In This Issue

- Low levels of self-reported well-being are linked to a heightened risk of disease among older adults.
- Older adults report the highest levels of well-being while socializing, working or volunteering, and exercising.
- One of the strongest predictors of well-being among older couples is the quality of their marriage.
- People are willing to trade personal well-being for other things they care about—income, their family's happiness, social status, or a sense of control.
- Well-being measures could help researchers identify groups of older adults who are at risk of poor health and evaluate interventions to improve their lives.
- In the United States and several other high-income English-speaking countries, life satisfaction follows a U-shaped pattern, dropping in middle age and rising thereafter. However, this is not the norm worldwide.

This publication summarizes research related to the objectives of the National Institute on Aging (NIA), with emphasis on work conducted at the NIA Centers on the Demography and Economics of Aging. Our objective is to provide decisionmakers in government, business, and nongovernmental organizations with up-to-date scientific evidence relevant to policy debates and program design. These newsletters can be accessed at www.prb.org/About/ProgramsProjects/Aging/TodaysResearchAging.aspx

■ **Experienced well-being** refers to an individual's moment-by-moment assessment of the emotional quality of daily life—the frequency and intensity of feelings of happiness, sadness, anger, stress, or pain that make days pleasant or unpleasant. This relatively new measure involves asking survey respondents “how do you feel at this moment?” or asking them to recall their emotions at specific times during the previous day.

Because these two measures capture different aspects of well-being, using them together can provide a rich picture of life satisfaction and quality. For example, Deaton and Stone (2014) show that U.S. adults who live with children tend to have slightly lower life satisfaction but more intense experienced well-being (higher levels of both joy and stress) than those who do not.

A third type of subjective well-being, known as “eudaimonic well-being,” measures an individual's sense that his or her life has meaning and purpose. Although aspects of this measure overlap with the other two, it is distinct in that it is based on an understanding that people are motivated by factors beyond their own personal happiness or satisfaction (National Research Council 2013).

Researchers Examine Subjective Well-Being Three Ways.

Life Satisfaction	Judgment about how satisfying life is overall.
	Evaluated using an 11-step “ladder” rating life from best to worst possible.
Experienced Well-Being	Moment-by-moment assessment of the emotional quality of daily life.
	Reflects the frequency and intensity of feelings of happiness, sadness, anger, stress, or pain.
Eudaimonic Well-Being	Sense of meaning and purpose in life.
	Distinct from personal happiness or satisfaction.

Patterns in Well-Being at Older Ages

In the United States, life satisfaction declines during middle age (ages 45 to 54) and then rises again, reflecting a U-shaped pattern (see box and figure, page 3), according to Steptoe, Deaton, and Stone (2014). Yet, two measures of negative well-being—reporting a lot of stress or anger the previous day—decline throughout the life course. Worry stays high until age 50, then drops, according to Steptoe and his colleagues. These findings are based on their analysis of data from the Gallup World Poll, an ongoing survey conducted in more than 160 countries. Life satisfaction among older people in other countries does not follow the same patterns (see box, page 3).

Well-being measures could be used to revise health care practices in areas that are less often addressed, such as relieving emotional distress and maintaining older adults' sense of dignity.

“Economic theory can predict the dip in well-being in middle age [in the United States],” they write. “This is the period at which wage rates typically peak and is the best time to work and earn the most, even at the expense of present well-being, so as to have increased wealth and well-being later in life.” The decline in anger, stress, and worry at older ages is consistent with other findings related to the “socio-emotional selectivity theory.” This theory holds that as people age they tend to make more careful choices, focusing their time and energy on more emotionally meaningful experiences and friendships, which buffer losses related to aging and boost well-being (Carstensen, Fung, and Charles 2003, cited in Steptoe, Deaton, and Stone 2014).

Health and Well-Being

Low levels of self-reported well-being are linked to a heightened risk of disease. “Established research has linked depression and life stress with premature mortality, coronary heart disease, diabetes, disability, and other chronic disease,” write Steptoe, Deaton, and Stone (2014). Not surprisingly, other studies show that chronic diseases are linked to high levels of unpleasant daily experiences. One study, which surveyed 11,500 individuals ages 50 and older, finds that stroke and

chronic lung disease take the biggest toll on experienced well-being (Wikman, Wardle, and Steptoe 2011). Additionally, the more chronic conditions people have, the lower their experienced well-being.

Can a higher level of subjective well-being serve to prevent illness and postpone death? Growing evidence suggests that it might, report Steptoe, Deaton, and Stone. They point to an analysis that reviewed 70 studies tracking a

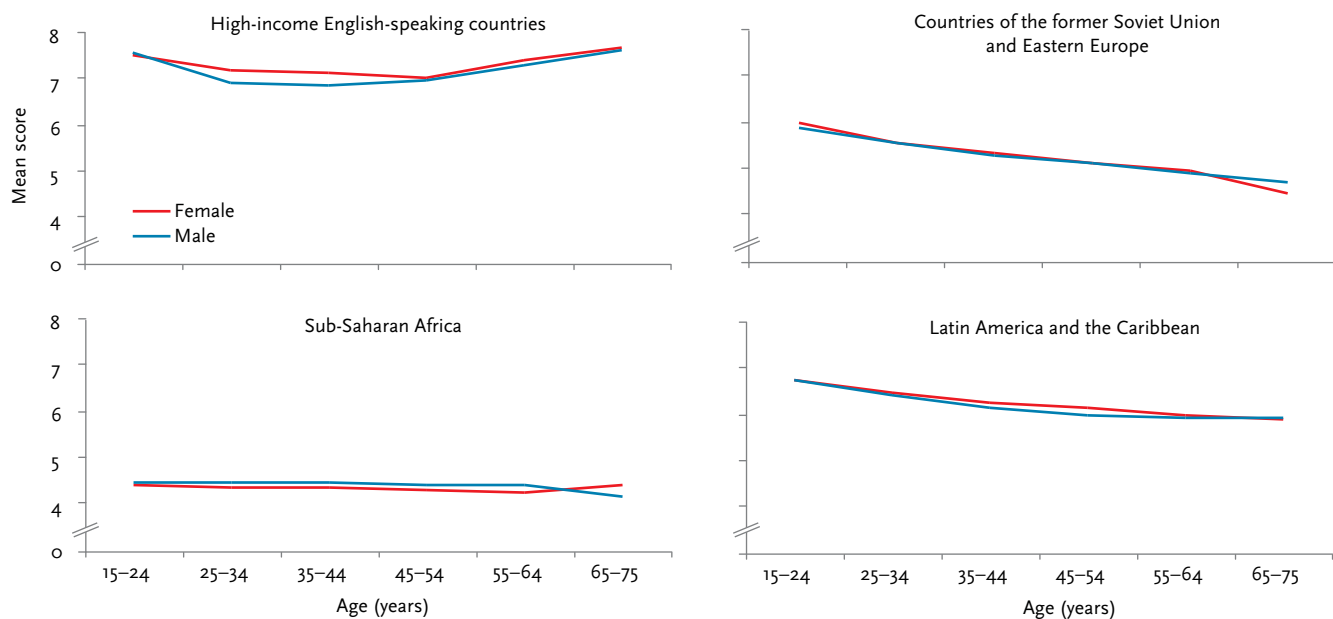
combined total of 3,800 people (Chida and Steptoe 2008). Among participants who began the studies in good health, those with high levels of well-being (measures that included experienced well-being and life satisfaction) were less likely to die than those with low levels, the analysis finds. The studies also show that higher levels of well-being are related to lower death rates in patients with renal failure and with HIV.

Well-Being Patterns Around the World

Life satisfaction follows a U-shaped pattern—dropping in middle age and rising thereafter—in the United States and in a number of other high-income English-speaking countries (Canada, the United Kingdom, Ireland, Australia, and New Zealand). But this age-related pattern is not the norm worldwide (see figure). Steptoe, Deaton, and Stone (2014) find that in sub-Saharan Africa, life satisfaction remains low at all ages. In countries of the former Soviet Union and Eastern Europe, life satisfaction overall is lower than in English-speaking countries, and it declines with age, falling particularly steeply after age 55. After the collapse of communism, they write, older people in the former Soviet Union “lost a system that, however imperfect, gave meaning to their lives, and, in some cases their pensions and their health care.” In Latin America and the Caribbean, life satisfaction also tends to fall with age, though not as dramatically as in eastern European countries.

Kapteyn, Smith, and Soest (2013) explored ways to compare life satisfaction across countries, taking into account cultural differences. Americans tend to place themselves on the extremes of life satisfaction scales (either very satisfied or very dissatisfied), while the Dutch tended to place themselves in the center. Raw data show that Americans are less satisfied with their incomes than the Dutch. Based on responses to questions related to a set of hypothetical situations, the researchers were able to temper these differences and enhance the comparability and accuracy of comparisons. They identified four key areas that influence overall life satisfaction for people in both countries: job or daily activities, social contacts and family, health, and income. In both cultures, social contacts and family have the greatest impact on life satisfaction, followed by job and daily activities, and health. Income has the smallest impact on life satisfaction for both groups, although income plays a greater role in the United States than in the Netherlands.

Life Satisfaction as People Age Varies by Location.



Source: Andrew Steptoe, Angus Deaton, and Arthur Stone, “Subjective Wellbeing, Health, and Ageing,” *Lancet*, November 2014.

These studies show only correlations, not cause and effect, so the specific role that subjective well-being plays in forestalling death is unclear. But well-being measures could be used to revise health care practices in areas that are less often addressed, such as relieving emotional distress and maintaining older adults' sense of dignity, argue Steptoe, Deaton, and Stone. Patients' well-being could be assessed directly rather than relying on reports from relatives or caregivers, and treatment strategies could be tailored to meet individuals' needs.

Participation, Activities, and Well-Being

Smith and colleagues (2014) find that older adults report the highest levels of experienced well-being and are happiest while socializing, working or volunteering, and exercising. How older people feel while participating in specific activities influences the choices they make about spending their time and, in turn, their health.

For this 2009 study, the researchers examined reports from 4,600 U.S. Health and Retirement Study (HRS) participants who were ages 50 and older and averaged age 70. Respondents identified the amount of time they spent engaged in specific activities the previous day, the types of feelings they experienced, and the intensity of those feelings.

The researchers found that participants spent an average of 3.5 hours daily viewing television, an activity that some people experienced positively and others experienced quite negatively. Only one other activity—managing and spending money—elicited higher levels of frustration and nervousness than television viewing. “TV appears to contribute less to overall positive well-being in older adults than other activities that involve more social, cognitive, and physical engagement,” they write. An “active and engaged lifestyle” (including socializing, work or volunteering, and exercise) is linked to higher levels of experienced well-being, they conclude.

But what about older people with disabilities whose health presents obstacles to activities and participation? A study by Freedman and colleagues (2011) finds that older married adults with disabilities have lower levels of experienced well-being and life satisfaction than their peers without a disability. The lower activity and participation levels of individuals with disabilities explain a portion of the difference in evaluated well-being between the two groups.

Finding ways to enable older people with disabilities to be involved in physical activity and volunteering could improve their well-being and satisfaction with their lives.

Compared with their counterparts without disabilities, respondents with a disability (of typical severity) labeled 71 fewer minutes per day as “pleasant.” The impact is comparable to or larger than having a poor relationship with one's spouse, the researchers report.

While both groups experience fairly similar levels of frustration and worry, older adults with a disability reported feeling more physical pain and tiredness and were more dissatisfied with their health and memory ability than their peers. The authors of this study drew on time-use diaries completed by 400 older married couples in the nationally-representative 2009 Panel Study of Income Dynamics (PSID). Participants were asked to reflect on the previous day and rate their experienced well-being while carrying out specific activities.

The researchers suggest that finding ways to enable older people with disabilities to be involved in physical activity and volunteering could improve their well-being and satisfaction with their lives. Additionally, they identify reducing pain and exhaustion as “critical targets for improving late-life well-being” of older adults who are disabled in some way.

Married Couples, Caregiving, and Well-Being

In the United States, unpaid family members provide the vast majority of the care that allows older people to live in their own homes. For an older married person living with a disability, the spouse is usually central to care activities. Researchers have debated whether a spouse's well-being is enhanced or eroded by caregiving. Some studies emphasize the burden of providing care and the negative consequences for well-being, while others emphasize the benefits of altruistic behavior.

A study by Freedman, Cornman, and Carr (2014) explores experienced well-being and care of spouses. The authors find that older women's experienced well-being is lower when engaged in routine housework relative to other activities. But when those same chores are done for a husband with a disability, a wife's well-being is enhanced, suggesting beneficial aspects of providing care. In contrast, husbands' experienced well-being does not fluctuate, whether they are participating in care-related activities or household chores.

These findings are based on interviews with 400 older married couples from the PSID. Caregiving tasks included activities such as laundry, shopping, food preparation, cleaning, and personal care for others.

The differences the researchers found between men and women could reflect the nature of traditional divisions of household labor: Women are more likely to perform continual and daily chores (cooking, house cleaning) while men tend to carry out sporadic projects such as repairs, the researchers note. For women, chores may “be particularly daunting as they experience their own health declines,” they write. Additional research could explore the impact of housekeeping assistance on the health and well-being of female caregivers; the findings could inform the design of support programs for caregivers.

Using the same data set, Carr and colleagues (2014) demonstrate that one of the strongest predictors of well-being among older couples is marital quality: Older husbands and wives who rate their marriages highly are not only more satisfied with their lives but also experience more positive emotions during the day. Their findings suggest that troubled marriages take an emotional toll, whereas high-quality marriages can buffer against late-life stressors, such as caregiving.

Well-Being Measures and Policymaking

Should the United States begin tracking national levels of subjective well-being and focus policy on improved well-being among older adults? Can measures of well-being be used to gauge national progress, supplementing economic indicators such as GDP? Steptoe, Deaton, and Stone (2014) note that “the well-being of elderly people is an important objective for both economic and health policy.” But Deaton and Stone (2013) argue that subjective well-being measures should be used cautiously to inform national policy, noting that individuals’ responses are self-reported, making them subject to personal interpretation and to the respondent’s current focus of attention. A National Research Council panel (National Research Council 2013) expressed skepticism over the usefulness of measuring the average well-being level of the entire population. In the panel’s view, these measures are best used to pinpoint specific groups within the population that may experience an unusual degree of distress and to evaluate interventions to improve their lives.

Household chores may become “particularly daunting” for older female caregivers as their health declines.

Benjamin and colleagues (2012) argue that measures of subjective well-being do not capture the full range of human motivation and preferences. They find that people are willing to trade personal well-being for other things they care about—income, their family’s happiness, social status, or a sense of control. The researchers gave 2,600 adults and university students a series of 13 hypothetical scenarios and asked them to evaluate which of two options would make them happier and to identify which they would choose. While most people chose the option that made them happier, a sizable share reported that their choice compromised their happiness. The researchers conclude that people have desires and objectives other than

happiness, which challenges the assumption that people tend to make choices exclusively to maximize their happiness. They emphasize that happiness measures alone are an insufficient basis for evaluating government policies. Benjamin and colleagues (2014b) find similar results in the choices medical students made related to medical residency programs.

In related work, Benjamin and colleagues (2014a) describe a broader set of well-being survey questions that include more than 130 factors that shape individual well-being. In addition to experiential well-being and life satisfaction, the questions measure factors related to family well-being, personal health, security, freedom, and other social and personal values. They asked 4,600 U.S. respondents to state their preference between pairs of aspects to capture the relative strength of different factors. Using this set of measures, they identified aspects of well-being that older people valued more highly than younger people, including “being treated with dignity and respect” and “having many options and possibilities in life and the freedom to choose among them.” They propose a method of combining the responses to this set of questions to create a more comprehensive well-being index.

Horner (2014) shows how subjective well-being measures might be used to inform a specific policy decision. Her study, using data from the United States and 16 western European countries, examines the impact of raising the retirement age. She finds that retirees’ subjective well-being improves when retirement occurs and then declines a few years later. The boost that retirement provides takes place in the same way whether individuals retire early or late; both groups have similar well-being levels by age 70, according to the study.

“Later formal retirement simply delays the subjective well-being benefits of retirement,” she writes. “If it is necessary to increase the retirement age by a few years to increase financial stability, policymakers need not worry that they are making people psychologically worse off in the long run.” The study drew on comparable data from the U.S. HRS, the Study of Health, Ageing, and Retirement in Europe (SHARE), and the English Longitudinal Study of Ageing (ELSA), taking into account policy differences among countries. The subjective well-being measures used included life satisfaction and a set of questions that assessed the older person’s sense of control, independence, autonomy, and pleasure.

Lucas (2013) demonstrates how subjective well-being measures might be useful to policymakers on a local level. He identifies a link between life satisfaction in U.S. counties and domestic in-migration. Counties with residents who report high levels of life satisfaction tend to grow more quickly than counties with residents who are less satisfied with their lives on average. But he points out that high levels of life satisfaction may reflect other factors that are already being measured, such as high employment or low poverty.

This study combined census data with results of the U.S. Center for Disease Control and Prevention’s Behavioral Risk Factor Surveillance System, designed to track health conditions. More than 2 million Americans participated in this survey that included a question asking respondents to rate how satisfied they were with their lives. Lucas suggests that further research is needed to provide a better understanding of the local factors associated with more satisfied populations; the results might enable policymakers and local planners to target funds in ways that increase life satisfaction.

Several studies in Latin America provide examples of how subjective well-being measures can be used to evaluate the impact of social interventions. The *Piso Firme* program replaced dirt floors with cement for 300,000 homeowners in Mexico (Cattaneo et al. 2009). The investigators surveyed 2,755 homeowners spread evenly throughout an urban area that straddles two Mexican states—one that had already implemented the program and one that had not yet begun. When they compared mothers raising children in households that received cement floors with those that still had dirt floors, they found higher life satisfaction levels (19 percent) and less depression and stress among those with cement floors. Another study that examined the impact of replacing

slum housing with pre-fabricated dwellings in El Salvador, Mexico, and Uruguay also found higher levels of life satisfaction among recipients than among those who did not receive the upgraded housing (Galiani et al. 2015). Similarly, research on government payments to low-income, rural elderly in Mexico (a noncontributory pension program) documented improvements in experienced well-being among those who received the cash payments compared to those who did not (Galiani, Gertler, and Bando 2013).

Tracking the well-being of older people can inform individual treatment strategies and health care policies.

Conclusion

In recent years, a number of large U.S. surveys have included questions measuring subjective well-being, including the HRS and the PSID. The results can identify differences in well-being across the older population and could be used to design and evaluate effective solutions. Researchers are just beginning to explore how well-being influences the choices older people make and how those decisions in turn influence their health. Tracking the well-being of older people can inform individual treatment strategies and health care policies, but current well-being measures may not incorporate all the factors that combine to shape an older person’s sense of well-being. Efforts to refine these measures and apply them in new settings could help policymakers and program planners improve the quality of life of the growing U.S. older population.

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The NIA Centers on the Demography and Economics of Aging

The National Institute on Aging of the National Institutes of Health supports research centers on the demography and economics of aging, based at the University of California at Berkeley; Duke University; Harvard University; the University of Michigan; the National Bureau of Economic Research; the University of Pennsylvania; the RAND Corporation; the University of Southern California and the University of California at Los Angeles; Stanford University; the University of Washington; and the University of Wisconsin.

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