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Original Article

Multiple "Old Ages": The Influence of Social Context on Women's Aging Anxiety

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Abstract

Objectives: Dominant views of aging generate anxiety for many adults—especially women, who face greater disadvantages in later life compared with men. However, little is known about changes in these concerns over time and their variation across women. Employing a feminist perspective on age relations, our study examines three social contexts affecting women's aging anxiety—social location, health, and social relationships.

Method: Using a sample of women (n = 905) from *Midlife in the United States* (1995–1996; 2004–2006), logistic regression models examine predictors of over-time patterns in three aging anxiety sources—declining attractiveness, declining health, and reproductive aging.

Results: Women report more declining-health anxiety, and it remains more stable over time than do declining-attractiveness and reproductive aging anxiety—both of which tend to decrease with age. The effects of social context vary across anxiety sources; however, more favorable over-time patterns are often associated with more disadvantaged social locations (i.e., older ages, non-white, lower socioeconomic status)—but better health and social relationships.

Discussion: Our study, the first to examine over-time patterns in aging anxiety, illustrates women's multiple "old ages"—a reality manifesting in not only objective conditions of later life but also perceptions of aging. It provides insight on social and cultural processes shaping aging perceptions.

Keywords: Gender—Subjective aging—Subjective life course

American culture's largely negative views of aging generate anxiety for many adults (Abramson & Silverstein, 2006). Concerns about aging, however, may be more pronounced for women than men—an assertion derived from a feminist perspective on age relations (Calasanti, 2003). This perspective highlights the role of age in social organization, particularly in distributing power across age groups through processes shaped by other inequalities, like gender. The intersecting power relations of age and gender tend to disadvantage older women relative to men—a pattern evidenced, for example, in their greater risk of poverty and workplace discrimination (Duncan & Loretto, 2004; Torres, 2014) and the less frequent and more negative cultural depictions of older women than men (Lauzen & Dozier, 2005). Consistent with these patterns, research finds that women feel more anxious about aging than do men (e.g., Cummings, Kropf, & DeWeaver, 2000). However, little is known about how women's aging anxiety changes over time, including the social factors that may dampen the impact of negative cultural messages.

Our understanding of women's aging anxiety is limited by previous studies' reliance on cross-sectional data, providing a snapshot view of women's aging concerns rather than illuminating their changes over time and the social contexts shaping them. Using panel data spanning a decade, we examine how various social contexts influence

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women's concerns about three potential sources of anxiety about their aging bodies: declining attractiveness, declining health, and reproductive aging. These anxiety sources are salient to many women, given the emphasis placed on their physical attractiveness and role as mothers, as well as their greater risk of disability (Brault, 2012; Hays, 1996; Rhode, 2010).

The Social Patterning of Aging Anxiety

A recurrent theme in research on older women's aging experiences centers on changes in bodily appearance and functioning, often negatively assessed (e.g., Bedford & Johnson, 2005; Halliwell & Dittmar, 2003; McLaren & Kuh, 2004; Slevin, 2010; Tiggemann, 2004; Winterich, 2007). However, women vary in the degree to which they worry about aging, with certain anxiety sources more salient for some women than others (Barrett & Robbins, 2008). This observation is consistent with a feminist perspective on age relations, highlighting "the intersection of age relations with other social locations lead[ing] to multiple 'old ages'" (Calasanti, 2003, p. 211). Guided by this perspective, we examine how various social locations, including those based on age, race, socioeconomic status (SES), and sexual minority status, shape women's aging anxiety. The perspective's focus on diversity leads us to consider two other possible sources of variation in women's aging anxiety—health, given the centrality of bodies to aging experiences (Twigg, 2004), and social relationships, which influence well-being more generally (Umberson & Montez, 2010).

Social Location

Disadvantaged locations tend to lead to worse outcomes, but this pattern is not universal, as aging anxiety illustrates. Some disadvantaged groups, including older adults and racial and sexual minorities, report less aging anxiety than do their respective counterparts (Abramson & Silverstein, 2006; Barrett & Robbins, 2008). These patterns resonate with a crisis competence perspective on minority group members' aging, positing that these individuals learn—through earlier life challenges—strategies adaptive to aging (e.g., Kimmel, 1978; Pound, Gompertz, & Ebrahim, 1998). They also are consistent with studies of women's embodied aging experiences, such as menopause and health declines, suggesting that more disadvantaged groups may have little anxiety about age-related physical changes, which pale in comparison with more urgent, day-to-day concerns (Dillaway, Byrnes, Miller, & Rehan, 2008; McMullen & Luborsky, 2006). Research also reveals constructions of these changes and strategies of negotiating them that may protect disadvantaged groups from aging anxieties (Agee, 2000; Dillaway et al., 2008). Race differences in menopause provide an illustration. African American women are more likely to receive information about this transition from friends and family—a strategy privileging self-knowledge and emphasizing self-reliance—while white women tend to turn to physicians and seek medical solutions—a strategy exposing them to a biomedical view of aging bodies that pathologizes women's experiences (Dillaway, 2005b; Nixon, Mansfield, Kittel, & Faulkner, 2001). These patterns contribute to African American women's more positive views of menopause, which may dampen their anxiety about it (Dillaway et al., 2008).

Variation in constructions of embodied aging experiences and strategies for negotiating them also may provide an explanation for older adults' lower aging anxiety, compared with younger and middle-aged adults (e.g., Abramson & Silverstein, 2006; Barrett & Robbins, 2008; Yan, Silverstein, & Wilber, 2011). For example, studies find that older adults expand their conceptualization of health by focusing less on physical aspects and more on attitudes and behaviors—a shift that may reduce declining-health anxiety (Idler, Hudson, & Leventhal, 1999). However, the degree to which age protects against anxiety varies across anxiety sources, as evidenced by a study of 1,406 women interviewed in the first wave of *Midlife in the United States* (MIDUS; 1995–1996) reporting that age offers somewhat weaker protection against declining-health anxieties than either reproductive aging or declining-attractiveness anxieties (Barrett & Robbins, 2008). The finding regarding attractiveness resonates with research reporting that, as women age they may not become more satisfied with their bodies, but these concerns may recede as a result of a valuation of physical function over appearance and a broadened (i.e., "whole person") beauty definition (Dumas, Laberge, & Straka, 2005; Hurd 2000; Hurd Clarke, 2002a; Reboussin et al., 2000). Research also finds that age gives some women a sense of entitlement to disregard appearance-related pressures, particularly regarding weight (Halliwell & Dittmar, 2003; Tiggemann, 2004; Tunaley, Walsh, & Nicolson, 1999).

Contrasting with the attention given to chronological age, few studies examine associations between aging anxiety and age identity. Pointing to the potential importance of this age dimension, research often finds that it is more strongly associated with well-being than is chronological age, with younger identities predicting higher well-being (e.g., Demakakos, Gjonca, & Nazroo, 2007). The association between age identity and health is likely to reflect the cultural construction of youth as the absence of health problems—leading healthier individuals to adopt younger identities—as well as the higher valuation of youth than old age—contributing to the health-enhancing effects of such identities. Applied to aging anxiety, these observations lead to the prediction that older chronological ages predict less anxiety, while older identities are associated with more anxiety.

Studies also find race differences in aging anxiety, with whites reporting higher anxiety non-whites (e.g., Abramson & Silverstein, 2006; Cummings et al., 2000). However, conclusions differ across sources of anxiety, as revealed

by the study of women's aging anxiety using MIDUS data (Barrett & Robbins, 2008). It found no difference between African American and white women in their reproductive aging anxiety, but greater anxiety about declining attractiveness among white women, a finding consistent with race differences in aging women's current body assessments (Reboussin et al., 2000; Winterich, 2007). These patterns also may reflect African American women's greater economic independence, indicated by their earning a higher proportion of their male counterparts' earnings, which may alleviate pressure faced by partnered women to retain youthful appearances; however, the inoculating effect of economic independence is likely undercut by African American women's relatively low overall earnings (Padavic & Reskin, 2002). Economic independence also may contribute to explaining African American women's lower declining-health anxiety compared with white women (Barrett & Robbins, 2008). Although running counter to race differences in health (Brault, 2012), this pattern resonates with older African Americans' interpretation of health problems around a cultural logic emphasizing faith and acceptance (McMullen & Luborsky, 2006).

Studies also draw different conclusions regarding the association between SES and aging anxiety. Those using summary measures of aging anxiety tend to find that socioeconomic advantage, indicated by higher education and income, predicts lower anxiety (e.g., Abramson & Silverstein, 2006; Yan et al., 2011). Studies giving greater attention to gender and anxiety sources reveal more complex patterns. The study by Barrett and Robbins (2008) found that women's financial independence is associated with their aging anxiety, with patterns varying across their concerns: Greater financial independence is associated with less declining-health or declining-attractiveness anxiety but more reproductive aging anxiety.

Another social location related to aging anxieties is sexual minority status—though it has received little scholarly attention. The study by Barrett and Robbins (2008) reported no difference between sexual minority (i.e., lesbian or bisexual) and non-minority (i.e., heterosexual) women in their odds of declining-health anxiety. In contrast, it found that heterosexual women are more anxious than sexual minority women about becoming less attractive and losing their reproductive ability. The attractiveness finding resonates with lesbians' greater acceptance than heterosexual women of physical signs of aging, like gray hair (Winterich, 2007).

Health

Better health predicts less anxiety (e.g., Lynch, 2000; Yan et al., 2011), with the association varying across anxiety sources. Better self-rated health and fewer chronic conditions predict lower odds of women's reporting declining-health anxiety, but these health measures have no relationship with reproductive aging or declining-attractiveness anxiety (Barrett & Robbins, 2008). However, these findings are from studies using cross-sectional data, a limitation pointing to an alternative interpretation, which could be illuminated by panel data: Health may be an antecedent or consequence of aging anxiety—or both. Greater attention also could be given to health dimensions especially salient for women. Their aging anxiety, particularly related to attractiveness, may be influenced by their weight—a prediction derived from women's high body dissatisfaction and their concerns about aging-related weight gain (e.g., Bedford & Johnson, 2005; Halliwell & Dittmar, 2003; Hurd Clarke, 2002b; McLaren & Kuh, 2004; Slevin, 2010; Winterich, 2007). Weight gain also may heighten aging-related health anxiety, given public health messages about weight as a chronic illness risk factor. Another health dimension receiving little attention is menopausal status. The dominant cultural framing of menopause as a "failure" and "precursor to disease" (Niland & Lyons, 2011)—shown to generate more negative views of the transition (Gannon & Ekstrom, 1993)—may heighten concerns about declining health and attractiveness, by emphasizing health risks (e.g., osteoporosis) and appearance changes (e.g., thinning hair). However, other relationships between menopausal status and aging anxiety are possible (Dillaway, 2005b). Research reporting that many women experience menopause as an "insignificant" (Winterich & Umberson, 1999, p. 57) or "benign" event (Rossi, 2004, p. 154) suggests it may not affect aging anxiety, while positive descriptions of menopause—for example, as the "good old" (Dillaway, 2005a, p. 398)—suggest this transition could reduce it (Greer, 1993).

Social Relationships

Social relationships are contexts within which meanings of embodied aging experiences emerge (e.g., Agree, 2000)—and they influence well-being (Umberson & Montez, 2010). These observations suggest that social relationships are important determinants of aging anxieties, but studies examining this possibility are few and reveal inconsistent findings. One study using MIDUS found that married women are more anxious than unmarried women about declining attractiveness (Rossi, 2004), while another study using the same data (but distinguishing groups of the unmarried) found higher likelihood of this anxiety among separated/divorced compared with married women (Barrett & Robbins, 2008). Another social role that has been examined is that of parent, with motherhood associated with lower reproductive aging anxiety but unrelated to other anxiety sources (Barrett & Robbins, 2008). Associations with relationship quality also vary across anxiety sources—with greater strain in spouse/partner relationships predicting higher odds of declining-attractiveness anxiety but unrelated to declining-health or reproductive aging anxiety (Barrett & Robbins, 2008).

In sum, the literature points to considerable variation in women's aging anxiety—an observation consistent with a

feminist perspective on age relations' assertion of multiple "old ages." However, this conclusion derives from a relatively small body of work relying on cross-sectional data. While studies suggest that women become less anxious about aging as they grow older, an examination of this possibility requires panel data. Panel data also permit examination of the effect of other social factors on aging anxiety, including not only fairly stable ones like race and SES but also dynamic ones like health and relationship quality. Using two waves of data spanning a decade, we examine the effect of social locations, health, and social relationships on three sources of aging anxiety—those centering on attractiveness, health, and reproduction.

Method

Data

We use data from MIDUS (Brim et al., 1995–1996; Ryff et al., 2004–2006)—the only nationally representative panel data set, of which we are aware, that includes aging anxiety measures. MIDUS is a representative sample of the non-institutionalized U.S. population aged 25 to 74 chosen via random-digit dialing. Each MIDUS wave has two parts: a telephone survey and mailed questionnaire. The baseline telephone survey and mailed questionnaire generated 70% and 87% response rates, respectively, yielding an overall response rate of 61% (n = 3,032). Of these respondents, 65% were re-interviewed at the second wave (n = 2,257). Our analytic sample (n = 905) is limited to women meeting these criteria: (a) participated in both waves of data collection, (b) completed both telephone survey and mailed questionnaire, and (c) had valid responses on all dependent variables. Compared with respondents included in our sample, those excluded had lower levels of education and were less likely to be married/partnered, employed, or parents. In analyses of reproductive aging anxiety, we further limit our sample by excluding women who at Wave 1 had already experienced menopause, bringing the sample size for these models to 510 women.

Measures

Our aging anxiety measures (Table 1) are drawn from the following three items asked of women in both waves (in a section on reproductive health): "Women sometimes worry about the future and getting older. How much do you worry about being too old to have children? being less attractive as a woman? and having more illness as you get older?" Responses are "none," "a little," "some," or "a lot." We note that the use of single-item measures limits our confidence regarding their reliability. Ideally, multiple items would be used to measure each aging anxiety source, but additional items are not available in the data. Further, we note that at both waves the zero correlations were weakest between reproductive aging and declining health (.12 at Wave 1; .21 at Wave 2) and strongest between declining attractiveness and declining health (.54 at Wave 1; .55 at Wave 2). These results suggest the items tap distinct constructs, a conclusion supported by cross-sectional analyses revealing variation across anxiety sources in their levels and predictors (Barrett & Robbins, 2008).

Given our paper's focus on identifying factors protecting against aging anxiety, we operationalize each of the three anxieties using a dichotomous variable that distinguishes from all other respondents those displaying the ideal pattern of having either no anxiety at both waves or a decline in anxiety between waves. However, we also conducted logistic and multinomial analyses using alternative specifications, with substantive conclusions largely consistent with those we present.

We examine three sets of aging anxiety predictors—social location, health, and social relationships. Social location includes the following: age (i.e., chronological age and age identity), race, SES, employment status, and sexual minority status. We examine two health measures shown to be associated with aging anxiety—chronic conditions and psychological distress (Barrett & Robbins, 2008)—and four that have not, to our knowledge, been considered in aging anxiety research—menstrual status, body mass, neuroticism, and perceived control. Menstrual status and weight are important to consider, given our study's focus on women, while neuroticism and perceived control are psychological orientations related to anxiety, and perhaps aging anxiety. We include four social relationship measures—marital/cohabiting status, parental status, spouse/partner support, and spouse/partner strain. Preliminary models included measures of support and strain in both friend and other family relationships, as they were significantly associated with aging anxiety in cross-sectional analyses (Barrett & Robbins, 2008), but they are excluded from models presented because they were not significant predictors of any of the aging anxiety sources. We examine not only baseline values but also change scores (i.e., Wave 2 – Wave 1) for the following measures: perceived financial situation, financial independence, chronic conditions, psychological distress, body mass index (BMI), perceived control, and spouse/partner strain and support. We do not include change measures for two predictors—age identity and neuroticism—because preliminary analyses revealed that they were not significant predictors of any of the anxieties. For all predictors with missing data, we imputed mean values for continuous variables and modal values for dichotomous predictors. Unpartnered individuals with missing values on spouse/partner support and strain were given the mean values for each category and only used in analyses in which marital/cohabiting status was controlled.

Analytic Strategy

Our analyses have two goals: to examine over-time change and stability in aging anxiety and to determine factors protecting against less favorable patterns. First, we explore

Table 1. Summary of Variables

Variable	Description	Mean (*SD*)
Aging anxiety[a]		
Declining-attractiveness anxiety	"How much do you worry about being less attractive as a woman?" 1 = no anxiety at both waves or a reduction in anxiety between waves; 0 = all others.	0.54
Declining-health anxiety	"How much do you worry about having more illness as you get older?" 1 = no anxiety at both waves or a reduction in anxiety between waves; 0 = all others.	0.37
Reproductive aging anxiety	"How much do you worry about being too old to have children?" 1 = no anxiety at both waves or a reduction in anxiety between waves; 0 = all others.	0.86
Social location		
W1 Age	Chronological age in years; range = 25 to 74.	47.05 (12.46)
W1 Age identity	(Subjective age – chronological age)/chronological age. Subjective age measured using responses to the following: "What age do you feel most of the time?" Higher values = older identities; range = –0.90 to 2.1.	–0.16
Non-white	1 = non-white; 0 = white	0.10
W1 Education	Years of schooling completed; range = 3.5 to 22.	13.96 (2.57)
W1 Perceived financial situation	Evaluation of personal financial situation; 0 = "the worst possible financial situation" to 10 = "the best possible financial situation"	6.00 (2.23)
Δ Perceived financial situation	W2 – W1 financial situation; range = –10 to 10.	0.23 (2.44)
Financial independence	Personal income/household income (i.e., sum of personal, spousal, other members' income, Social Security, government assistance, and other income sources). Higher values = greater financial independence; range = 0 to 1.	0.35 (0.33)
Δ Financial independence	W2 – W1 financial independence; range = –1 to 1.	–0.01 (0.36)
W1 Employed	1 = employed full- or part-time; 0 = not employed	0.65
Sexual minority status	1 = identifies as homosexual or bisexual; 0 = heterosexual	0.02
Health		
W1 Chronic conditions	Number of chronic conditions experienced in the past year; range (W1) = 0 to 21 and (W2) = 0 to 17.	2.76 (2.64)
Δ Chronic conditions	W2 – W1 chronic conditions; range = –12 to 11.	–0.05 (2.29)
W1 Psychological distress	Six-item mean scale ($\alpha_{Wave\ 1}$ = .89; $\alpha_{Wave\ 2}$ = .89) indicating frequency of feeling during the past 30 days sad, nervous, restless or fidgety, hopeless, that everything is an effort, and worthless; 1 = none of the time to 5 = all of the time.	1.60 (0.66)
Δ Psychological distress	W2 – W1 psychological distress; range = –3.5 to 3.83.	–0.05 (0.61)
W1 BMI	MIDUS-generated measure (i.e., BMI = weight (kg)/height $(m)^2$); range (W1) = 14 to 61 and (W2) = 15.08 to 62.65.	26.18 (5.72)
Δ BMI	W2 – W1 BMI; range = –22.92 to 26.6.	1.49 (3.89)
W1 Menstrual status	"Have your menstrual periods stopped permanently?" 1 = yes; 0 = no	0.44
W1 Neuroticism	MIDUS-generated scale of respondents' self-descriptions as moody, worrying, nervous, and calm; 1 = not at all to 4 = a lot.	2.48 (0.71)
W1 Perceived control	Twelve-item mean scale ($\alpha_{Wave\ 1}$ = .85; $\alpha_{Wave\ 2}$ = .87); e.g., "I often feel helpless in dealing with problems in life"; 1 = disagree strongly to 7 = agree strongly; higher values = greater perceived control.	5.44 (1.01)
Δ Perceived control	W2 – W1 personal control; range = –3.58 to 4.17.	–0.02 (0.99)
Social relationships		
W1 Married/cohabiting	1 = married or cohabiting; 0 = all others	0.66
W1 Parent	1 = parent; 0 = not a parent	0.86
W1 Spouse/partner support	Six-item mean scale ($\alpha_{Wave\ 1}$ = .92; $\alpha_{Wave\ 2}$ = .91); e.g., "How much does your [spouse/partner] appreciate you?"; 1 = not at all to 4 = a lot.	3.50 (0.52)
Δ Spouse/partner support	W2 – W1 spouse/partner support; range = –2.67 to 2.83.	0.06 (0.54)
W1 Spouse/partner strain	Six-item mean scale ($\alpha_{Wave\ 1}$ = .88; $\alpha_{Wave\ 2}$ = .89); e.g., "How often does your spouse or partner make too many demands on you?"; 1 = not at all to 4 = a lot.	2.29 (0.53)
Δ Spouse/partner strain	W2 – W1 spouse/partner strain; range = –2.83 to 2.67.	–0.10 (0.55)

Note: BMI = body mass index; MIDUS = *Midlife in the United States*.

[a]Sentence introducing the three aging anxiety items in MIDUS: "Women sometimes worry about the future and getting older." For reproductive aging anxiety, n = 510. For all other variables, n = 905.

how each aging anxiety source shifts over a 10-year period by conducting cross-tabulations of Wave 1 and Wave 2 anxiety. To better understand the patterns, we use the original responses (i.e., none, a little, some, and a lot) rather than the dichotomous variable used in multivariate models. Second, we use logistic regression to examine factors that may contribute to having either consistently no anxiety or decreasing levels of it. These models regress each anxiety source on the three sets of predictors (i.e., social location, health, and social relationships). We ran preliminary analyses entering each set of predictors individually, but we present the full models because substantive conclusions did not differ. Each model includes MIDUS-generated survey weights to correct for sampling error.

Results

Our results reveal aging anxiety's relatively low prevalence at Wave 1; however, patterns vary across anxiety sources (Table 2). Not surprisingly, the most prevalent aging anxiety is declining health. The modal response was "a little" anxiety, representing approximately 39% of respondents. Only 20% reported no declining-health anxiety, while 29% reported "some" and 12% reported "a lot." Similar to the results for declining health, the modal response to declining-attractiveness anxiety was "a little," though the percent reporting this level (35%) was nearly identical to the percent reporting "none" (34%). Only 10% of women reported "a lot" of declining-attractiveness anxiety. The lowest prevalence is found for reproductive aging anxiety; approximately 72% of women reported none and just over 5% reported a lot.

Over-time patterns in aging anxiety also vary across the sources. More stability than change is observed for declining-health anxiety; for example, 20% of women at Wave 1 reported no anxiety, compared with 21% at Wave 2. In contrast, we see a decline between waves in declining-attractiveness anxiety. Illustrating this pattern, 34% reported no anxiety at Wave 1, compared with 41% at Wave 2. The greatest decline was observed for reproductive aging anxiety. For example, at Wave 1, 72% of women reported no anxiety—a number rising to 83% at Wave 2.

While the overall percentages suggest limited change, many women reported either increases or decreases in anxiety between waves. For example, among respondents reporting a little declining-health anxiety at Wave 1, 49% reported the same level at Wave 2; however, 21% reported less anxiety and even more women—30%—reported greater anxiety. A similar pattern emerges for declining-attractiveness anxiety. Of those reporting a little anxiety at baseline, 45% reported the same level at Wave 2, but 34% reported less and 21% reported more. We see less variability in reproductive aging anxiety, as the majority of women reported either declines or consistently low levels. However, some women report increases. For example, among women reporting a little anxiety at Wave 1, 16% reported a higher level at Wave 2. Taken together, the bivariate patterns reveal that many women become more or less anxious about various aspects of aging, the predictors of which are the focus of our multivariate analyses.

As shown in Table 3, several factors affect the odds of reporting a favorable pattern between waves in

Table 2. Cross-Tabulations of Wave 1 and Wave 2 Aging Anxiety

	Wave 1 declining-attractiveness anxiety				
Wave 2	None	A little	Some	A lot	Total
None	218	108	34	9	369
	70.32%	33.96%	17.89%	10.34%	40.77%
A little	64	144	72	21	301
	20.65%	45.28%	37.89%	24.14%	33.26%
Some	24	52	60	28	164
	7.74%	16.35%	31.58%	32.18%	18.12%
A lot	4	14	24	29	71
	1.29%	4.4%	12.63%	33.33%	7.85%
Total	310	318	190	87	905
	100%	100%	100%	100%	100%
(row %)	(34.25%)	(35.14%)	(20.99%)	(9.61%)	

Note: Chi-square = 293.04 ($p < .001$)

	Wave 1 declining-health anxiety				
Wave 2	None	A little	Some	A lot	Total
None	87	74	26	7	194
	48.60%	20.85%	9.96%	6.36%	21.44%
A little	55	175	85	23	338
	30.73%	49.3%	32.57%	20.91%	37.35%
Some	30	91	105	33	259
	16.76%	25.63%	40.23%	30%	28.62%
A lot	7	15	45	47	114
	3.91%	4.23%	17.24%	42.73%	12.6%
Total	179	355	261	110	905
	100%	100%	100%	100%	100%
(row %)	(19.78%)	(39.23%)	(28.84%)	(12.15%)	

Note: Chi-square = 251.09 ($p < .001$)

	Wave 1 reproductive aging anxiety				
Wave 2	None	A little	Some	A lot	Total
None	339	39	31	14	423
	91.87%	63.93%	59.62%	50%	82.94%
A little	16	12	9	5	42
	4.34%	19.67%	17.31%	17.86%	8.24%
Some	8	6	7	2	23
	2.17%	9.84%	13.46%	7.14%	4.51%
A lot	6	4	5	7	22
	1.63%	6.56%	9.62%	25%	4.31%
Total	369	61	52	28	510
	100%	100%	100%	100%	100%
(row %)	(72.35%)	(11.96%)	(10.20%)	(5.49%)	

Note: Chi-squared = 94.17 ($p < .001$)

declining-attractiveness anxiety (i.e., either no anxiety at both waves or a decline between waves). Being older and non-white is associated with higher odds, while having more education is associated with lower odds. Only one of the health measures reaches significance, with results indicating that greater increases in perceived control are associated with higher odds of having a favorable pattern in declining-attractiveness anxiety. Similarly, only one of the social relationship measures is significant; having greater increases in spouse/partner strain is associated with lower odds of reporting a favorable pattern.

Compared with the findings for declining-attractiveness anxiety, results for declining-health anxiety are similar with regard to associations with social locations and relationships but different in terms of associations with health. Being older and non-white predicts higher odds of a favorable pattern between the waves in declining-health anxiety, while greater increases in relationship strain reduce these odds. Not surprisingly, several health measures are significantly associated with declining-health anxiety; results indicate that having greater psychological distress at Wave 1 and greater increases in psychological distress and chronic conditions between waves are associated with lower odds of reporting a favorable pattern in declining-health anxiety.

Comparison of results for reproductive aging with those for both declining-attractiveness and declining-health anxiety reveals more differences than similarities. In contrast with results for the other anxieties, we find that age identity, employment, and parenthood are significantly related to reproductive aging anxiety. Having older identities and being a parent or employed predict greater odds of having a favorable pattern in reproductive aging anxiety. Also contrasting with the other anxieties, reproductive aging anxiety is related to financial independence and BMI, with greater increases in either factor predicting lower odds of a favorable pattern. Other results are more consistent with

Table 3. Logistic Regression of Aging Anxiety on Social Location, Health, and Social Relationships

	Odds ratios (*SE*s)		
	Declining attractiveness[a]	Declining health[a]	Reproductive aging[a]
	n = 905	*n* = 905	*n* = 510
W1 Age[b]	1.04 (0.01)**	1.02 (0.01)*	1.16 (0.04)**
W1 Age identity	1.08 (0.41)	1.66 (0.67)	3.29 (1.91)*
Non-white (0,1)	2.09 (0.56)**	1.80 (0.49)*	0.67 (0.30)
W1 Education[b]	0.93 (0.03)*	0.97 (0.03)	0.98 (0.07)
W1 Financial situation[c]	1.03 (0.05)	1.09 (0.05)†	1.05 (0.10)
Δ Financial situation[c]	1.06 (0.05)	1.06 (0.05)	1.15 (0.08)†
Financial independence[c]	1.40 (0.56)	0.70 (0.29)	0.52 (0.39)
Δ Financial independence[c]	1.23 (0.36)	0.65 (0.19)	0.25 (0.15)*
W1 employed (0,1)	0.77 (0.15)	0.79 (0.15)	3.06 (1.15)**
Sexual minority status	1.54 (0.87)	1.89 (1.05)	4.91 (4.27)†
W1 Chronic conditions[c]	1.01 (0.05)	0.99 (0.05)	0.86 (0.08)
Δ Chronic conditions[c]	0.94 (0.04)	0.90 (0.05)*	0.86 (0.06)*
W1 Psychological distress[c]	0.72 (0.15)	0.65 (0.13)*	0.67 (0.20)
Δ Psychological distress[c]	0.85 (0.17)	0.68 (0.12)*	1.17 (0.27)
W1 BMI	1.03 (0.02)†	1.01 (0.01)	0.98 (0.03)
Δ BMI	0.99 (0.02)	0.98 (0.02)	0.91 (0.03)**
W1 Menstrual status (0,1)	1.22 (0.31)	0.83 (0.20)	—
Neuroticism[c]	1.03 (0.12)	1.10 (0.13)	0.66 (0.15)†
W1 Perceived control[c]	1.20 (0.14)	0.88 (0.10)	0.92 (0.21)
Δ Perceived control[c]	1.41 (0.14)**	1.16 (0.12)	1.54 (0.29)*
W1 Married/cohabiting (0,1)	0.85 (0.19)	0.68 (0.15)†	2.23 (1.01)†
W1 Parent (0,1)	0.97 (0.25)	0.88 (0.23)	3.60 (1.62)**
W1 Spouse/partner support[c]	0.97 (0.23)	0.81 (0.21)	0.68 (0.28)
Δ Spouse/partner support[c]	0.79 (0.17)	0.72 (0.18)	2.15 (0.83)*
W1 Spouse/partner strain[c]	0.81 (0.18)	0.86 (0.19)	0.69 (0.30)
Δ Spouse/partner strain[c]	0.61 (0.13)*	0.62 (0.14)*	1.45 (0.55)
Pseudo R^2	0.11	0.07	0.30

Note: BMI = body mass index.

[a]1 = no anxiety at both waves or a reduction in anxiety between waves and 0 = constant level of a little, some, or a lot of anxiety, or an increase between waves. [b]In years. [c]Higher values represent better financial situation, greater financial independence, more chronic conditions, and higher levels of neuroticism, distress, control, strain, and support.

†$p < .10$. *$p < .05$. **$p < .01$.

those for declining-health or declining-attractiveness anxiety—namely, the protective effect of older ages and having less change between waves in chronic conditions. A protective effect also is found for spouse/partner relationships; however, unlike declining-attractiveness and declining-health anxiety, which are shaped by relationship strain, more favorable over-time patterns in reproductive aging anxiety are associated with greater increases in relationship support. Although it falls short of significance, the odds ratio for sexual minority status is large (nearly 5), suggesting that this group may be more likely to have favorable patterns in reproductive aging anxiety.

Discussion

Although studies document women's greater aging anxiety than men's (e.g., Abramson & Silverstein, 2006; Cummings et al., 2000), little is known about changes in these concerns over time and their variation across women. Our study—the first (to our knowledge) to examine aging anxiety using panel data—addresses these issues. Our focus on variation was guided by a feminist perspective on age relations, highlighting the patterning of aging experiences by intersecting systems of inequality (Calasanti, 2003). This perspective's focus on variation led us to consider other sources of it, namely those centering on health and social relationships.

Consistent with this perspective, we found that women vary in the degree to which they worry about different aspects of aging, with social disadvantage often associated with less anxiety. We found, across all three anxiety sources, that older rather than younger ages predicted more favorable aging anxiety patterns. Changes in aging anxiety over the decade of the study also suggest an advantage accruing with age. The age patterns are consistent with studies of embodied aging experiences revealing disadvantaged groups' constructions of and strategies of navigating these transitions that may reduce anxiety about them (e.g., Agee, 2000; Dillaway et al., 2008). However, patterns vary across anxiety sources, with steep declines found for reproductive aging, moderate declines for declining attractiveness, and relative stability for declining health. These results provide a portrait of aging anxiety's patterning across women's lives: In young adulthood and middle age, women worry more and about more aging issues, while in later life they worry less and about fewer aging issues (namely declining health). We also found, in models of reproductive aging anxiety, a protective effect for older identities. While consistent with the impact of chronological age, this finding contrasts with reported health benefits of youthful identities, pointing to the utility of examining multiple age dimensions (e.g., Barrett & Toothman, 2014).

Findings for race and SES also revealed more favorable aging anxiety patterns among women in disadvantaged social locations. Results for declining-attractiveness and declining-health anxieties indicated that non-white women have more favorable over-time trends than do white women. Similarly, lower education levels predicted more favorable anxiety patterns, though it held only for declining attractiveness. Findings for another SES indicator, financial independence, may provide additional support for this perspective, as lower financial independence predicted more favorable trends in reproductive aging anxiety. Counter to this finding, however, being employed exerted a protective effect on this anxiety source. Taken together, these findings reveal complex effects of social location on aging anxiety, stemming from inequalities' patterning of constraints and adaptive responses to them.

Our study also identified health as a factor producing variation in women's aging anxiety. Consistent with cross-sectional studies (e.g., Lynch, 2000), we found evidence that better physical and psychological health predicted more favorable aging anxiety patterns, though its impact varied across anxiety sources. We also identified several health-related predictors of aging anxiety not previously examined. We found that greater increases in perceived control predicted better over-time patterns in declining-attractiveness and reproductive aging anxiety. This finding contributes to the extensive literature on perceived control, reporting benefits ranging from better mental health to greater longevity (e.g., Ross & Mirowsky, 2003; Turiano, Chapman, Agrigoroaei, Infurna, & Lachman, 2014). However, our finding did not apply to declining-health anxiety, perhaps reflecting a view of both attractiveness and fertility as more controllable than health. Our analyses also revealed that greater increases in BMI between the waves predicted less favorable patterns in reproductive aging anxiety—a finding that may reflect public health messages urging women of reproductive age to prepare their bodies (and selves) in anticipation of motherhood (Waggoner, 2015).

Another source of variation in women's aging anxiety we examined centered on social relationships—a topic receiving particularly limited attention within the small literature on aging anxiety. In short, we found that worse spouse/partner relationships increase aging anxiety—with increases in strain affecting declining-attractiveness and declining-health anxiety and decreases in support affecting reproductive aging anxiety. These findings provide further evidence of social relationships' numerous impacts on our lives—they not only shape the meaning we give to our embodied aging experiences but also influence their impacts on our well-being (e.g., Agee, 2000; Dillaway et al., 2008). The social relationship findings suggest avenues for research, such as examinations of within-couple interplay of aging experiences and anxieties. Further, our observation of significant findings for change in (but not baseline measures of) social relationships points to the importance of considering, using panel data, the impact of women's changing life circumstances on their aging anxiety, including the size, composition, and quality of their social networks as they move through middle and later life and face such transitions as widowhood and relocation.

The limitations of our study reveal other areas for research. We examine only three anxiety sources using

single-items that significantly limit measurement precision. Research would be advanced by the development of scales tapping a wide range of aging anxieties facing women and men—including not only other physical body changes, such as hearing loss, sexual functioning, and ability to care for oneself, but also changes less related to physicality, such as memory loss, isolation, and financial concerns. Examination of other anxiety sources would help determine the generalizability of our observation that some disadvantaged groups worry less about aging than their advantaged peers—providing broader insights on the consequences of social inequality. Our paper also lays the groundwork for research examining in a more nuanced way the variation in women's aging experiences and their implications for aging anxiety. We examined social location, health, and social relationships as independent factors shaping aging anxiety, but they are likely to interact in complex ways to not only shape women's anxieties as they age but also the strategies they use to dampen them.

Our findings illustrate women's multiple "old ages"—a reality manifesting in not only the more extensively documented objective conditions of later life but also perceptions of aging. Our identification of sources of variation in women's aging anxiety yields insight on aging as a socially and culturally structured process. Our finding that better health protects against aging anxiety may reflect our culture's focus on later life as a stage of decline—an orientation working to the psychological advantage of healthier women, but disadvantage of their less healthy peers. Better social relationships also reduce aging anxiety, illustrating close others' impact on our aging experiences; this view contrasts with the cultural emphasis on aging as an individual—and individually determined—experience (Holstein, 2015). We also found connections between social locations and aging anxiety, with some patterns suggesting that women's experiences of other devalued statuses can reduce their concerns about growing older. This finding has implications for subjective aging—the broader construct of which aging anxiety is a component. Our findings diverge from those observed for other subjective aging dimensions (e.g., Toothman & Barrett, 2011), suggesting that social advantage may enhance some aging views but diminish others. Our findings also have implications for women's well-being in later life, as greater aging anxiety is associated with elevated psychological distress (Barrett & Robbins, 2008). Few studies examine aging anxiety's consequences; however, they are suggested by the broader subjective aging literature, revealing the health-enhancing effect of positive aging views (e.g., Barrett & Toothman, 2014). Our study provides a foundation for examinations of aging anxiety's effects on well-being by highlighting its potential variation across women.

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