INT'L. J. AGING AND HUMAN DEVELOPMENT, Vol. 76(3) 251-267, 2013

CHANGE IN PERCEIVED AGE IN MIDDLE AND LATER LIFE*

RUSSELL A. WARD
University at Albany, SUNY

ABSTRACT

Analyses examine change in the age people "feel" (*felt age*) and "would like to be" (*ideal age*) (relative to current age) in middle and later life. Data are from 1,815 respondents in two waves (1995-96, 2004-06) of the Midlife in the United States Survey (MIDUS) who were age 40+ at Wave 1. In aggregate, people feel about the same amount younger but become increasingly distant from preferred age. Favorable health trends between waves and better expected future health are related to younger *felt age*, cross-sectionally and longitudinally. Health is not related to *ideal age*, but education and (for respondents younger than 60) better financial expectations are associated with less youthful ideal age. Patterns for *felt age* appear to reflect images of later life as a time of physical decline, whereas *ideal age* appears to be shaped more by socioeconomic considerations.

Perceptions of age are imbued with cultural, social, and personal meaning, as highlighted in symbolic-interactionist perspectives on how stereotypes and self-perceptions of aging reflect images and meanings of age (e.g., Karp, 1988; Levy,

*The research reported here uses data from the National Survey of Midlife Development in the United States (MIDUS), 1995-1996 and 2004-06, which was carried out with support from the John D. and Catherine T. MacArthur Foundation on Successful Midlife Development. Data were acquired from the Inter-University Consortium for Political and Social Research, Ann Arbor, MI. An earlier version of this article was presented at the annual meetings of the Gerontological Society of America, November, 2010, New Orleans, LA.

doi: http://dx.doi.org/10.2190/AG.76.3.e
http://baywood.com

2003; Logan, Ward, & Spitze, 1992; Sherman, 1994). This contributes to a "mental map of the life cycle" (Settersten & Mayer, 1997) or "internalized clock" (Schafer & Shippee, 2010b), as internalized images and stereotypes, beginning in childhood and continuing in adulthood, become aging "self-stereotypes" that affect self-perceptions of aging (Levy, 2003). Schafer and Shippee (2010b) have emphasized that this is a dynamic process linked to life course experiences, as "construction of an age-based identity" (p. 245) is shaped by past and present circumstances. Similarly, Montepare (2009) has also noted the dynamic "process of anchoring and adjusting personal age perceptions" (p. 42), highlighting the dynamic nature of perceived age over the life course.

This life course view points to the dynamics of perceptions of the aging self throughout the life course. However, although some research has addressed perceived age in adolescence and young adulthood (e.g., Foster, Hagan, & Brooks-Gunn, 2008; Galambos, Albrecht, & Jansson, 2009; Galambos, Turner, & Tilton-Weaver, 2005; Rubin & Berntsen, 2006), it has been assessed mostly with older samples (aged 60 or 65+). Further, as Schafer and Shippee (2010b), have noted, research has largely failed to take a dynamic view of change in perceived age. The research reported here also focuses on older ages, but it extends into midlife, in which age perceptions and "aging messages" (Karp, 1988) may become more influential for one's self-image and identity (see also Logan et al., 1992; Macia, Duboz, Montepare, & Gueye, 2012; Rubin & Berntsen, 2006; Sherman, 1994; Ward, 2010; Westerhof & Barrett, 2005). In addition, a longitudinal approach is taken to address understudied questions of how and why perceived age changes over time, while comparing patterns for two dimensions of perceived age.

CONCEPTUALIZATION AND MEASUREMENT OF PERCEIVED AGE

How should we conceptualize and measure perceived age? A variety of terms and measures have been used in this literature (e.g., see Settersten & Mayer, 1997), including "age identity" as "middle-aged" or "old" (e.g., Logan et al., 1992; Mutran & George, 1982; Ward, LaGory, & Sherman, 1988), "aging satisfaction" (e.g., Kleinspehn-Ammerlahn, Kotter-Grühn, & Smith, 2008; Levy, Slade, Kunkel, & Kasl, 2002), and the age people "feel" or would "like" to be (e.g., Hubley & Hultsch, 1994; Rubin & Berntsen, 2006; Uotinen, Rantanen, Suutama, & Ruoppila, 2006; Ward, 2010; Westerhof & Barrett, 2005). These views of perceived age variously reflect cultural images of age and aging as well as experiences in one's own life.

The "feel" and "like" indicators, termed *felt age* and *ideal age*, are employed here as reflecting these dimensions of perceived age in different ways. Felt and ideal age exhibit different empirical patterns: younger *felt age* has been found to be related to positive views of self and of one's life, whereas younger

ideal age is related to less positive experiences and assessments of one's life (Ward, 2010; also see Macia et al., 2012). Reflecting these patterns, *felt age* is conceptualized here as comparisons of one's life to expectations and stereotypes about age (similar in that regard to "age identity" and Levy's (2003) focus on age stereotypes); e.g., at 70 you may feel 50 because your life does not fit your images and expectations for being "older." *Ideal age*, in contrast, is conceptualized here as a comparison to one's earlier life and perceived prospects for the future (similar to "aging satisfaction," as also noted by Macia et al., 2012); for example, at 70 you may wish to be 50 because life was better then and perhaps held more promise for the future.

PREDICTORS OF PERCEIVED AGE AND CHANGE

Suggesting a "youthful bias" (Staats, Heaphey, Miller, Partlo, Romine, & Stubbs, 1993) or "rejection" of old age (Barak & Rahtz, 1999), most people in middle and later life avoid self-labels like "old" and report feeling younger than their age, a pattern found in a variety of societal contexts from the United States and Canada to Western Europe to Africa (e.g., see Barak, 2009; Hubley & Hultsch, 1994; Kleinspehn-Ammerlahn et al., 2008; Kotter-Grühn, Kleinspehn-Ammerlahn, Gerstorf, & Smith, 2009; Macia et al., 2012; Montepare & Lachman, 1989; Rubin & Berntsen, 2006; Staats et al., 1993; Ward, 2010; Westerhof & Barrett, 2005). This may reflect efforts at self-enhancement and comparison to stereotypical (and outdated) images of older people (Schafer & Shippee, 2010a; Teuscher, 2009). Indeed, older felt age and younger ideal age are associated with lower well-being (e.g., Logan et al., 1992; Montepare & Lachman, 1989; Uotinen et al., 2006; Ward, 2010; Westerhof & Barrett, 2005).

Reflecting these patterns, Schafer and Shippee (2010b) suggest that people will seek to maintain younger age identity or perceived age. But what factors shape and predict *change* in perceived age? Montepare (2009) refers to "reference points" that shape subjective age judgments over the life course; Galambos et al. (2009) cite sociocultural transitions in adolescence and young adulthood, and Settersten and Mayer (1997) also refer to transitions in education and work. Similarly, Karp (1988) discusses aging "messages" in midlife, Logan et al. (1992) refer to changes in family and work as "signposts," and Sherman (1994) reports themes of comparative, reflected, retrospective, and mature self. These considerations point to the relevance of age-symbolic transitions and experiences, and of age-linked alterations in perceptions of one's life and self. Perceived age is viewed here as being shaped by, first, one's expectations about older ages compared to one's own circumstances, and, second, patterns and transitions that entail comparisons with one's past and expectations about the future. More specifically, findings from prior research can be organized around three sets of factors: age-linked role transitions, socioeconomic status, and health.

Social roles and transitions associated with aging, such as retirement and widowhood, seem likely to be "signposts" that affect perceived age, leading to older felt age and perhaps younger ideal age. However, there are inconsistent findings: some have found perceived age related to retirement (Bultena & Powers, 1978; Mutran & George, 1982; Ward, 1977) or widowhood (Logan et al., 1992; Mutran & Reitzes, 1981), but others find little association between perceived age and work or family roles and transitions in those roles, particularly when health is controlled (e.g., see Logan et al., 1992; Schafer & Shippee, 2010b; Ward, 2010).

Barrett (2003) cites SES as shaping subjective experiences of aging, perhaps due to a more compressed life course at lower SES. Thus, lower SES may yield older felt age and younger ideal age (reflecting less "aging satisfaction"). However, although a few studies have found education or financial well-being related to perceived age (Baum & Boxley, 1983; Markides & Boldt, 1983; Mutran & George, 1982; Steitz & McClary, 1988), Barrett (2003) found such patterns to be accounted for by worse health at lower SES.

In contrast to the inconsistent findings for age-related social roles and SES, health has been found to have a consistent, even overarching influence on perceived age. Levy et al. (2002) suggest that physical decline is a central theme in aging stereotypes, and worse health (especially self-rated health) consistently predicts older age perceptions (e.g., Barak & Rahtz, 1999; Barrett, 2003, 2005; Hubley & Russell, 2009; Logan et al., 1992; Schafer & Shippee, 2010a; Staats et al., 1993; Ward, 2010; Westerhof, Barrett, & Steverink, 2003), and Schafer and Shippee (2010b) found that health decline predicts change in perceived age.

RESEARCH QUESTIONS

Older age is associated with older perceived age and lower "aging satisfaction," but also with feeling younger than one's age to a greater extent (e.g., Logan et al., 1992; Kotter-Grühn et al., 2009; Ward, 2010). Such correlations with age imply change, but only a few studies have investigated perceived age longitudinally or the predictors of change. Some have found movement toward older categories (e.g., from middle-aged to old) (Bultena & Powers, 1978; Markides & Boldt, 1983; Markides & Ray, 1988). Uotinen et al. (2006) found in an older Finnish sample (65+ at baseline) that both *felt* and *ideal* age increased over 8 years in absolute terms, but there was not significant aggregate change relative to chronological age; and individual change was about evenly divided between feeling or wishing to be older and younger. Similarly, average felt age (relative to chronological age) exhibited little change over 6 years for an older Berlin sample, though individuals changed in both directions (Kleinspehn-Ammerlahn et al., 2008; Kotter-Grühn et al., 2009); change was related to health, but not SES.

The first research question concerns patterns of change in perceived age, and whether they differ for the two dimensions of felt and ideal age. We have

noted prior cross-sectional findings that older felt age and younger ideal age are associated with older age, suggesting change. But some research suggests that perceived age is stable in aggregate relative to current age. It is hypothesized here that felt age (relative to chronological age) will be stable, as people feel about the same degree younger (or older). However, if preferred age is more anchored (at, say, 40), ideal age would exhibit increasing distance from current age.

A second set of questions concerns predictors of change in perceived age, and whether there are different patterns for felt and ideal age. It was suggested earlier that felt age reflects comparisons to expectations and stereotypes about aging, whereas ideal age reflects comparisons to one's past and expectations about one's future. More specifically, three sets of factors were highlighted: health, socioeconomic status, and role changes. It is hypothesized that better health will be associated with increasingly youthful felt age by countering stereotypes of physical decline; but better health may also contribute to less youthful ideal age by increasing the comparative value of current age. Some findings suggest that higher socioeconomic status will be related to feeling younger, though this may reflect better health; but higher SES may also contribute to a less youthful ideal age by increasing the perceived quality of current and future age. Finally, retirement and widowhood may be associated with older felt age as age-symbolic role losses, but with younger ideal age by reducing the perceived quality of current age; however, past research suggests that controls for health may account for such patterns.

METHOD

Sample

Data are from two waves (1995-96 and 2004-06) of the Midlife in the United States (MIDUS) survey, representing non-institutionalized, English-speaking adults aged 25-74. Retention at Wave 2 for the core sample was 69%; predictors included being older, female, in better health, and better educated (Radler & Ryff, 2010); the subgroup analyzed here exhibited similar retention patterns. Reflecting our focus on middle and later life, analyses include respondents aged 40-74 at Wave 1 who were also in Wave 2 (N = 1,815 of 2,270 from Wave 1, 80% retention). Respondents at Wave 2 were aged 48 to 84 (M = 63.1, SD = 9.2): 41% were younger than 60, 32% in their 60s, and 27% aged 70+; 51% were women; and 90% white, 5% black, and 5% other or multiple racial identification.

Measures

Age-Related Perceptions

We focus on two measures of perceived age—"what age do you feel most of the time" and "what age would you like to be"—subtracted from chronological

age to assess how much respondents feel younger/older (*felt age*) and would like to be younger/older (*ideal age*) than current age (positive scores = feel/like to be younger). These are not strongly correlated ($r = .20, p < .001$). Wave 1-2 retention on these key variables was 84% for felt age and 85% for ideal age. To reduce distortion from extreme scores, approximately 5% reporting feeling or liking to be many years younger were recoded (e.g., for *felt age*: 30+ = 30).

Predictors of Age Perceptions

Analyses focus on three sets of predictors: health, socioeconomic status, and role changes. As we have noted, health has been found to be a consistent factor in perceived age. Various health measures in the survey, including subjective assessments, functional health, and health conditions, are strongly intercorrelated and exhibit similar associations with perceived age. Here we focus on subjective self-rated health, a common indicator of overall health and the primary focus in studies of perceived age. Respondents rated "your health these days" (from 0 = *worst possible* to 10 = *best possible*; mean = 7.3, SD = 1.7), "looking back 10 years ago" ($M = 8.1$, $SD = 1.8$), and "looking ahead 10 years into the future" ($M = 6.4$, $SD = 2.2$). Current and expected future health are highly correlated ($r = .73$, $p < .001$), raising collinearity issues, so a measure of health change was created by subtracting Wave 1 current health from Wave 2 current health ($M = -0.22$, $SD = 1.58$). Health change is more modestly correlated with expected future health ($r = .41$, $p < .001$). This also allows an assessment of the roles of both health change (incorporating past and current health) and future expectations, and to use parallel measures of financial situation.

Two socioeconomic indicators are used. Parallel to health, respondents rated "your financial situation" now ($M = 6.6$, $SD = 2.2$), 10 years ago ($M = 6.7$, $SD = 2.1$), and 10 years into the future ($M = 6.8$, $SD = 2.3$). Like health, current and expected finances are highly correlated ($r = .66$, $p < .001$), so change in current financial assessment from Wave 1 to Wave 2 is used ($M = .24$, $SD = 2.16$) along with expected future finances (their correlation is: $r = .33$, $p < .001$). Education (12 categories from 1 = *no school/some grade school* to 12 = *Ph.D [and similar]*; $M = 7.2$ [corresponding to some college], $SD = 2.7$), is also used as an indicator of SES.

Age-linked role transitions are represented by dummy variables for being widowed (11%) and for retired (38%). Analyses also include age and gender (*male* = 1, *female* = 0).

RESULTS

Patterns of Perceived Age

As in prior studies, respondents generally "feel" and would "like" to be younger. Mean age respondents reported feeling was 44.0 at Wave 1 ($M = 9.9$ years younger

than current age) and 51.7 at Wave 2 (M = 11.4 years younger, SD = 9.1). The degree to which people felt younger (relative to chronological age) was relatively stable: felt age was correlated over the two waves (r = .52, $p < .001$), aggregate *felt age* increased only marginally (9.9 to 11.4), and mean individual change was only 1.4 years. But there is individual variation (SD for change in felt age = 8.4); for example, felt age (versus current age) declined by 1-4 years for 21%, by 5-9 years for 11%, and by 10 years or more for 12%, while felt age increased by 1-4 years for 19%, by 5-9 years for 18%, and by 10 years or more for 13%.

The mean age people would "like to be" was 35.0 at Wave 1 (M = 19.0 years younger) and 38.3 at Wave 2 (M = 24.9 years younger, SD = 13.3); as was true of felt age, these ages were relatively highly correlated over the two waves (r = .61, $p < .001$). But although reported preferred age was relatively stable in an absolute sense, this yielded greater change in *ideal age* relative to current age; mean individual change in ideal age was 5.8 years (SD = 10.5), greater than the change in felt age. Thus, over time respondents in aggregate felt about the same amount younger but became more distant from the age they would like to be. As with felt age, there is individual variation in change in ideal age; for example, ideal age (relative to current age) declined by 1-4 years for 9%, by 5-9 years for 5%, and by 10 years of more for 8%, while ideal age increased by 1-4 years for 16%, by 5-9 years for 27%, and by 10 years or more for 30%.

Table 1 summarizes patterns by age and gender. Older respondents felt younger to a greater extent in both waves than younger (more middle-aged) respondents, but the younger respondents exhibited modestly more change. Age differences are more pronounced for *ideal age* in both waves, as older respondents perceived themselves more distant from the relatively anchored preferred age than did more middle-aged respondents. But change in ideal age is not related to age in this bivariate analysis (though it is related in multivariate analyses reported below). Women felt younger than men, but only in Wave 1; and men and women did not differ significantly in their change in felt age. Men were more distant from their preferred age in Wave 2, and men exhibited greater change in ideal age.

Predictors of Perceived Age

Potential predictors of *felt* and *ideal* age and of their change—health, socioeconomic status, role changes, age, and gender—were incorporated in multiple regression analyses (see Table 2). Two models are presented for both dependent variables:

1. a cross-sectional view at Wave 2, assessing predictors of the *levels* of felt and ideal age; and
2. a stepwise model that first entered the corresponding Wave 1 measure of perceived age, then added other predictors, thereby assessing predictors of *change* in the dependent variable from Wave 1 to Wave 2 (see Allison, 1990; Finkel, 1995).

Table 1. Patterns of *Felt Age* and *Ideal Age* by Age and Gender

	Felt age[a]			*Ideal age*[a]		
	Wave 1	Wave 2	Change	Wave 1	Wave 2	Change
Age						
48-54	6.9*	9.2*	2.4*	12.5*	18.3*	6.0
55-64	9.0	11.0	1.8	16.8	22.8	6.0
65+	12.3	12.9	0.6	24.6	30.0	5.6
Gender						
Men	9.5*	11.0	1.4	19.6	26.4*	6.8*
Women	10.3	11.8	1.5	18.8	23.6	4.9

[a]Chronological age minus age R feels/like to be (positive score = feel/like to be younger).
*Differences across age groups and by gender significant at $p < .05$.

Beginning with *felt age*, the cross-sectional analysis shows that feeling younger is most strongly related to older age and more favorable future health expectations, whereas being retired has a small association with feeling older. Turning to the longitudinal analysis of *change* in felt age, age is not related to change in felt age with other variables controlled, but both improved health (or less decline) and positive health expectations are associated with feeling younger. Socioeconomic indicators (education and perceived financial status) and gender are not related to felt age or its change. Neither being widowed nor retired is related to change in felt age; further, other analyses found that becoming widowed (5% of Rs) or retired (19% of Rs) between waves is also unrelated to change in felt age.

We can add some flesh to the regression patterns to clarify the magnitude of the effects of perceived health on change in felt age. The mean change in felt age ranged from –.22 years for those who reported worse health at Wave 2, to 1.74 years for those reporting no change, to 3.28 years (younger) for those reporting better health. Similarly, mean change in felt age ranged from .50 years for those scoring 0-4 on future health expectations to 2.60 years for those scoring 8-10.

Different patterns are evident for *ideal age*. The cross-sectional analysis shows that more youthful ideal age is strongly associated with older age (as with felt age) and (unlike felt age) modestly to being male and having less education, and more weakly to less favorable future financial expectations; further, in contrast to felt age, health perceptions are unrelated to ideal age. Ideal age is not related to being widowed or retired (or to becoming so between waves). In the analysis of *change* in ideal age, age and gender retain modest significant associations. Older age is associated with becoming more distant from the age one would "like to be" in the multivariate analysis. Additionally, men

Table 2. Multiple Regression Analyses of *Felt Age* and *Ideal Age* (Standardized Regression Coefficients), Cross-Sectional at Wave 2 (T2) and Change from Wave 1 (T1) to Wave 2

	Felt age[a]		*Ideal age*[a]	
	Cross-sectional at T2	Change T1-T2	Cross-sectional at T2	Change T1-T2
Felt/ideal age T1		.50*		.53*
Age	.26*	.05	.38*	.14*
Gender[b]	–.03	–.00	.13*	.10*
Education	.02	.00	–.13*	–.08*
Widowed[c]	.03	.03	.01	.00
Retired[c]	–.08*	–.03	–.02	–.01
Health change[d]	.04	.11*	.04	.02
Health future[e]	.28*	.12*	–.05	–.02
Financial change[d]	–.04	–.01	.00	–.02
Financial future[e]	.04	.02	–.07*	–.03
N	1353	1330	1377	1369
Adj. R^2	.119*	.312*	.209*	.413*

[a]Chronological age minus age R feels/like to be (positive score = feel/like to be younger).
[b]Gender coded 1 = male, 0 = female.
[c]Widowed and retired coded 1 = widowed/retired, 0 = not.
[d]Health and financial change = T2 rating (0-10) – T1 rating (0-10).
[e]Expected future health and financial ratings coded from 0 = *worst possible* to 10 = *best possible*.
*$p < .05$.

exhibit increasingly younger ideal age compared with women. Education retains a significant (albeit small) negative association with change in ideal age, but financial perceptions are not significantly related to change in ideal age (as noted below, however, an association is found among younger respondents).

To explore patterns of perceived age more fully, analyses of change in felt and ideal age were repeated separately by gender and by age (see Table 3). There are no statistically significant differences in the model coefficients for men and women. In the models by age subgroups for felt age (< 60 vs. 60+), there is a statistically significant difference in the coefficients for gender: men feel younger than women among respondents younger than 60, whereas women feel younger than men among respondents aged 60+. However, both coefficients

Table 3. Multiple Regression Analyses of *Felt Age* and *Ideal Age* (Standardized Regression Coefficients), Change from Wave 1 (T1) to Wave 2 (T2), by Age and Gender Subgroups

	Change in *Felt age*[a] T1-T2				Change in *Ideal age*[a] T1-T2			
	Younger than 60	Age 60+	Men	Women	Younger than 60	Age 60+	Men	Women
Felt/ideal age T1	.46*	.51*	.48*	.51*	.45*	.54*	.55*	.51*
Age	.02	.06	.01	.11*	.05	.09*	.14*	.15*
Gender[b]	**.08***	**–.08***	X	X	.10*	.11*	X	X
Education	–.01	.01	–.04	.05	–.05	–.10*	–.11*	–.04
Widowed[c]	–.02	.03	.03	.01	–.03	.01	–.05	.04
Retired[c]	.03	–.04	–.03	–.02	–.04	.00	.00	–.03
Health change[d]	.11*	.12*	.10*	.12*	–.02	.05	–.02	.06
Health future[e]	.18*	.08*	.17*	.08	.00	–.03	–.02	–.02
Financial change[d]	–.03	–.01	–.05	.02	–.01	–.03	.02	–.06
Financial future[e]	–.03	.05	.04	.01	**–.15***	**.02**	–.05	–.02
N	563	767	659	671	574	795	668	701
Adj. R^2	.298*	.320*	.292*	.339*	.277*	.378*	.440*	.368*

[a]Chronological age minus age R feels/like to be (positive score = feel/like to be younger).
[b]Gender coded 1 = male, 0 = female.
[c]Widowed and retired coded 1 = widowed/retired, 0 = not.
[d]Health and financial change = T2 rating (0-10) – T1 rating (0-10).
[e]Expected future health and financial ratings coded from 0 = *worst possible* to 10 = *best possible*.
*$p < .05$. Differences between coefficients across subgroups (age or gender) highlighted where significant (based on comparisons of unstandardized coefficients).

are small. Other predictors of change in felt age do not differ significantly for the age subgroups; in particular, better health predicts younger felt age for both middle-aged and older respondents.

Predictors of ideal age are also similar for middle-aged and older respondents with one exception: favorable future financial expectations are significantly related to change toward less youthful ideal age among respondents younger than 60, but these are not related among older respondents. To add some clarification to the magnitude of this association, mean change in ideal age among respondents younger than 60 ranged from 7.9 years for those scoring 0-4 on future financial expectations to 5.0 years for those scoring 8-10. Thus, among respondents in the younger (more middle-aged) group, those with more positive views of future finances wish to be younger to a lesser extent.

DISCUSSION

Perceived age has been a topic of considerable interest. Although some work has looked at this in midlife and even into adolescence and young adulthood, research has focused mostly on older samples. Both middle-aged and older persons have been found to typically feel younger and wish to be younger than their current age. But with a few exceptions, this research has taken a static cross-sectional view. The research reported here takes a dynamic longitudinal view to analyze patterns of change in perceived age and predictors of that change in both middle and later life, focusing on three sets of predictors: health, socioeconomic status, and age-linked role changes. Patterns of change are compared for *felt* and *ideal* age to illuminate different dimensions of perceived age.

As hypothesized, *felt age* exhibited little change in aggregate, with relative stability in feeling younger compared to current age (about 10-12 years). Felt age appears to be a moving equilibrium; i.e., the age people feel increases with age but remains on average about the same degree younger compared with their actual age. Rubin and Berntsen (2006) found similar stability in felt age after age 40 in their Danish sample, feeling about 20% younger (roughly comparable to the patterns reported here). In contrast, the age people wish to be is more anchored (in the mid-30s), so that *ideal age* exhibits increasing distance from current age longitudinally.

Aggregate patterns of felt and ideal age here (approximately 10 and 20 years younger, respectively) are similar to Hubley and Hultsch's (1994) Canadian sample, and stability over time in felt age was also found in samples in Berlin (Kleinspehn-Ammerlahn et al., 2008) and Finland (Uotinen et al., 2006). However, Uotinen et al. (2006) found smaller age discrepancies in felt age (about 5-7 years), older preferred ages (means of about 50 to 70 for different subgroups) that yielded smaller discrepancies in ideal age, and no significant aggregate change over 8 years in ideal age discrepancies from current age. Macia et al. (2012) also found smaller discrepancies in both felt age (less than 3 years)

and ideal age (about 10 years) in a Senegalese sample. The different patterns in Finland and Senegal suggest cross-cultural variation in images and acceptance of aging that shape perceived age.

Although change in perceived age was relatively modest in aggregate, there was substantial variability across individuals (from 10 or more years younger to 10 or more years older on both dimensions). Changes in perceived age reflect both change in a person's circumstances over time and perceptions about the future. As expected, however, felt and ideal age exhibited different patterns of predictors, in particular in the implications of health and socioeconomic factors. Feeling younger and change in that direction were related to more favorable health trends between waves and to better expected future health. Health was not related to ideal age, however (as also found by Hubley and Hultsch, 1994, and Macia et al., 2012). Socioeconomic variables—education and expected future financial well-being—were not related to felt age (similar to Kleinspehn-Ammerlahn et al., 2008, and Rubin and Berntsen, 2006), but they exhibited some association with ideal age.

These analyses investigated change in perceived age in both midlife and later life, enabling comparisons of patterns in these different parts of adulthood. Older respondents report increasingly younger felt age compared with chronological age, but felt age tends to be proportionately similar from midlife into later life, as also noted by Rubin and Berntsen (2006). Predictors are also similar in midlife and later life, with health playing a significant role in shaping how old people feel. Similarly, Logan et al. (1992) found that health predicted both "young" vs. "middle-aged" and "middle-aged" vs. "old" age identity. Although felt age exhibits proportional stability, ideal age exhibits increasing distance from a relatively anchored age (at about 35-40) people would "like to be." However, midlife respondents (younger than 60) exhibited less youthful ideal age if their perceived financial prospects were more favorable. This may reflect the approach of retirement, with greater "aging satisfaction" (implied by less youthful ideal age) in middle-age when better financial well-being is anticipated.

Prior research has found only inconsistent associations between perceived age and widowhood and retirement, and patterns here found these to have little bearing on either felt or ideal age. Although widowhood and retirement might be viewed as age-symbolic transitions, their implications for perceived age appear to be accounted for by age, health, and socioeconomic factors (also see Logan et al., 1992; Ward, 2010).

Gender was not related to felt age, but men reported more youthful ideal age than women (also found by Uotinen et al., 2006) and changed more in that direction. Studies of gender and perceived age have yielded inconsistent patterns: some report women feeling younger (Hubley & Hultsch, 1994; Schafer & Shippee, 2010a) or having younger age identity (Montepare & Lachman, 1989), others that men feel younger (Kotter-Grühn et al., 2009). Noting such inconsistencies, others have called for further research on gender differences in

perceived age (e.g., Kleinspehn-Ammerlahn et al., 2008; Schafer & Shippee, 2010a), with Barrett (2005) suggesting in-depth investigation of "gendered experiences" in health, family, and work.

What are the implications of the patterns of perceived age reported here? The introductory discussion suggested that perceived age is shaped over the life course by two considerations: internalized images about aging (Levy, 2003) and comparisons with one's own life, past and future, corresponding to Montepare's (2009) "reference points." Changes in the two dimensions of perceived age addressed here—felt age and ideal age—reflect these processes, but in different ways. Felt age has been conceptualized here as reflecting expectations and stereotypes about aging, in particular as a time of physical decline, as suggested by Levy et al. (2002), so better health corresponds to younger self-image. Prior research and patterns reported here show little effect of socioeconomic factors on felt age. Ideal age, in contrast, is not related to health but is related to education and to expected future financial well-being among middle-age persons. Ideal age, a less-studied dimension of perceived age, is conceptualized here as "aging satisfaction" that reflects a weighing of the positives and negatives of one's past, present, and expected future. Less youthful ideal age appears to partly reflect advantages of higher socioeconomic status in midlife that yield more promising expectations for later life.

Contrasts between felt and ideal age are also likely in terms of the outcomes of perceived age and change. Reflecting symbolic-interactionist underpinnings of work on perceived age, resistance to older perceived age, and its association with feelings of decline, suggest a devalued status of later life (e.g., see Nelson, 2002; Westerhof & Barrett, 2005) whereby younger perceived age may be self-enhancing (Barrett, 2005) and people seek to maintain more youthful self-perceptions (Schafer & Shippee, 2010b). Although there is cross-cultural variation in patterns of perceived age which may reflect cultural values and processes of modernization, self-enhancing implications of more youthful perceived age are evident in many societies (Barak, 2009; Macia et al., 2012). Felt and ideal age reflect these considerations, but again in different ways: feeling younger has been found to be related to higher well-being, but younger ideal age related to lower well-being (e.g., see Ward, 2010; also Macia et al., 2012). Feeling healthy (as do most in middle and later life) contributes to feeling younger, and expected good future health enhances this over time; so younger felt age (and a younger "age identity") is self-enhancing, counteracting negative images of aging. More youthful ideal age (or less "aging satisfaction"), in contrast, entails lower well-being. This distance from preferred age increases from middle to later life. However, positive financial expectations for the future, at least in midlife, likely contribute to well-being in part through less youthful ideal (or "preferred") age.

In addition to the implications of perceived age for subjective well-being, felt and ideal age may affect behavior. Levy (2003) has suggested that aging stereotypes become internalized earlier in life and may eventually become

self-stereotypes. Levy offers the example of negative images of aging reducing self-efficacy, which in turn reduces functional health. In a similar vein, feeling "old" may lead people to accept problems as "normal aging," or might hasten retirement decisions. On the other hand, feeling (or wishing to be) younger suggests a reluctance to identify with "old people," which may reduce age-based political solidarity or affect willingness to utilize programs and services for seniors.

Although longitudinal data have clear advantages over cross-sectional data for addressing patterns and especially changes in perceived age, some limitations should be acknowledged. The 10-year time frame is relatively limited (though nonetheless there is evidence of substantial change and interindividual variation in perceived age), and analyses here focused on persons already in midlife or older. In addition, attrition in panel studies is a source of potential bias. Retention in the MIDUS sample was high for the subsample and key variables of interest here, but greater retention of older respondents, particularly those in better health (Radler & Ryff, 2010), may have yielded somewhat different patterns of felt and ideal age and their change, and perhaps understated the role of health over time.

This study points to promising areas for further research. More work is needed on dynamic aspects of perceived age across the life course (Montepare, 2009; Schafer & Shipee, 2010b). Work by Galambos et al. (2005), for example, suggests that implications of feeling younger or older are likely to be different in "emerging adulthood" than in later life. Different patterns for felt and ideal age found here also highlight the need to investigate further the nature, antecedents, and outcomes of different dimensions of perceived age. Schafer and Shipee (2010b), for example, point to the relevance of experiences in the lives of significant others, reflecting the implications of linked lives within a life course perspective, and of psychosocial resources in adapting to stress. The results here point to the need to investigate further the implications of socioeconomic variables on different dimensions of perceived age, and how these may be related to gender and other status characteristics. More attention is also needed to outcomes of perceived age and of changes therein, in terms of various dimensions of well-being and possible effects on behavior and life choices in areas such as work and retirement, leisure and volunteer participation, and service utilization. More work is also needed on cross-cultural and subgroup differences in the meanings, predictors, and outcomes of various dimensions of perceived age.

REFERENCES

Allison, P. (1990). Change scores as dependent variables in regression analysis. *Sociological Methodology, 20*, 93-114. url: http://www.jstor.org/stable/271083

Barak, B. (2009). Age identity: A cross-cultural global approach. *International Journal of Behavioral Development, 33*, 2-11. doi: 10.1177/0165025408099485

Barak, B., & Rahtz, D. (1999). Perceived youth: Appraisal and characterization. *International Journal of Aging and Human Development, 49*, 231-257. doi: 10.2190/11CW-WKLJ-40KW-7KG9

Barrett, A. (2003). Socioeconomic status and age identity: The role of dimensions of health in the subjective construction of age. *Journal of Gerontology: Social Sciences, 58B*, S101-S109. doi: 10.1093/geronb/58.2S101

Barrett, A. (2005). Gendered experiences in midlife: Implications for age identity. *Journal of Aging Studies, 19*, 163-183. doi: 10.1016/j.aging.2004.05.002

Barrett, A., & Robbins, C. (2008). The multiple sources of women's aging anxiety and their relationship with psychological distress. *Journal of Aging and Health, 20*, 32-65. doi: 10.1177/0898264307309932

Baum, S., & Boxley, R. (1983). Age identification in the elderly. *The Gerontologist, 23*, 532-553. doi: 10.1093/geront/23.5.532

Bultena, G., & Powers, E. (1978). Denial of aging: Age identification and reference group orientation. *Journal of Gerontology, 33*, 748-754.

Finkel, S. (1995). *Causal analysis with panel data.* Thousand Oaks, CA: Sage.

Foster, H., Hagan, J., & Brooks-Gunn, J. (2008). Growing up fast: Stress exposure and subjective "weathering" in emerging adulthood. *Journal of Health and Social Behavior, 49*, 162-177. doi: 10.1/1177/002214650804900204

Galambos, N., Albrecht, A., & Jansson, S. (2009). Dating, sex, and substance use predict increases in adolescents' subjective age across two years. *International Journal of Behavioral Development, 33*, 32-41. doi: 10.1177/0165025408095552

Galambos, N., Turner, P., & Tilton-Weaver, L. (2005). Chronological and subjective age in emerging adulthood: The crossover effect. *Journal of Adolescent Research, 20*, 538-556. doi: 10.1177/0743558405274876

Hubley, A., & Hultsch, D. (1994). The relationship of personality trait variables to subjective age identity in older adults. *Research on Aging, 16*, 415-439. doi: 10.1177/0164027594164005

Hubley, A., & Russell, L. (2009). Predictions of subjective age, desired age, and age satisfaction in older adults: Do some health dimensions contribute more than others. *International Journal of Behavioral Development, 33*, 12-21. doi: 10.1177/0165025408099486

Karp, D. (1988). A decade of reminders: Changing age consciousness between fifty and sixty years old. *The Gerontologist, 28*, 727-738. doi: 10.1093/geront/28.6.727

Kleinspehn-Ammerlahn, A., Kotter-Grühn, D., & Smith, J. (2008). "Self-perceptions of aging: Do subjective age and satisfaction with aging change during old age? *Journal of Gerontology: Psychological Sciences, 63B*, P377-P385.

Kotter-Grühn, D., Kleinspehn-Ammerlahn, A., Gerstorf, D., & Smith, J. (2009). Self-perceptions of aging predict mortality and change with approaching death: 16-year longitudinal results from the Berlin Aging Study. *Psychology and Aging, 24*, 654-667. doi: 10.1037/a0016510

Levy, B. (2003). Mind matters: Cognitive and physical effects of aging self-stereotypes. *Journal of Gerontology: Psychological Sciences, 58B*, P203-P211. doi: 10.1093/geronb/58.4P203

Levy, B., Slade, M., Kunkel, S., & Kasl, S. (2002). Longevity increased by positive self-perceptions of aging. *Journal of Personality and Social Psychology, 83*, 261-270.

Logan, J., Ward, R., & Spitze, G. (1992). As old as you feel: Age identity in middle and later life. *Social Forces, 71*, 451-467. doi: url:http//jstor.org/stable/2580019

Macia, E., Duboz, P., Montepare, J., & Gueye, L. (2012). Age identity, self-rated health, and life satisfaction among older adults in Dakar, Senegal. *European Journal of Ageing*, published online: April 12, 2012. doi: 10.1007/s10433-012-0227-7

Markides, K., & Boldt, J. (1983). Change in subjective age among the elderly: A longitudinal analysis. *The Gerontologist, 23*, 422-427. doi: 10.1093/geront/23.4.422

Markides, K., & Ray, L. (1988). Change in subjective age among the elderly: An eight-year longitudinal study. *Comprehensive Gerontology Bulletin, 2*, 11-15.

Montepare, J. (2009). Subjective age: Toward a guiding lifespan framework. *International Journal of Behavioral Development, 33*, 42-46. doi: 10.1177/0165025408 09551

Montepare, J., & Lachman, M. (1989). "You're only as old as you feel": Self-perceptions of age, fear of aging, and life satisfaction from adolescence to old age. *Psychology and Aging, 4*, 73-78.

Mutran, E., & George, L. (1982). Alternate methods of measuring role/identity: A research note. *Social Forces, 60*, 866-875. url: http://www.jstor.org/stable/2578399

Mutran, E., & Reitzes, D. (1981). Retirement, identity, and well-being: Realignment of role relationships. *Journal of Gerontology, 36*, 733-740.

Nelson, T. (2002). *Ageism: Stereotyping and prejudice against older persons*. Cambridge, MA: MIT Press.

Radler, B., & Ryff, C. (2010). Who participates: Accounting for longitudinal retention in the MIDUS national study of health and well-being. *Journal of Aging and Health, 22*, 307-331. doi: 10.1177/0898264309358617

Rubin, D., & Berntsen, D. (2006). People over forty feel 20% younger than their age: Subjective age across the lifespan. *Psychonomic Bulletin & Review, 13*, 776-780. doi: 10.3758/BF03193996

Schafer, M., & Shippee, T. (2010a). Age identity, gender, and perceptions of decline: Does feeling older lead to pessimistic dispositions about cognitive aging? *Journal of Gerontology: Social Sciences, 65B*, 91-96. doi: 10.1093/geronb/gbp046

Schafer, M., & Shippee, T. (2010b). Age identity in context: Stress and the subjective side of aging. *Social Psychology Quarterly, 73*, 245-264. doi: 10.1177/019027251 0379751

Settersten, R., & Mayer, K. (1997). The measurement of age, age structuring, and the life course. *Annual Review of Sociology, 23*, 233-261. url: http://www.jstor.org/stable/ 2952551

Sherman, S. (1994). Changes in age identity: Self perceptions in middle and later life. *Journal of Aging Studies, 8*, 397-412. doi: 10.1016/0890-4065(94)90011-6

Staats, S., Heaphey, K., Miller, D., Partlo, C., Romine, N., & Stubbs, K. (1993). Subjective age and health perceptions of older persons: Maintaining the youthful bias in sickness and in health. *International Journal of Aging and Human Development, 37*, 191-203. doi: 10.2190/373B-PJ6U-DWAA-4K03

Steitz, J., & McClary, A. (1988). Subjective age, age identity, and middle-age adults. *Experimental Aging Research, 14*, 83-88.

Teuscher, U. (2009). Subjective age bias: A motivational and information processing approach. *International Journal of Behavioral Development, 33*, 22-31. doi: 10.1177 /0165025409099487

Uotinen, V., Rantanen, T., Suutama, T., & Ruoppila, I. (2006). Change in subjective age among older people over an eight-year follow-up: "Getting older and feeling younger." *Experimental Aging Research, 32*, 381-393. doi: 10.1080/03610730600875759

Ward, R. (1977). The impact of subjective age and stigma on older persons. *Journal of Gerontology, 32*, 227-232.

Ward, R. (2010). How old am I? Perceived age in middle and later life. *International Journal of Aging and Human Development, 71*, 167-184. doi: 10.2190/AG.71.3.a

Ward, R., LaGory, M., & Sherman, S. (1988). *The environment for aging: Social, interpersonal, and spatial contexts*. Tuscaloosa, AL: University of Alabama Press.

Westerhof, G., & Barrett, A. (2005). Age identity and subjective well-being: A comparison of the United States and Germany. *Journal of Gerontology: Social Sciences, 60B*, S129-S136. doi: 10.1093/geronb/60.3.S129

Westerhof, G., Barrett, A., & Steverink, N. (2003). Forever young? A comparison of age identities in the United States and Germany. *Research of Aging, 25*, 366-383. doi: 10.1177/1064027503025004002

Direct reprint requests to:

Russell A. Ward
Department of Sociology
University at Albany, SUNY
1400 Washington Ave.
Albany, NY 12222
e-mail: rward@albany.edu