

Age Identity, Gender, and Perceptions of Decline: Does Feeling Older Lead to Pessimistic Dispositions About Cognitive Aging?

Markus H. Schafer and Tetyana P. Shippee

Center on Aging and the Life Course, Purdue University, West Lafayette, Indiana.

Objectives. Drawing on past studies of age identity, this article examined whether feeling older was associated with more pessimistic views about cognitive aging.

Methods. Using respondents aged 55 years and older in the Midlife Development in the United States study, we estimated a series of linear regression models to predict people's dispositions toward their cognitive aging. The main comparison is whether the effects of age identity on cognitive aging differ for men and women.

Results. Beyond the effects of chronological age, older age identities were associated with more pessimistic dispositions about cognitive aging. This relationship, however, was found only among women.

Discussion. Age identity shapes cognitive aging dispositions, though the gendered nature of this relationship remains somewhat unclear. The findings give further evidence about the far-reaching implications of age identity for successful aging and suggest that future work can explicate how subjective aging processes may differ by gender.

Key Words: Age identity—Cognitive aging—Cognitive decline—Gender—Subjective age.

AS adults progress through their later years, many note declines in their ability to recall bits of information and perform mental calculations. Though reflections about cognitive aging are expected to grow more pessimistic with the passage of chronological time, people's life courses elapse in ways besides objective days, months, calendar, and years. Therefore, age identity may be a more telling indicator of dispositions toward cognitive aging than is chronological age per se. Subjective evaluations of age are an important aspect of the self with implications for well-being (Westerhof & Barrett, 2005). Using a national longitudinal sample of adults aged 55–74 years at baseline, this article considers how age identity is associated with dispositions toward cognitive aging and how the relationship differs by gender.

Social psychologists in sociology see identities as “sets of meanings people hold for themselves that define ‘what it means’ to be who they are” (Burke, 2004, p. 5). Culture gives definition and meaning to positions within society, and people place these labels and expectations on themselves and on others. Of the various cultural categories from which people derive their identities, age is unique in that it is far more permeable than categories like race or gender, and because all people invariably increase in age over time, age identity bridges both developmental and cultural aspects of human life (Howard, 2000).

The age-based identities generated within a social context powerfully shape people's well-being. In modern cultures, youthfulness is a prized status, and accordingly,

ageism and negative stereotypes of aging abound in the United States (Palmore, 2003). Eschewing “oldness” and preserving a youthful identity are therefore compensatory strategies people use to counteract the negative cultural messages associated with aging and the realization of being past their own desired chronological age (Heckhausen & Schulz, 1998). Generally speaking, people use positive self-illusions as a strategy to maximize happiness and social engagement (Taylor & Brown, 1988). The consistent finding that people most identify with their “younger selves” (Barrett, 2003; Barrett, 2005; Uotinen, Rantanen, Suutama, & Ruoppila, 2006; Westerhof & Barrett, 2005) is a strong example of self-enhancing illusions at the basis of the self-concept (Markus & Wurf, 1987).

Consistent with these basic social psychological premises, a number of recent studies show the beneficial effects of young age identities. These include qualitative benefits such as efficacy in coping with medical illnesses (Boehmer, 2007) and general life satisfaction (Westerhof & Barrett, 2005), as well as more concrete advantages such as reduced risk of disability and hypertension (Demakakos, Gjonca, & Nazroo, 2007) and mortality (Uotinen, Rantanen, & Suutama, 2005). Despite a few exceptions (Boehmer; Demakakos et al., 2007; Uotinen et al., 2006), most research has used cross-sectional data to examine the antecedents of age identity, identifying health status and occupancy of key social roles in the life course as its chief predictors (e.g., Barrett, 2003, 2005; Johnson, Berg, & Sirotzki, 2007; Mutran & George, 1982). This article seeks to explore

additional *implications* of age identity for successful aging by using longitudinal data and focusing on how subjective age influences cognitive aging dispositions (hereafter CAD). We expect not only that age identity is related to aspects of physical well-being (Barrett, 2003; Demakakos et al.; Uotinen et al., 2005) but that older subjective age is associated with more pessimistic perspectives on cognitive functioning, net of the effect of chronological age.

Cognitive aging is a key component of successful aging, with strong implications for quality of life and maintaining independence in older age (Seeman, Lusignolo, Albert, & Berkman, 2001). Exploring CAD thus extends previous research, which has emphasized the physical health correlates of age identity but has given little attention to the mind. In addressing this limitation of past research, we draw on scale instruments developed by psychologists of aging (Lachman, Baltes, Nesselrode, & Willis, 1982; Lachman, Bandura, Weaver, & Elliott, 1992) that are useful for identifying the self-regulatory attitudes that influence cognitive performance (West & Yassuda, 2004). This research tradition has been instrumental in identifying why older adults fare worse on cognitive tasks; in addition to explanations based on brain and sensory changes (Baltes & Lindenberger, 1997), part of the effect owes to the lower levels of perceived control over their cognitive abilities and negative internalized attributions for memory performance (Devolder & Pressley, 1992; Lachman & Andreoletti, 2006). Psychologists in the area of CAD have been interested primarily in the personality attributes associated with these attitudes, such as anxiety or achievement orientation (e.g., Lachman et al., 1982) and—more recently—in identifying the mechanisms linking cognitive expectations to performance (e.g., better use of recall-enhancing learning strategies [Lachman, Andreoletti, & Pearman, 2006] and level of confidence in information retrieval [Touren & Hertzog, 2004]). Our core concern here, however, is with age identity and how it relates to CAD. Which matters more for people's outlook on cognitive aging—an objective count of chronological years or their own evaluations of their age?

In pursuing this inquiry, we draw specific attention to gender differences. Identities are located at the intersection of a multiplicity of traits—race, gender, age, and so on (Howard, 2000), and as an aspect of the self, age perceptions differ in important ways between men and women. Barrett (2005) shows that women tend to be subjectively older than men because of their worse health and limited control over their personal relationships. Women are also especially prone to ageist stereotypes (Hurd, 1999) and are frequently evaluated on traits associated with youthfulness such as physical beauty and sexual appeal (Barrett, 2005).

The importance of gender is further underscored by studies on aging self-perceptions. Lynch (2000), for instance, developed a construct of age anxiety including six concerns—health, fear of the future, and unease over loss of independence, among other things. Overall, women were higher in age

anxiety, though the effect was more marked among younger adults. Relating to cognitive aging, past research also documents that women tend to be less confident about their own cognitive abilities (West, Welch, & Knabb, 2002) and that older women, but not older men, are stereotyped as passive and cognitively incompetent (Canetto, Kaminski, & Felicio, 1995).

Taken together, research on age identity and cognitive aging perceptions suggests that the *salience of internalized age-based concerns and age-related social evaluations are shaped by gender*. Based on the findings discussed earlier, this suggests that the association between age and threats to well-being (e.g., declining health, cognitive incompetence) is most pronounced among women. Essentially, this conceptualization predicts an interactive association; we therefore expect age identity's most negative effects on CAD to be observed among women.

Bringing together the concepts of age identity, CAD, and gender is valuable because age-based expectations are important in adult development. This has been ably documented by Levy and colleagues (2002, 2003), who found that positive self-perceptions about growing older improve health and increase longevity. Insights from social psychology such as the self-fulfilling prophecy posit that people's expectation for their futures matter; whether one is fatalistic or optimistic about one's future cognitive status likely shapes one's course of development. Indeed, negative dispositions about memory abilities compromise memory performance, particularly among older adults (West & Yassuda, 2004).

DATA AND METHODS

Sample

Data are drawn from two waves of phone- and self-administered questionnaire data from the National Survey of Midlife Development in the United States (MIDUS). Initial data were collected from 1995 to 1996 from a sampling frame of all English-speaking noninstitutionalized adults aged 25–74 years in the contiguous 48 states. The response rate for Wave 1 (W1) was 61%, producing a total sample of 3,034 participants.

Respondents were then contacted 10 years later in 2005 to secure their participation for Wave 2 (W2). Of the complete W1 sample, 2,103 individuals were followed up (69%). This rate differed, however, by key attributes: Only 58% of Black respondents were followed up versus 70% of non-Black persons, about 71% of women remained in the study compared with 68% of men, and participants who were retained had scored 1 unit higher on education. This study focuses only on adults 55–74 years of age at W1, who had similar retention rates to the overall sample. Sixty-four cases with item-missing data from baseline or follow-up were dropped from the analyses, leaving a final study sample of 496 respondents. Poststratification weights were used in all multivariate analyses.

Cognitive Aging Dispositions

Dispositions toward cognitive aging were assessed with a six-item scale reflecting individuals' attitudes about changes in their ability to perform various cognitive tasks as they age ($\alpha = .78$). The items were taken from larger subscales of the Personality in Intellectual Aging Context instrument (Lachman et al., 1982) and the Memory Controllability Inventory (Lachman et al., 1992). They include: "It's inevitable that my intellectual functioning will decline as I get older"; "The older I get, the harder it is to think clearly"; "My mental acuity (sharpness) is bound to decline"; "I don't remember things as well as I used to"; "There's not much I can do to keep my memory from going down hill"; and "I can understand instructions only after someone explains them to me." High scores correspond with more optimistic dispositions toward cognitive aging. We selected these six questions out of a total of nine cognitive aging items in the MIDUS survey after conducting an iterated principal factor analysis and identifying a one-factor solution. Reliability was also highest when using this particular six-item configuration.

Age Identity

Age identity was measured by subtracting chronological age from the response to the following question: "Many people feel older or younger than they actually are. What age do you feel most of the time?" (Barrett, 2003, 2005; Westerhof & Barrett, 2005). This results in negative values reflecting younger subjective ages and positive values reflecting older subjective age relative to chronological age. The observed range was -39 to 13 .

Additional Variables

Our analyses control for a host of variables known to shape age identity, such as health status, familial role positions, and participation in the work force, along with demographic covariates. Variables included age, race (1 = Black; 0 = other), sex (1 = female; 0 = male), education (years of education, ranging from 1 to 12), and one's occupational standing (1 = has worked or is working in a white-collar occupation; 0 = has not worked in a white-collar occupation). We accounted for employment status (1 = working; 0 = unemployed), marital status (1 = married; 0 = otherwise), and parental status (1 = has children; 0 = does not have children). We also controlled for health indicators: physical health (self-rated, ranging from 1 to 5), disability (a nine-item scale, $\alpha = .87$), and negative affect (six-item scale, $\alpha = .82$). We included a general indicator of perceived control as it is associated with maintenance of cognitive abilities (Verhaeghen, Geraerts, & Marcoen, 2000). Perceived control is based on a 12-item scale assessing the amount of control respondents had in their life, such as "In general I feel I am in charge of the situations in which I live." The scale had an intra-item reliability of $.84$ and was moderately correlated with the CAD measure ($r = .38$; as well as with age [$r =$

$-.16$] and age identity [$r = -.18$]). Finally, we incorporated a sum of cognitively engaging activities measuring the count of activities respondents participated in at least several times a month. These include word games, lectures or courses, and writing (e.g., letters, journals) or computer use.

Analytic Strategy

The research plan is relatively straightforward. After presenting descriptive statistics of our overall study sample, as well as the differences between men and women, we estimate linear regression equations separately for men and women. A t test is used to test differences in slopes across the two subsamples. The key comparison is whether the effect of age identity on CAD differs between men and women.

RESULTS

Table 1 presents means and standard deviations for the variables used in the analysis. Overall, respondents reported age identities that were younger than their chronological age, with women feeling relatively younger than men (-12.5 compared with -11.5), although this difference was not significant. In general, men and women had similar expectations about CAD. Though not displayed in a table, there was a modest level of correlation between CAD and key independent variables ($r = -.20$ with age identity; $r = -.15$ with age).

In Table 2, we present linear regression models examining the effects of age identity on CAD for men and women, reporting both unstandardized and standardized coefficients. Results show that among women, age identity was a strong predictor of CAD, as a 1-unit increase in subjective age was associated with a $.15$ CAD decrease. Comparing standardized units, the beta coefficient for age identity was actually slightly *larger* than that of age in its objective measurement ($.18$ compared with $.15$). Older women and those with negative affect were more pessimistic toward cognitive aging, but those with more education and greater sense of control tended to be more optimistic about cognitive aging.

Interestingly, we did not observe a statistically significant relationship between age identity and CAD among men. Similarly, chronological age did not predict CAD. However, a t test of the slopes failed to reveal a statistically significant difference for age identity between men and women. Other predictors of cognitive aging remained similar to those for women, with two exceptions: Among men, those in better health were more negative about their cognitive aging (slope was significantly different than that for women, $p < .05$), and education was not a significant predictor of CAD.

DISCUSSION

This article found that age identity has a strong influence on CAD above and beyond individuals' chronological age,

Table 1. Means and Standard Deviations for All Variables in the Analyses, Midlife Development in the United States, 1995–2005

	Range	Total sample	Women	Men
Dispositions about cognitive aging, Wave 2	6–42	25.113 (7.523)	25.448 (7.608)	24.713 (7.418)
Female	0–1	0.547		
Age identity	–39 to 13	–12.048 (8.241)	–12.498 (8.265)	–11.504 (8.197)
Age	55–74	62.337 (5.506)	61.824 (5.589)	62.956* (5.350)
Black	0–1	0.046	0.059	0.031
Education	1–12	6.784 (2.606)	6.396 (2.368)	7.252** (2.802)
White-collar occupation	0–1	0.246	0.143	0.372***
Working	0–1	0.423	0.487	0.345***
Married	0–1	0.689	0.560	0.845***
Parent	0–1	0.897	0.894	0.903
Physical health	1–5	3.499 (0.953)	3.484 (0.951)	3.518 (0.958)
Disability	1–4	1.632 (0.686)	1.711 (0.707)	1.538** (0.649)
Negative affect	1–4	1.427 (0.504)	1.469 (0.535)	1.375* (0.461)
Sense of control	1.8–7	5.458 (0.999)	5.409 (1.015)	5.517 (0.977)
Cognitively engaging activities	0–3	1.419 (1.037)	1.685 (1.013)	1.097*** (0.975)
Observations		496	270	226

Note: * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed).

educational status, health, demographic factors, sense of control, and participation in cognitively engaging activities.

Age identity is increasingly noted as an important component of the self, with key implications for health and well-being (e.g., Demakakos et al., 2007). In short, youthful identities are prized and not easily relinquished (Barrett, 2005; Westerhof & Barrett, 2005). Part of youth's appeal—in addition to its association with physical vigor—is mental acuity. Not surprisingly, those with younger age identities were found to be more optimistic about their ability to maintain memory and other aspects of cognitive ability, regardless of their objective age.

The effect of age identity on CAD, however, is not consistent across gender lines; the standardized coefficient for age identity was nearly twice as large for women and was non-significant for male respondents. Nevertheless, testing the slope differences failed to reveal statistically significant differences between men and women. (Preliminary analyses [available upon request] with the full sample [women and men] showed that the effect of age identity on CAD was significant [$\beta = -.134$; $p < .05$] and essentially the average of the standardized effects of women and men separately.) This suggests that though subjective evaluations of age seem more closely tied to evaluations of mental functioning among

Table 2. Linear Regression Models by Gender Predicting Dispositions About Cognitive Aging, Midlife Development in the United States, 1995–2005

	Women		Men	
	Unstandardized coefficients (SE)	Beta	Unstandardized coefficients (SE)	Beta
Age identity	–0.155* (0.062)	–.176	–0.072 (0.083)	–.083
Age	–0.197* (0.099)	–.155	–0.180 (0.105)	–.126
Black	–1.315 (1.128)	–.038	0.697 (3.323)	.015
Education	0.480* (0.212)	.155	0.387 (0.222)	.143
White-collar occupation ^a	–0.253 (1.325)	–.011	0.498 (0.970)	.03
Working ^a	–1.524 (1.069)	–.100	–0.055 (1.069)	–.003
Married ^a	–1.663 (0.899)	–.109	0.475 (1.559)	.023
Parent ^a	1.465 (1.165)	.062	0.414 (1.840)	.017
Physical health	0.268 (0.573)	.037	–1.499* ^b (0.601)	–.18
Disability	0.715 (0.778)	.068	–1.057 (0.869)	–.09
Negative affect	–1.699* (0.815)	–.128	–2.847* (1.188)	–.174
Sense of control	1.762** (0.567)	.245	2.431*** (0.565)	.313
Cognitively engaging activities	0.713 (0.457)	.096	0.242 (0.709)	.030
<i>df</i>	13		13	
<i>F</i>	7.70		5.41	
Adjusted <i>R</i> ²	0.276		0.265	
Observations	270		226	

Notes: ^aThe reference categories include those who have not worked in white-collar occupations and respondents who are not working, nonmarried, and not parents.

^bSlopes for men and women are significantly different in parallel models ($p < .05$).

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed).

women, we cannot rule out the possibility that the effects are actually equal across groups. Greater statistical power would enable better tests of subsample differences between men and women. (The heterogeneity of error variance between male and female subsamples suggests that there is a rather modest level of statistical power for detecting significant differences in age identity in CAD between women and men.) In addition, it is important to note that we did not observe differences in CAD between men and women at the bivariate level. Likewise, bivariate comparisons failed to reveal an age identity difference between genders.

Future studies may take up the issue of gender and age identity more broadly. Scholars have rightly emphasized that physical appearance and its presumed age-based deterioration is a predominant aging concern among women in American society (e.g., Barrett, 2005); however, unease over mental competence and memory ability may also be key concerns among women as they sense themselves aging. Indeed, women are more concerned about aging in general (Lynch, 2000) and have been found to be less confident about their cognitive abilities in specific (West et al., 2002). Future research can further clarify how age identity and gender interact to influence the pressures and uncertainties of aging.

Several limitations of this study must be kept in mind. First, the data did not include measures of individuals' cognitive abilities (e.g., memory tests or math puzzles), thwarting our ability to examine how age identity affects actual cognitive performance in later life. Prior research, however, indicates that *evaluative expectations* have concrete effects on a person's future (West & Yassuda, 2004). Second, we were limited in our ability to examine racial/ethnic differences in CAD due to the small number of minorities in the MIDUS data. Other research could examine how the relationship between age identity and CAD varies by race/ethnicity in addition to gender. Third, CAD was not measured at W1. This precludes the ability to include baseline CAD as a regressor and thereby measure change in the evaluations over 10 years. We anticipate that people with older age identities would grow increasingly pessimistic about cognitive aging over time, though additional measures for the dependent variable are necessary to test this assumption. Fourth, our measure of age identity is but one among many possible ways to operationalize this concept. For instance, others have conceptualized age identity as how one identifies with a discrete age category, such as "middle-age" or "old" (e.g., Mutran & George, 1982). Though it would have been desirable to broaden our analysis with the use of additional measures, we did not have other options available in our data.

Despite these limitations, our approach made several contributions. First, this article has expanded the literature on age identity, exploring domains of life affected by age identity other than physical health or general well-being and presenting the differences by gender. Cognitive aging dispositions

are an important aspect of aging because the maintenance of cognitive functioning sustains engagement in life activities and social relationships. Furthermore, positive *expectations* about aging confer tangible protective benefits across a variety of life domains (Levy, 2003; Levy et al., 2002, 2003; West & Yassuda, 2004). Our results show that age identity strongly shapes such dispositions, *having as much or more of an impact than objective age*, though this relationship was observed only among women.

Second, this article used a longitudinal design, enabling us to prospectively examine the effects of age identity. Though past research has identified important antecedents and consequences of age identity, most prior studies have used cross-sectional data (e.g., Barrett, 2003; Barrett, 2005; Westerhof & Barrett, 2005).

Finally, most life course and aging scholars privilege chronological age as a key indicator of developmental change. Though the passage of years since one's birth is one way to conceptualize age and aging, there are multiple forms of time-based experience. This study illustrates the utility of age identity as an important way to capture expected change in the later life course, suggesting that future research might fruitfully explore other implications of self-concept among aging individuals.

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CORRESPONDENCE

Address correspondence to Markus H. Schafer, MS, Center on Aging and the Life Course, Purdue University, Young Hall, 155 South Grant Street, West Lafayette, IN 47907-2114. Email: mhschafe@purdue.edu

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