

Today's Research on Aging

PROGRAM AND POLICY IMPLICATIONS

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Social Support, Networks, and Happiness

As Americans live longer, researchers have begun to investigate how people can move into old age not just healthier, but also happier. Increasingly, researchers are exploring relationships between physical and mental health and social connections among the elderly. The Behavioral and Social Research Program at the National Institute on Aging (NIA) supports research on the relationships between aging and social connections. This newsletter will review recent NIA-sponsored and other research that explores these relationships, especially research on the ways social networks affect health and happiness and influence longevity.

Life Expectancy and Happiness

The average number of years that a 30-year-old adult in the United States could expect to live increased 5.4 years for men and 3.6 years for women between 1970 and 2000. This increase may be divided into changes in the number of happy years of life and unhappy years of life. Men gained 6.8 more years of happy life and had 1.4 fewer years of unhappy life. The number of happy years that women lived increased by 3.6 years, but their number of unhappy years did not change. For men and women, changes in the number of happy years lived contributed more to the total increase in adult U.S. life expectancy than did the changes in

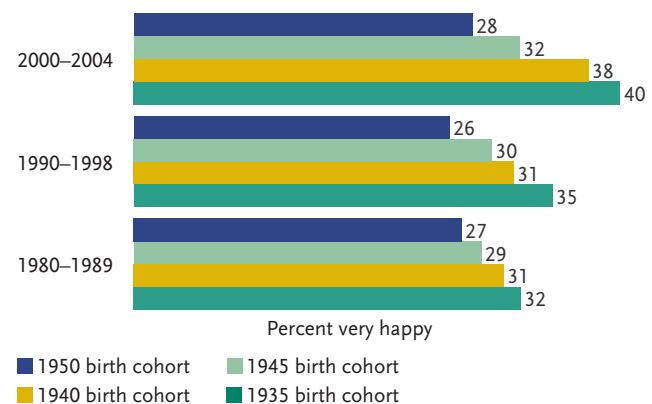
unhappy years lived (Yang 2008b). On average, for those ages 65 and older, an increase in years of happy life accompanied the increase in life expectancy.

In other analyses, Yang (2008a) identified differences in birth cohorts that may have contributed to the increase in expected number of years of happiness over the adult life in the United States between 1970 and 2000. In general, more recent birth cohorts are less likely than those born at the beginning of the 20th century to say they are very happy (see Figures 1 and 2). This relationship between cohort and self-reported happiness holds over time, from the 1980s through the early 2000s (see Figure 1). For those born in earlier cohorts, depression declined more with age (Yang 2007) and happiness increased with age (Yang 2008a).

The significant cohort differences in happiness that Yang (2008a and 2008b) finds suggest that happiness is affected by the social and economic pressures facing the generation into which a person was born. In other words, experiences common to one's birth cohort may shape expectations and these influence one's perceived level of happiness.

One model of how happiness is determined looks at happiness as a tool used by individuals to assess their options,

For most of the last 25 years, people born between the Great Depression and the end of World War II were more likely than early baby boomers to report being very happy.



Source: Yang (2008a).

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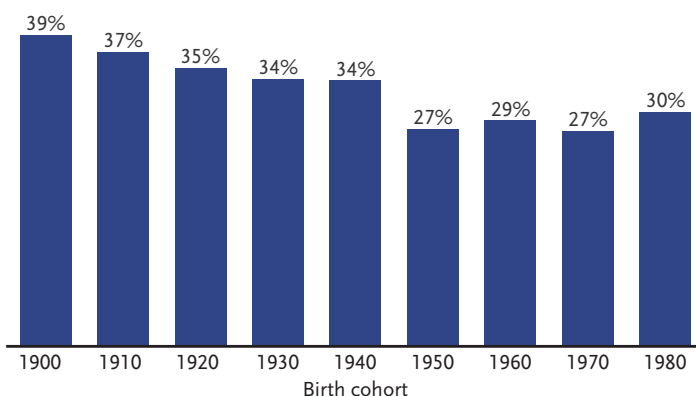
This review summarizes research related to the objectives of the National Institute on Aging, with emphasis on work conducted at the NIA demography centers. Our objective is to provide decisionmakers in government, business, and nongovernmental organizations with up-to-date scientific evidence relevant to policy debates and program design. These newsletters can be accessed at www.prb.org/TodaysResearch.aspx.

choosing the option that provides the highest expected happiness (Rayo and Becker 2007). In this model, a person's level of happiness is based not only on that person's prior expectations (such as being accustomed to a particular lifestyle), but also on peer comparisons (such as concern about one's wages relative to a co-worker's). Under this scheme, individuals experience the best results (highest expected levels of happiness) when they adapt to changes. For the elderly, this might mean comparing their health outcomes to those in their cohort rather than to what their health was like when they were younger. A review of survey evidence on happiness over the life cycle suggests that both expectations and adaptation (changes in expectations as life circumstances change) influence how happy or satisfied with life individuals feel (Easterlin 2003). However, the effect of expectations and adaptation will vary across different life domains such as health, family, and income (see box).

Happiness and Health Over the Life Course

Happiness and self-reported well-being can have an impact on mental and physical health. Loneliness is related to negative physical health outcomes in older adults, including higher systolic blood pressure, elevated hormone levels, and less restorative sleep—in other words, sleep that is less effective in restoring alertness and in improving mood and performance (Hawkey and Cacioppo 2007). But the relationship between aging and happiness is less clear. Scientists who study happiness over the life course suggest different theories about how social roles (for example, one's position at work or duties within a family) produce age-related changes in happiness. Some suggest that, as people age,

People born earlier in the 20th century are generally more likely to say that they are very happy.



Source: Yang (2008a).

Happiness Over the Life Cycle and Across Domains

Studies have shown that though there may be some adaptation to changes in life circumstances, this adaptation is not complete—there is some effect on happiness even if the effect is not of the magnitude expected. One explanation is that individual aspirations change with life circumstances such that the happier one is the more one requires in order to be happy. However, the extent to which one's aspirations change with circumstances varies depending on the circumstances. The level of material possessions that makes one happy changes at the same rate that income changes. This accounts for there being little difference in happiness with income growth. In the marital and health domains, the goals don't change as soon as one gets married or achieves a health objective, so larger effects are observed with changes in circumstances.

Although people adapt to changes in their life circumstances and their levels of happiness do not change as much as anticipated, their level of happiness does not return to the initial starting point. Cohort studies of happiness over the life cycle suggest that individuals do not completely adapt to declines in their health. Self-reported health declines with age; for individuals with poorer health, the average level of happiness is lower at all ages. At ages where a higher proportion of the cohort is married, happiness is higher on average; cohorts with longer duration of first marriages report both higher mean marital happiness and higher mean happiness than those with shorter marriages, the never married, and the widowed. Results of cohort studies of marriage are supported by analyses that look at individuals over time and by cross-sectional analyses that control for other factors that might affect happiness. Cross-sectional studies find that happiness is greater among higher income groups after controlling for other factors. However, studies that look at happiness over the life cycle find that happiness only increases initially with income.

References

Richard A. Easterlin, "Explaining Happiness," *Proceedings of the National Academy of Sciences* 100, no. 19 (2003): 11176-83.

Richard A. Easterlin, "Life Cycle Happiness and its Sources: Intersections of Psychology, Economics, and Demography," *Journal of Economic Psychology* 27, no. 3 (2006): 463-82.

health problems increase and social networks decrease as peers die, making the elderly less happy (George 2006). Others hypothesize that happiness increases with age because as individuals age, they become more comfortable with themselves and their role in society (Gove et al. 1989). Researchers are testing these theories.

Fiori and her colleagues (2006) believe that individuals have different social networks and that each has a different effect on health. The different roles that each person plays—parent, child, co-worker, churchgoer—introduce them to different networks that help them to feel socially connected and improve their sense of well-being. Their analysis of 1,669 adults ages 60 and older, using data from the Americans' Changing Lives study, identified five types of social networks based on the dominant characteristic of the network:

- Nonfamily-restricted—characterized by extremely limited social ties.
- Nonfriends—characterized by infrequent contact with friends.
- Family—a network with frequent contact among family members.
- Friends—characterized by frequent contact with friends.
- Diverse—not dominated by any particular type of member.

Fiori and colleagues found that membership in these different groups varied by age, education, income, and functional status. Older individuals were most likely to be in nonfamily-restricted networks, characterized by infrequent social contact with others. Another study that tracked changes in social relations over the life course found that older people tend to focus the bulk of their social outreach and contact on their closest social networks, specifically family members (Shaw et al. 2007).

An active social network of family and friends can promote healthy aging through a variety of mechanisms including tangible and emotional support (Fiori, Antonucci, and Cortina 2006). Additionally, these researchers believe that high quality social relations may be associated with increased mental health. Individuals who have more restricted networks were most likely to exhibit signs of depression.

Some researchers have suggested that the particular family members who provide emotional and social support in old age may be important. Okabayashi and colleagues (2004) hypothesized that in Japan, a culture characterized by children's commitment to supporting their elderly parents, children are the most important social and emotional support.

Using a national survey of 2,200 Japanese over the age of 60, these researchers determined that support from one's children is associated with positive mental health outcomes, more so than support from other sources including spouses and friends. This finding contrasts with an earlier result from a study of older persons in the United States and India, where emotional support from a spouse is more important in determining well-being than is support from one's children (Venkatraman 1995). Evidence from these studies suggests that individuals in different cultural contexts have different expectations for social support.

Researchers have been investigating how major life course events—including retirement, bereavement, and health deterioration—affect the social networks and connectedness of older individuals. New research illuminates how these events shape the social interconnectedness of older Americans. Data from the National Social Life, Health and Aging Project (NSHAP) have helped researchers profile the social connectedness of American adults ages 57 to 85 (Cornwell et al. 2008). Researchers used nine dimensions of social connectivity: network size, volume of contact with network members, emotional closeness to network members, network composition, network density, involvement with neighbors, attending religious services, volunteering, and involvement with organized groups. Network size is the number of people that respondents believe to be part of their core network. Volume of contact refers to the number of times that respondents contact or are contacted by members of their network, while closeness is a subjective measure of how emotionally connected the respondent feels with the network members. Network density is a measure of the proportion of the network members who know one another. The profile that emerged from analysis of these dimensions showed that among older Americans, the oldest-old (ages 75 to 85):

- Have smaller social networks.
- Have less emotional closeness to network members.
- Are more likely to socialize with their neighbors, attend church, and volunteer.

Interestingly, the volume of contact with people fluctuates with age rather than declining steadily. Contact declines through the 50s and 60s, but increases in the late 70s, which may be due in part to deteriorating health.

Religious social networks may also affect health. Krause (2002) explored the relationship between health and the spiritual and emotional support that church members pro-

vide. That study found attending church more regularly is positively correlated with feeling that the congregation is more cohesive and with feeling closer to God. Older persons who report feeling closer to God are more optimistic and have better self-reported health outcomes.

Socioeconomic and Racial Factors

There are substantive differences in individual experiences of aging based on race, socioeconomic status, and gender. Results from one recent study suggest that, over time, older adults with less education experience a continued decline in social contact with friends and the support they provide (Shaw et al. 2007). However, the same study also suggests that individuals with low levels of education are more likely to receive tangible support and that anticipated levels of support decline less precipitously with time. While the researchers did not find any difference in social support based on race, this may have been due to an overly small sample size. Antonucci and her colleagues (2003) examined the relationship between higher socioeconomic status of the elderly and better physical and mental health outcomes. Using a representative sample of older adults in the Detroit area, they looked at whether the effect of socioeconomic status diminished when relationships with children were taken into account. They determined that the size of social networks and the emotional support of a child moderate the impact of education on health outcomes for some but not for others. For fathers with low levels of education, strong social ties play a great role in moderating the effect of socioeconomic status on health, but this is not the case for mothers.

Other studies have examined the role of race on networks. In his work on religious networks, Krause (2002) explored the impact of race on religious involvement. He found that when compared to older whites, older blacks are more involved in religion and report that their congregations are more cohesive. Research looking at the effect of race on network size concluded that racial differences in networks are due to neighborhood differences (Small 2007). The study, which used data from the Urban Poverty and Family Life Survey in Chicago, found that the degree of racial segregation affected whether blacks and other racial minorities were more likely to live in poor neighborhoods and to consequently have smaller social networks. While the study did not specifically look at the impact of neighborhoods on healthy aging, smaller networks may negatively affect the elderly because of the lack of support. This is a topic for further research.

Contagion

Happiness, like smoking and obesity, seems to spread from person to person in a network. A study of happiness in the Framingham Heart Study social network revealed clusters of happy and unhappy people (Fowler and Christakis 2008). Friends of happy people also tended to be happy, as were the friends of friends of happy people. This relatively close relationship (three degrees of separation) among happy people is not just because people tend to associate with those similar to themselves but because happiness seems to spread.

The exact mechanism through which happiness spreads is not known but seems to be related to geographic proximity. Having a spouse, nearby siblings, or a neighbor become happy increases the probability of happiness. Living in close proximity to happy co-workers, however, does not increase one's chances of being happy. The spread of happiness is also more likely through same-sex relationships, as observed in the Framingham Heart Study, which found that neighbors and friends had more influence on happiness than did spouses (Fowler and Christakis 2008).

Because the spread of happiness in social networks is similar to the spread of smoking and obesity, Fowler and Christakis (2008) suggest that there may be generic characteristics in how health behavior and emotional states spread. The closeness of relationships associated with the transmission of these behaviors may limit the extent to which one individual may influence health behaviors in a network. But the findings suggest that health interventions can have a cascading effect. For example, curing an illness is likely to have an immediate effect not only on a person's health but also on their happiness and the happiness of others. This cascading effect has the potential to increase the cost effectiveness of medical care and health promotion.

National Well-Being Accounts

The above findings on how happiness spreads in social networks provides just one example of the potential policy insight to be gained from studying not just the relationship of happiness and health, but also from understanding more about subjective well-being. Subjective measures of well-being are consistently related to measures of brain function and health outcomes (see literature review in Frey and Stutzer 2002). In addition, there is some correlation between objective life circumstances and the feelings that individuals report (see discussion in Kahneman and Krueger 2006). Individual reports of happiness provide some information on life circumstances, including health and mental functions.

Proposed national well-being accounts can be used to summarize the average feeling of well-being in a population and to analyze the relationship to population health. Kahneman and his colleagues have developed a method for estimating a national index of well-being that requires measures of time allocation and of feelings associated with each situation for which time allocation is measured (Kahneman et al. 2004). The time allocation measures and happiness/satisfaction measures do not have to be taken from the same surveys. These estimates of national well-being would allow one to assess whether population-level changes in well-being over time may be attributed to changes in time allocation or changes in the level of satisfaction derived from specific situations. For example, if the national well-being index in the United States were to fall during a long economic recession, it would be possible to decompose this change into a portion attributable to people spending less time working and another attributable to lower levels of satisfaction during work or leisure time, or both. Also, a trend analysis of such a national well-being index might suggest whether policy changes have an impact on well-being at the population level.

References

- Toni C. Antonucci, Kristine J. Ajrouch, and Mary R. Janevic, "The Effect of Social Relations With Children on the Education-Health Link in Men and Women Aged 40 and Over," *Social Science & Medicine* 56, no. 5 (2003): 949-60.
- Benjamin Cornwell, Edward O. Laumann, and L. Philip Schumm, "The Social Connectedness of Older Adults: A National Profile," *American Sociological Review* 73, no. 2 (2008): 185-203.
- Katherine L. Fiori, Toni C. Antonucci, and Kai S. Cortina, "Social Network Typologies and Mental Health Among Older Adults," *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 61B, no. 1 (2006): P25-32.
- James H. Fowler and Nicholas A. Christakis, "The Dynamic Spread of Happiness in a Large Social Network: Longitudinal Analysis Over 20 Years in the Framingham Heart Study," *British Medical Journal* 337, no. a2338 (2008): 1-9.
- Bruno Frey and Alois Stutzer, "What Can Economists Learn From Happiness Research?" *Journal of Economic Literature* 40, no. 2 (2002): 402-35.
- Linda K. George, "Perceived Quality of Life," in *Handbook of Aging and the Social Sciences*, 6th ed., eds. R.H. Binstock and L.K. George (San Diego, CA: Elsevier, 2006).
- Walter R. Gove, Suzanne T. Ortega, and Carolyn Briggs Style, "The Maturation and Role Perspectives on Aging and Self Through the Adult Years: An Empirical Evaluation," *American Journal of Sociology* 94, no. 5 (1989): 1117-45.
- Louise C. Hawkey and John T. Cacioppo, "Aging and Loneliness," *Current Directions in Psychological Science* 16, no. 4 (2007): 187-91.
- Daniel Kahneman et al., "Toward National Well-Being Accounts," *The American Economic Review* 94, no. 2 (2004): 429-34.
- Daniel Kahneman and Alan B. Krueger, "Developments in the Measurement of Subjective Well-Being," *The Journal of Economic Perspectives* 20, no. 1 (2006): 3-24.
- Neal Krause, "Church-Based Social Support and Health in Old Age: Exploring Variation by Race," *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 57B, no. 6 (2002): S332-347.
- Hideki Okabayashi et al., "Mental Health Among Older Adults in Japan: Do Sources of Social Support and Negative Interaction Make a Difference?" *Social Science & Medicine* 59, no. 11 (2004): 2259-70.
- Luis Rayo and Gary S. Becker, "Evolutionary Efficiency and Happiness," *Journal of Political Economy* 115, no. 2 (2007): 302-37.
- Benjamin A. Shaw et al., "Tracking Changes in Social Relations Throughout Late Life," *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 62B, no. 2 (2007): S90-99.
- Mario Luis Small, "Racial Differences in Networks: Do Neighborhood Conditions Matter?" *Social Science Quarterly* 88, no. 2 (2007): 320-42.
- M.M. Venkatraman, "A Cross-Cultural Study of the Subjective Well-Being of Married Elderly Persons in the United States and India," *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 50B, no. 1 (1995): S35-44.
- Yang Yang, "Is Old Age Depressing? Growth Trajectories and Cohort Variation in Late-Life Depression," *Journal of Health and Social Behavior* 48, no. 1 (2007): 16-32.
- Yang Yang, "Social Inequalities in Happiness in the United States, 1972 to 2004: An Age-Period-Cohort Analysis," *American Sociological Review* 73, no. 2 (2008a): 204-26.
- Yang Yang, "Long and Happy Living: Trends and Patterns of Happy Life Expectancy in the U.S., 1970-2000," *Social Science Research* 37, no. 4 (2008b): 1235-52.

The NIA Demography Centers

The National Institute on Aging supports 13 research centers on the demography and economics of aging, based at the University of California at Berkeley, the University of Chicago, Harvard University, the University of Michigan, the National Bureau of Economic Research, the University of North Carolina, the University of Pennsylvania, Pennsylvania State University, Princeton University, RAND Corporation, Stanford University, the University of Southern California/University of California at Los Angeles, and the University of Wisconsin.

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