Cohort Differences in Self-Rated Health: Evidence from a Three-Decade, Community-Based, Longitudinal Study of Women

Henian Chen¹,²,³, Patricia Cohen¹,³,⁴, and Stephanie Kasen¹,³

¹ Department of Epidemiology, New York State Psychiatric Institute, New York, NY.
² Department of Biostatistics, New York State Psychiatric Institute, New York, NY.
³ Department of Psychiatry, College of Physicians and Surgeons, Columbia University, New York, NY.
⁴ Department of Epidemiology, Mailman School of Public Health, Columbia University, New York, NY.

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Despite the fact that life expectancy has nearly doubled over the past century, the US public has become increasingly preoccupied with issues of health and illness. In this study, the authors investigated cohort differences in self-rated health between women born in 1935–1944 (preboomers) and women born in 1945–1954 (baby boomers). A randomly selected, community-based sample of 618 mothers, 314 preboomers, and 304 baby boomers was interviewed. Over three decades, self-rated health was assessed in 1975, 1983, 1985–1986, 1991–1994, and 2001–2004. An individual growth model showed a linear decline (β=-0.61 per year, p<0.001) in self-rated health from mean ages 31–59 years combined, with a quadratic age effect (β=0.03, p<0.001). Baby boomers reported lower self-rated health (mean difference, μ=-5.30; p<0.001) and more rapid decline per year (slope difference, β=-0.52; p<0.001) than did preboomers of overlapping ages; those differences remained after adjusting for demographics, socioeconomic variables, personality factors, health behaviors, chronic illness, and depression symptoms. Study findings have important implications with regard to the potential growing burden on the nation’s health care system, suggesting that generational changes in health evaluations and expectations may continue to increase demand for medical care.

cohort effect; health; women

Abbreviations: SD, standard deviation; SRH, self-rated health.

The baby-boomer cohort includes over 65 million individuals and thus represents close to one fourth of the population of the United States (1). In contrast to their more conservative parents, baby boomers belong to the generation of protest and activists, expressed in part by less conventional dress, recreational drug use, and a more individualist focus. As the first cohort to grow up in an affluent and largely peaceful postwar society characterized by unprecedented educational and employment opportunities and social change, especially for women, baby boomers may be considered privileged in comparison to earlier generations.

Nevertheless, baby-boomer women in midlife are reported to be significantly more depressed and have lower self-esteem compared with preboomer women at equivalent ages (2). Moreover, studies have found a higher incidence of arthritis, obesity, diabetes, and heart disease and more illicit drug use among members of the baby-boomer generation than among their predecessors (3–7). As such, baby boomers will likely demand more medical services and intervention than past generations. Recent projections show that the aging of baby boomers will result in a doubling of the number of persons aged 65 years or older with arthritis or chronic joint symptoms by 2030, when the last of the
baby-boom generation will be 65 years of age (8). Because of the size of this generation, their aging has profound societal implications relative to previous and subsequent generations (9).

One of the most frequently used measures of health status is self-rated health (SRH), a single question asking people to rate their overall health on a scale from excellent to poor. There is widespread agreement that this simple global question provides a useful summary of how people perceive their overall health status (10). SRH predicts subsequent mortality (11), as well as functional decline (12), later chronic disease (13), and recovery from major medical events (14). Recent studies (15, 16) have shown an association between SRH and frequently used biomarkers and endocrine measures. SRH has been found to have good test-retest reliability (17) and concurrent validity (18). SRH has been recommended for population health and health monitoring by the World Health Organization, the Centers for Disease Control and Prevention in the United States, and the European Union Commission (19–22). In the current study, we examined SRH trajectories over 28 years in a representative sample of women and compared SRH in two cohorts of baby boomers and preboomers assessed at overlapping ages. We drew on longitudinal data obtained from a representative sample of 758 mothers, assessed prospectively regarding SRH in 1975, 1983, 1986, 1993, and 2003, when they were mean ages 31, 39, 42, 49, and 59 years, respectively. Information on personality traits, chronic illness, employment status, marital status, socioeconomic status, smoking, alcohol consumption, weight gain, and depression symptoms was obtained in all but the first interview. The research questions we addressed are as follows:

1. What is the natural history of SRH over the adult years in this community sample of women from a 28-year longitudinal follow-up?
2. Is there a cohort difference regarding SRH between baby boomers and preboomers assessed at overlapping ages? If yes, is this cohort difference independent of demographic and socioeconomic variables related to SRH? If so, is the difference accounted for by chronic illness, depression symptoms, or health-related behaviors?

**MATERIALS AND METHODS**

**Sample**

Participants were mothers drawn from a sample of 976 families, randomly selected in 1975 for a study of child behavior on the basis of residing in one of two Upstate New York counties and having at least one child between 1 and 10 years of age living at home. These women were first interviewed in 1975, at a mean age of 31 years, about their health and family background. In 1983 (at a mean age of 39 years), 718 of these mothers were located and reinterviewed. To replace the disproportionate number of poor, urban women lost to follow-up, we randomly sampled mothers from 54 new families from poor, urban neighborhoods in the same two counties to achieve a total of 772 in the 1983 sample. Follow-up at mean ages of 42 (1986), 49 (1993), and 59 (2003) years included SRH, health behaviors, personality characteristics, depression symptoms, and social role factors. Detailed information regarding study methodology is available from previous reports (23–25); also refer to the following website: http://www.nyspi.cpmc.columbia.edu/childcom).

The women in the sample were 91 percent White; resided in urban, suburban, and rural areas; spanned the full socioeconomic status range; and were representative of the northeastern region of the United States from which they were sampled. Retention rates were 95 percent in 1986 and 90 percent in 1993. In the recent 2003 follow-up, 609 women were reinterviewed and 75 women had died, thus accounting for 90 percent of the 1983 sample; those remaining were not reinterviewed because of refusal to participate (n = 31), serious illness (n = 17), study time constraints (n = 16), and failure to be located (n = 12).

After selection by birth years from 1935 to 1954, 618 women remained for analysis in this study. Preboomers (n = 314, 50.8 percent) were defined as those born between 1935 and 1944 (10 years). Their mean ages at assessment were 34.42 (standard deviation (SD), 2.77), 42.79 (SD, 2.86), 45.39 (SD, 2.86), 51.21 (SD, 2.80), and 61.36 (SD, 2.82) years. Eighty-one women were lost from the study at 2003, including 35 who had died. Baby boomers (n = 304, 49.2 percent) were defined as those born between 1945 and 1954 (10 years). Their mean ages at assessment were 26.63 (SD, 2.51), 35.11 (SD, 2.54), 37.66 (SD, 2.55), 43.66 (SD, 2.59), and 53.83 (SD, 2.60) years. Forty-one women were lost at 2003, including nine who had died.

**Measures**

**Outcome variable: SRH.** At each assessment, participants completed a five-point Likert-response item to rate their health from excellent to poor (Would you say your health in general is excellent, very good, good, fair, or poor?). To improve the intrinsic meaning of the SRH score (26), we used a linear transformation such that SRH score = [(observed score – minimum possible score (1))/(maximum possible score (5) – minimum possible score (1))] × 100. Thus, the lowest possible score was defined as zero and the maximum possible score as 100, with higher scores indicating better health.

**Predictors of SRH.** We used demographic variables, personality factors, health behaviors, and depression and psychiatric symptoms assessed during each of the last four follow-ups in these analyses.

**Demographic variables.** Race, socioeconomic status in 1983 (the standardized sum of standardized measures of years of one’s own/spouse’s educational level, occupational status, and family income), time-varying marital status, and time-varying employment status were the demographic variables assessed.

**Personality factors.** We carried out a factor analysis to consolidate the 39 items assessing maternal personality originating from a range of scales (27) used in each interview. Three factors include maladaptation (defiance,
impulsivity, alienation; 15 items, reliability coefficient $\alpha = 0.82$), empowered/goal directed (self-reliant, confident, assertive; 13 items, reliability coefficient $\alpha = 0.80$), and socialized/warm (gentle, compassionate, rule abiding). The third factor did not relate to SRH and was not used in the following analyses.

Depression symptoms. A nine-item scale based on the Hopkins Symptom Checklist-90 Depression Scale was used to assess depressive symptoms at follow-ups from 1983 to 2003 ($\alpha = 0.85$, $\alpha = 0.87$, $\alpha = 0.88$, and $\alpha = 0.85$). The validity of this measure has been supported in prior work on this sample of women (23, 24).

Chronic illness. Chronic disease presence was defined as any autoimmune, cancer, diabetes, musculoskeletal, cardiovascular, gastrointestinal, neurologic, or respiratory disease that interfered with role function or for which regular medication was taken (set at 0 = absent, 1 = present).

Smoking and alcohol consumption. Included were scaled measures of amount and frequency of cigarette smoking and alcohol consumption.

Weight gain. Weight was self-reported in 1975 and 2003. We calculated weight gain by using a woman's 2003 weight minus her 1975 weight. We imputed weight in 1975 for the women recruited in 1983 based on the weight and age information from the entire sample.

Statistical analysis

An individual growth model was used to fit the SRH age trajectory (28) with the PROC MIXED procedure from the SAS statistical software package (29). The first step in these analyses was to determine the best basic model fit for the relation between SRH and age. Thus, we first examined between-participant differences ("random effects") in the mean level of SRH. The estimated variance of the mean SRH was 166.91 (standard error, 13.18; $p < 0.001$), meaning that the 618 participants differed significantly in their average SRH. Adding age-related linear change in SRH (age), quadratic change (age$^2$), and cubic change (age$^3$) in the model sequentially showed significant model improvement ($\chi^2 = 470.5, p < 0.001$) for the linear age effect and further significant improvement for the quadratic age effect ($\chi^2 = 113.2, p < 0.001$). Therefore, these linear and quadratic age effects were retained in the random model for the SRH analyses using unstructured covariance (the best one for these data), showing that both linear and quadratic changes varied significantly across the study participants.

The results from the quadratic model are complex. Thus, to simplify interpretation of these trends when we moved from the above "random" to the "fixed" or average effect level, we also fit a spline model with knots at ages 40 and 50 years (30). The spline model estimates the linear changes in SRH before age 40 years, between ages 40 and 50 years, and after age 50 years and may be considered an alternative to the combined linear and quadratic age changes.

An initial growth model was estimated for the entire sample as well as separately for preboomer women and baby-boomer women over the 28 years covered by the five assessments. Subsequent models added cohort and cohort-by-age interaction variables to the model to test the mean and trajectories differences in SRH at comparable ages. Final models added all potential predictors to the model estimates. Dummy variables indicating women who were newly recruited in 1983 and women who were lost from the study at the 2003 assessment were tested as potentially necessary control variables but were removed because they were not statistically significant. Residual diagnostics were used to assess the adequacy of the fitted models. Histograms of residuals did not indicate discernable skew, and normal quantile plots displayed no systematic departure from a straight line. Thus, the normal residual assumption is tenable in our SRH data.

RESULTS

Estimating the trajectory of SRH across 28 years

**Quadratic model.** The basic growth model of "fixed" or average effects on SRH included linear and nonlinear (quadratic) age change in SRH for the entire sample (table 1). The average SRH score estimated at age 42 years was 79.94 percentage points, with a significant linear decline of 0.61 percentage point per year from mean ages 31 to 59 years combined with a 0.03 percentage point quadratic age effect. When the analyses were confined to women born before 1945, the average SRH score estimated at age 42 years was 82.60, with a significant linear decline of 0.32 percentage point per year combined with a 0.03 percentage point quadratic age effect. Thus, baby-boomer women reported more than a 5 percentage points lower SRH estimated at age 42 years and a 0.52 percentage point more rapid decline per year compared with preboomer women (table 1). As shown in figure 1, these significant SRH differences not only were reflected at age 42 years but also actually increased from ages 30 to 61 years, the ages at which members of both cohorts overlapped. At age 61 years, the baby-boomer cohort reported their health status as an average of about 50, that is, "good," whereas the earlier cohort had reported their health status as more than a half scale unit higher, close to "very good."

**Spline model.** The spline models examined the linear annual changes in SRH prior to age 40 years, from age 40 to 50 years, and after age 50 years (table 1). For the entire sample, the annual linear changes were $-0.19$ percentage point ($p < 0.001$), $-0.90$ percentage point ($p < 0.001$), and $-1.09$ percentage points ($p < 0.001$) over these three age ranges, respectively. When the analyses were confined to women born before 1945, the linear annual changes were 0.08 percentage point ($p = 0.52$), $-0.89$ percentage point ($p < 0.001$), and $-0.96$ percentage point ($p < 0.001$) over ages of less than 40 years, between ages 40 and 50 years, and after age 50 years. For the women in the more recent cohort, these changes were $-0.25$ percentage point ($p < 0.001$), $-1.18$ percentage points ($p < 0.001$), and $-1.38$ percentage points ($p < 0.001$) for age less than 40 years, between ages 40 and 50 years, and after age 50 years. Thus,
the cohort differences were −0.34 percentage point (p = 0.02), −0.42 percentage point (p = 0.25), and −0.41 percentage point (p = 0.004) for these three age groups (table 1).

### Predictors of SRH

For preboomer women, the most important predictors of SRH were chronic illness, depression, empowered/goal-directed personality, employment, maladaptation personality, and socioeconomic status. One standard deviation increase in chronic illness, depression, and maladaptation lowered SRH significantly by 7.01 percentage points, 4.34 percentage points, and 1.64 percentage points, respectively. One standard deviation increase in empowered/goal-directed personality, employment, and socioeconomic status raised SRH significantly by 2.34 percentage points, 1.87 percentage points, and 1.41 percentage points, respectively.

For baby-boomer women, the most important predictors of SRH were chronic illness, socioeconomic status, depression, weight gain, smoking, and maladaptation. One standard deviation increase in chronic illness lowered SRH by 7.82 percentage points, and one standard deviation increase in socioeconomic status raised SRH by 7.82 percentage points.

**Predictors of SRH**

- For preboomer women:
  - Chronic illness: −7.01 percentage points
  - Depression: −4.34 percentage points
  - Maladaptation: −1.64 percentage points
  - Empowered/goal-directed personality: +2.34 percentage points
  - Employment: +1.87 percentage points
  - Socioeconomic status: +1.41 percentage points

- For baby-boomer women:
  - Chronic illness: −7.82 percentage points
  - Socioeconomic status: +7.82 percentage points

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**FIGURE 1.** Change in self-rated health status from 1975 to 2003, by birth cohort, Upstate New York. Refer to the Materials and Methods section of the text for an explanation of the health-status point scale used on the y-axis and a definition of baby boomers and preboomers.

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**TABLE 1.** Changes in self-rated health status (per year) from 1975 to 2003, Upstate New York

<table>
<thead>
<tr>
<th></th>
<th>Total (n = 618)</th>
<th>Preboomers (n = 314)</th>
<th>Baby boomers (n = 304)</th>
<th>Cohort differences (n = 618)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quadratic model</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Self-rated health at age 42 years</td>
<td>79.94**</td>
<td>82.60***</td>
<td>77.30**</td>
<td>−5.30**</td>
</tr>
<tr>
<td>Linear annual change (age)</td>
<td>−0.61** −0.68, −0.53</td>
<td>−0.32** −0.45, −0.19</td>
<td>−0.84** −0.95, −0.73</td>
<td>−0.52** −0.69, −0.35</td>
</tr>
<tr>
<td>Quadratic age change (age²)</td>
<td>−0.03** −0.03, −0.02</td>
<td>−0.03** −0.04, −0.02</td>
<td>−0.03** −0.04, −0.02</td>
<td>0.004 −0.008, 0.016</td>
</tr>
<tr>
<td><strong>Spline model (age in years)</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>&lt;40</td>
<td>−0.19** −0.31, −0.08</td>
<td>0.08 −0.17, 0.33</td>
<td>−0.25** −0.39, −0.12</td>
<td>−0.34* −0.62, −0.06</td>
</tr>
<tr>
<td>40–50</td>
<td>−0.90** −1.24, −0.57</td>
<td>−0.89** −1.29, −0.49</td>
<td>−1.18** −1.79, −0.58</td>
<td>−0.29 −0.99, 0.42</td>
</tr>
<tr>
<td>&gt;50</td>
<td>−1.09** −1.22, −0.95</td>
<td>−0.96** −1.12, −0.81</td>
<td>−1.38** −1.62, −1.14</td>
<td>−0.41** −0.68, −0.13</td>
</tr>
</tbody>
</table>

* p < 0.05; **p < 0.01.

† All parameter entries are maximum likelihood estimates fitted by individual growth models by using the PROC MIXED procedure from the SAS statistical software package (SAS Institute, Inc., Cary, North Carolina). Age was centered at 42 years (intercept should be interpreted as average self-rated health at age 42 years). Cohort was coded 0 = preboomer, 1 = baby boomer (cohort difference = boom age − preboomer finding). Refer to the Materials and Methods section of the text for a definition of preboomers and baby boomers.

‡ CI, confidence interval.
deviation increase in chronic illness, depression, weight gain, smoking, and maladaptation lowered SRH significantly by 5.17 percentage points, 2.94 percentage points, 2.52 percentage points, 1.37 percentage points, and 1.32 percentage points, respectively. One standard deviation increase in socioeconomic status raised SRH significantly by 3.94 percentage points.

Findings regarding the primary demographic confounders, socioeconomic status and employment status, were interesting. Socioeconomic status was a predictor of SRH in both groups but showed a greater influence in the more recent cohort. On the other hand, employment was not statistically significant in the more recent cohort, potentially reflecting the larger association of health with employment for women of older ages as well as the likely higher age-adjusted employment rates across the younger cohort, given historical employment trends. Chronic illness showed a slightly, although not significantly higher relation with SRH in the preboomer cohort. The remaining time-varying predictors of SRH were used explicitly in an attempt to explain differences in SRH trajectories between the cohorts. Cigarette smoking, alcohol consumption, and weight gain all increased and may have mediated cohort differences. Cohort differences in depression, empowerment, and maladaptation may also account for differences in SRH.

We added those nine time-varying predictors to the basic cohort-difference model (n = 618). Compared with the basic cohort-difference model, the final model showed that the nine time-varying predictors accounted for the following proportions of total variance: 50.4 percent of the mean of SRH, 30.1 percent of the linear change in SRH, and 15.9 percent of the quadratic change in SRH in the entire sample. The key finding in this model was that cohort differences in SRH, both mean level and decline with age, remained significant after chronic illness, depression symptoms, personality factors, health behaviors, and demographic and socioeconomic variables were statistically controlled (table 2).

**DISCUSSION**

These findings from a community-based, longitudinal study of women provide initial support for the following: 1) The average SRH score estimated at age 42 years was 79.94, with a significant linear decline of 0.61 percentage point per year from mean ages 31 to 59 years combined with a 0.03 percentage point quadratic age effect for the entire sample. 2) Baby-boomer women reported a 5.30 percentage points lower SRH and a 0.52 percentage point more rapid decline per year than did preboomer women at the same ages. 3) Changes in demographic variables, socioeconomic status, personality factors, health behaviors, chronic illness, and depression symptoms over cohort and age did not explain the significant cohort difference, although they did reduce the remaining mean difference about 40 percent from the original average age-adjusted level of 5.30 percentage points to 2.86 percentage points. The cohort difference in annual age-related decline, however, remained essentially the same following statistical consideration of these possible cohort differences, from an overall level of about −0.42 percentage point per year in the original model without “explanatory variables” to −0.43 percentage point in the final model. 4) SRH was related to chronic illness, depression symptoms, socioeconomic status, and maladaptation for both preboomer and baby-boomer women. Personality factors and employment were significantly related to the SRH of preboomer women, and health behaviors (smoking, weight gain) were significantly related to SRH for the baby-boomer cohort.

The present findings are consistent with previous findings indicating that SRH declines with age (22, 31–33) and extend them by specifying the nature of these age-related declines. The curvilinear trend shows that, although there is a net decline in SRH during the adult life course, this net linear decline actually belies a more complex pattern of relative stability in early adulthood up to about age 40 years, followed by a more precipitous drop thereafter. The present findings are of interest because they confirm that midadult to older baby-boomer women report poorer SRH than preboomer women do. Among 2,587 community residents who were age 65 years or older between 1982 and 1988, cohorts born between 1900–1905 and prior to 1900 had better SRH than cohorts born between 1906–1911 and 1912–1917 (34). To our knowledge, our study is the first to report the cohort difference in SRH among women, even after controlling for several relevant potential explanatory variables.

A part of this cohort difference in SRH, but by no means all, may be due to the higher age-adjusted and self-reported prevalence of arthritis, obesity, diabetes, heart disease, depression, illicit drug use, and lower self-esteem among more recent cohorts of women than among their predecessors (2–7). Such a cohort difference may occur because knowledge about health and medical care has changed rapidly in this century (33, 34), and the concept of health might change over time (35). Older cohorts may have different interpretations of and expectations about health and health care and may therefore rate their health status differently (36). A study based on a US national sample from 1993–2001 showed that the percentage of individuals reporting fair or poor SRH increased from 13.4 percent in 1993 to 15.5 percent in 2001, or about 1.2 percent per year (95 percent confidence interval: 0.9 percent, 1.6 percent) (23). Hoeymans et al. (33) studied 513 men aged 70 years or older from 1990 to 1995 and found that those aged 75–79 and 85–89 years in 1995 had significantly worse SRH than men in those same age groups in 1990. The proportion of men who rated themselves as healthy declined by 3.3 percent (p < 0.001) per year from 1990 to 1995, supporting a time effect (time change) on SRH. Our study shows that SRH declined 0.46 percentage point per year of time and declined 0.30 percentage point per year of age among women (table 3); moreover, a greater decline in SRH per year of time was found for baby-boomer women (−0.35 percentage point) compared with preboomer women (−0.05 percentage point).

Over the past decade, the US population has enjoyed rapidly declining mortality rates at all ages. Early diagnosis and treatment of life-threatening chronic diseases are the major factors. Clearly, age-adjusted mortality rates are
declining. Studies show that the US population is experiencing “longer life but worsening health” in part because of increasing survival time for chronically ill, functionally limited, and disabled persons (37, 38). However, in these analyses, cohort differences in functionally significant chronic illness did not account for cohort differences in SRH.

Mortality rates are often used as summary measures of current health status when comparing different populations. However, these measures have the limitation of measuring only the very extreme of ill health. Alternatively, SRH as an approach to quantifying the health of a population tends to be regarded as flawed because of its subjectivity.

TABLE 2. Standardized predictors of self-rated health status from 1983 to 2003 in two cohorts, Upstate New York†

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Preboomers (n = 314)</th>
<th>Baby boomers (n = 304)</th>
<th>Total (n = 618)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression symptoms</td>
<td>–4.34** –5.72, –2.96</td>
<td>–2.94** –4.16, –1.72</td>
<td>–3.60** –4.53, –2.68</td>
</tr>
<tr>
<td>Goal-directed personality</td>
<td>2.34** 1.05, 3.62*</td>
<td>0.70 –0.51, 1.91</td>
<td>1.42** 0.53, 2.30</td>
</tr>
<tr>
<td>Employment</td>
<td>1.87* 0.84, 2.91*</td>
<td>0.68 –0.32, 1.68</td>
<td>1.35** 0.62, 2.08</td>
</tr>
<tr>
<td>Maladaptation personality</td>
<td>–1.64* –2.96, –0.32</td>
<td>–1.32* –2.60, –0.05</td>
<td>–1.47** –2.39, –0.54</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>1.41* 0.02, 2.80</td>
<td>3.94** 2.46, 5.41</td>
<td>2.65** 1.62, 3.67</td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td>0.97 –0.11, 2.06</td>
<td>–0.08 –1.15, 0.99</td>
<td>0.41 –0.36, 1.18</td>
</tr>
<tr>
<td>No. of cigarettes smoked daily</td>
<td>–0.87 –2.11, 0.36</td>
<td>–1.37** –2.53, –0.21</td>
<td>–1.12** –1.97, –0.27</td>
</tr>
<tr>
<td>Weight gain</td>
<td>–0.72 –2.28, 0.86</td>
<td>–2.52** –3.89, –1.16</td>
<td>–1.97** –3.00, –0.94</td>
</tr>
<tr>
<td>Cohort difference</td>
<td></td>
<td></td>
<td>–2.86** –5.17, –0.54</td>
</tr>
<tr>
<td>Cohort difference in linear age change</td>
<td></td>
<td></td>
<td>–0.43** –0.70, –0.17</td>
</tr>
</tbody>
</table>

* p < 0.05; **p < 0.01.
† All parameter entries are maximum likelihood estimates fitted by individual growth models by using the PROC MIXED procedure from the SAS statistical software package (SAS Institute, Inc., Cary, North Carolina). Cohort was coded 0 = preboomer, 1 = baby boomer. All predictors were standardized for the entire sample measured over time by subtracting mean and dividing by standard deviation to facilitate comparison of magnitudes of regression coefficients by using a one standard deviation change. Refer to the Materials and Methods section of the text for a definition of preboomers and baby boomers.
‡ CI, confidence interval.

TABLE 3. Longitudinal changes in self-rated health status from 1975 to 2003 in two cohorts, by time, Upstate New York†

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model 1 Estimate 95% CI†</th>
<th>Model 2 Estimate 95% CI†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-rated health at a mean age of 42 years and 1993</td>
<td>77.27** 75.22, 79.31</td>
<td>81.98** 77.50, 86.46</td>
</tr>
<tr>
<td>Per year of time from 1975 to 2003</td>
<td>–0.46** –0.70, –0.21</td>
<td>–0.05 –0.45, 0.35</td>
</tr>
<tr>
<td>Per year of age from 20 to 75 years</td>
<td>–0.30* –0.56, –0.05</td>
<td>–0.58** –0.98, –0.17</td>
</tr>
<tr>
<td>Time × age</td>
<td>–0.03** –0.04, –0.03</td>
<td>–0.03** –0.04, –0.03</td>
</tr>
<tr>
<td>Cohort difference</td>
<td>–5.08* –9.11, –1.05</td>
<td>–0.31** –0.43, –0.18</td>
</tr>
<tr>
<td>Cohort difference by time</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.05; **p < 0.01.
† All parameter entries are maximum likelihood estimates fitted by individual growth models by using the PROC MIXED procedure from the SAS statistical software package (SAS Institute, Inc., Cary, North Carolina). Time was centered at 1993; age was centered at 42 years. Cohort was coded 0 = preboomer, 1 = baby boomer. Refer to the Materials and Methods section of the text for a definition of preboomers and baby boomers.
‡ CI, confidence interval.
use these ideas when assessing their own health (36, 39). It is undeniably true that more recent generations are exposed to much more health-related literature and advertising, all tending to reinforce a view of great personal vulnerability, regardless of the sanitary and medical strides achieved over recent generations.

Several limitations of the current study require discussion. Because it was conducted with a sample of primarily White women, the findings cannot be readily generalized to non-White or male samples. A second limitation of our study was that all women in this sample were mothers, so findings may not generalize to women who are childless.

Our findings of a cohort difference in SRH may be important for medical policy and care in the United States. If this difference continues to increase, more recent generations will continue to amplify the demand for medical care. Our findings have important policy implications because they suggest that the nation’s overall health goals (40) are not being met. Identifying and addressing the cause of this cohort difference in SRH are essential. Continued population surveillance of SRH offers promise for contributing to our understanding of the broader determinants of women’s health and for evaluating progress toward national health goals.

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