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The Multiple Sources of Women's Aging Anxiety and Their Relationship With Psychological Distress

Anne E. Barrett, PhD
Cheryl Robbins, PhD
Florida State University, Tallahassee

Objective: The authors examine associations of three sources of women's aging anxiety—declining attractiveness, health, and fertility—with social contexts of their lives, including locations in systems of inequality, connections to institutions, relationships, and health. They also explore links between aging anxieties and distress. **Method:** Employing data from the National Survey of Midlife Development in the United States conducted in 1995-1996, the authors use logistic and OLS regression. **Results:** Anxiety about attractiveness is higher among women who are younger, White, heterosexual, employed, separated/divorced, less financially independent, and have worse relationships. Anxiety about health is greater among women who are younger, White, less financially independent, and have worse relationships and health. Anxiety about fertility is higher among younger, more educated, heterosexual, more financially independent, and childless women. Anxiety about health and attractiveness predicts greater distress. **Discussion:** This study suggests that correlates and mental health consequences of aging anxiety differ across sources of concern.

Keywords: *aging anxiety; psychological distress; mental health; gender*

"Never ask a woman her age." This aphorism reflects cultural constructions and assumptions about women's experience with aging. As suggested by the double standard of aging—a term popularized by Sontag (1972)—the loss of status that accompanies aging is more severe for women than men, which leads to the expectation that reminders of aging

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produce anxiety for many women. This pattern is generally supported by the small literature on aging anxiety.[1] Research tends to find that women experience more anxiety about their own aging than do men (Abramson & Silverstein, 2006; Cummings, Kropf, & DeWeaver, 2000; Lynch, 2000); however, it should be noted that a few studies—employing smaller, nonrandom samples—fail to find gender differences (Kafer, Rakowski, Lachman, & Hickey, 1980) or report more concerns among men (Lasher & Faulkender, 1993; Watkins, Coates, & Ferroni, 1998).

Although most research suggests that aging anxiety is greater among women, studies are limited by inadequate attention to the multiple sources of women's concerns about their own aging. Their anxiety may center on any number of future possibilities, such as health declines, changes in physical appearance, and loss of fertility. Rather than exploring this variation, studies tend to focus on summary indicators of aging anxiety (Cummings et al., 2000; Kafer et al., 1980; Lasher & Faulkender, 1993). As a consequence, we know little about how multiple sources of aging anxiety are shaped by the various contexts of women's lives. Numerous social factors—race/ethnicity, social class, and family relationships, to name only a few—influence the objective experience of aging, such as the likelihood of having plastic surgery, being widowed, living in poverty, being disabled, or having an informal caregiver. We argue that many of these same factors are likely to influence the subjective experience of aging, including women's concerns about their own aging. We examine the following four clusters of factors and their associations with aging anxiety: women's locations in systems of inequality (e.g., race/ethnicity, social class, and sexual orientation); their connections to social institutions (e.g., marriage, family, and work); the nature of their social ties; and their health status. Many of these factors have not been examined in prior literature, leaving their associations with various sources of women's aging anxiety unexplored. Our purpose is to provide a descriptive analysis of these associations; we do not place greater emphasis on some groups of variables over others.

Prior work on aging anxiety also is limited by the absence of studies examining the consequences of worrying about aging, including its effects on psychological well-being. Mental health researchers have extensively examined the role of gender in shaping mental health, revealing such patterns as women's relatively high risk of psychological distress and internalizing psychiatric disorders (Kessler, McGonagle, Swartz, Blazer, & Nelson, 1993; Nolen-Hoeksema, 1990; Rosenfield, 1999). However, studies do not fully consider the mental health implications of gendered aging. In a society that privileges men over women and youth over old age, women's concerns about their own futures may erode their mental health in the present. Research is

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needed that examines the association between aging anxiety and mental health, including variation across sources of aging concerns.

This study extends the literature by examining several sources of women's aging anxiety: concerns about health declines, changes in physical appearance, and reproductive aging. These anxieties are likely to be relevant to many women, given the cultural emphasis placed on their attractiveness and role as mothers, as well as their greater risk of disability (McNeil, 2001). We explore the relationship between each source of aging anxiety and various contexts of women's lives, including their positions in systems of inequality, their connections to social institutions, the nature of their social ties, and their health. We also expand research on women's mental health by examining the association between these sources of aging anxiety and psychological distress.

Social Factors Influencing Aging Anxiety

Locations in Systems of Inequality

We examine women's locations in four systems of inequality—age, race/ethnicity, sexual orientation, and social class—each of which will exert an influence on the contour of their later years. Occupying lower positions in these hierarchies, in general, reduces access to economic resources, status, and power and increases exposure to stress, in the form of ageism, racism, heterosexism, and classism. Applied to our study, these structural locations—which are important predictors of well-being in later life—may influence anxiety about one's own aging. However, the relationship between structural location and aging anxiety is more complex for at least two conceptual reasons. First, occupying a lower status in a particular hierarchy does not necessarily imply greater aging anxiety. In the discussion that follows, we provide rationales for expecting, in some cases, that more "disadvantaged" individuals experience less aging anxiety than their more privileged peers. Second, these structural characteristics are more than indicators of locations within systems of stratification. Of particular note, age is also an indicator of cohort membership, as well as a rough proxy for developmental or life stage. In developing our arguments concerning relationships between age and various sources of aging anxiety, we draw on these multiple meanings of age.

Age

The social factor receiving the most attention in this literature is age. Studies consistently find that the young have more negative views and

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greater anxiety about their own aging than do older adults, which may reflect their lesser knowledge about aging and less frequent contact with elders (Abramson & Silverstein, 2006; Cummings et al., 2000; Kafer et al., 1980; Lasher & Faulkender, 1993; Lynch, 2000; Rossi, 2004). In other words, age may represent the accumulation of greater experience with the realities of aging, which may allay personal fears about growing older. Although largely unexplored in prior studies, the greater aging anxiety of young women may center on particular concerns. Given their expanded educational, work, and family options—and the accompanying increase in their economic self-sufficiency—young and middle-aged women, especially the more educated, may have relatively few concerns relating to health in their later years. However, their continuing navigation of these options may lead some women, in particular those without children, to have heightened anxiety about reproductive aging. That is, their life stage, for which age is a rough proxy, may give rise to this source of concern about aging. This prediction is supported by the work of Rossi (2004), who finds that younger women, in particular those younger than 40, are more likely than older women to worry about loss of their fertility; however, the childless are twice as likely as mothers to report such anxiety. The demographic trend toward older ages at marriage and childbearing—combined with American society's ageist standards of beauty and valuation of women by their appearance—also may increase concerns about attractiveness among young women, in particular those without partners. In addition to arguments resting on cohort effects, elevated anxiety concerning appearance among young women is predicted by research revealing that older women, although not rejecting youthful conceptions of beauty, create new definitions that de-emphasize physical features (Hurd, 2001).

Race/Ethnicity

African Americans and Hispanics tend to report greater aging anxiety than Whites (Abramson & Silverstein, 2006; Klemmack & Roff, 1984; Lynch, 2000); however, this relationship may not hold across sources of aging anxiety. Women of color may have greater anxiety about health declines, given their elevated risk of many illnesses and their shorter life expectancy (American Heart Association, 2004; Anderson & DeTurk, 2002; National Cancer Institute, 2003). Although race differentials in health suggest greater health anxiety among minority women, the opposite prediction also has support: Anxiety about health declines may be attenuated among minority women by their greater acceptance of tragedy (Davis, 1990), as well as strong extended family networks that lower their risk of institutionalization as frail

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elders (Wallace, Levy-Storms, Kington, & Andersen, 1998). Cultural norms may reduce other sources of anxiety among women of color, including changes in physical appearance. Supporting this hypothesis, African American women report better body image than White women (Altabe, 1998), perhaps as a result of their broader conceptions of beauty (Calasanti & Slevin, 2001). Another feature of African American women's lives—their greater economic independence, as indicated by their earning a higher proportion of the wages of their male counterparts compared with women of other races (Padavic & Reskin, 2002)—may diminish anxiety about attractiveness, as well as health-related concerns. However, the protective influence of Black women's economic independence may be undermined by their low position on the earnings ladder (Padavic & Reskin, 2002). Although receiving limited attention, minority women also may have less anxiety about reproductive aging than their White peers. A small focus group study found that African Americans tend to frame their reproductive aging positively, whereas White women view it as a sign of physical decline (Sampselle, Harris, Harlow, & Sowers, 2002).

Sexual Orientation

Incorporating gender into the analysis of aging anxiety brings into focus sexuality, a context of women's lives that may influence their concerns about their futures. The privileging of heterosexuality may make concerns about health trajectories particularly salient for lesbians, given their inability to obtain, for example, employer-provided health insurance for spouses and Social Security survivor's benefits. However, the separation of their sexuality from their fertility may provide protection against concerns about their reproductive aging. Lesbians also may have less anxiety about physical signs of aging as suggested by research reporting that they have a better body image and less concern with appearance than heterosexual women (Siever, 1994), perhaps because they are less subject to the "male gaze" that attends to and values a certain standard of attractiveness (Wolf, 1991). However, not all studies support this assertion (Copper, 1986; Fullmer, Shenk, & Eastland, 1999).

Socioeconomic Status

Higher socioeconomic status (SES) predicts lower aging anxiety, perhaps because resources provide the means to deal with many of the challenges of aging, such as health declines and income loss following retirement or widowhood (Abramson & Silverstein, 2006; Cummings et al., 2000;

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Klemmack & Roff, 1984; Lynch, 2000). However, studies have given limited attention to possible variation in this relationship across sources of aging anxiety, as well as indicators of SES. Research is needed that examines not only the traditional measures like education and income but also indicators of women's economic independence. Greater contributions to household income may symbolize for many women an enhanced ability to manage future challenges on their own.

Incorporating a focus on gender into this literature highlights the possibility that the relationship between SES and aging anxiety varies across sources of anxiety and indicators of SES. Achieving high levels of education and personal income—a life course path involving for many women the postponement of marriage and parenthood—may be associated with greater concerns about reproductive aging. However, higher education and greater economic independence may insulate women from concerns about aging-related changes in their appearance. In contrast, concerns about loss of attractiveness may be strongly felt by economically dependent women with high-earning husbands or partners. Not only might these women recognize the socioeconomic losses they could incur if their relationships dissolved, but their privilege also allows them to give greater thought to their own aging and contemplate options to stem the tide, which may increase aging anxiety. Supporting this argument, Rossi (2004) finds that women with high-earning spouses have greater anxiety about age-related changes in their attractiveness than less socioeconomically advantaged wives. Although relationships with anxiety about attractiveness and reproductive aging may vary across socioeconomic indicators, a more consistent pattern may be found for anxiety about health declines. The strong, positive relationship between physical health and various measures of SES (Williams & Collins, 1995) suggests that having more socioeconomic resources—as indicated by education, household income, or the relative contribution to household income—is associated with lower levels of anxiety about health declines.

Connections to Social Institutions

Although receiving very limited attention, aging anxiety may be shaped by our attachments to various institutions, including marriage, family, and work. Being embedded in institutions that provide economic and social support over the life course may decrease some sources of aging anxiety. For example, marriage, which not only protects physical and mental health (Simon, 2002; Waite, 1995) but also provides a source of support in the face of illness, may reduce anxiety about future health declines. In contrast, marriage may not

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shield women from concerns about declines in attractiveness. Comparing married or cohabiting women with singles, Rossi (2004) finds greater anxiety about attractiveness among those with partners across most age groups. Similarly, a qualitative study of middle-aged women by Giesen (1989) reports that single women are more likely than their married peers to change their definitions of attractiveness as they grow older and view themselves as becoming more attractive with age. They also are less likely to refer to their physical appearance in discussing their attractiveness. Married women's concerns about their appearance may reflect the convergence of several cultural factors, including our youthful standards of beauty, emphasis on women's physical appearance, and the threat of divorce, given our relatively high rate of marital dissolution (Hackstaff, 1999). Providing some support for this argument, married women between the ages of 40 and 59 who report more troubled relationships with their spouses, such as more disagreements and a higher perceived likelihood of separation, experience greater anxiety about aging-related declines in attractiveness (Rossi, 2004). This finding suggests that separated or divorced women may, in fact, have more anxiety about their attractiveness than married or cohabiting women. This possibility has not been examined because prior work contrasts married or cohabiting women with a composite group of single women (e.g., Giesen, 1989; Rossi, 2004).

Another institutional context that may influence aging anxiety is parenthood. Having children is associated with reporting fewer concerns about reproductive aging (Rossi, 2004), and although unexplored in prior studies, it also may reduce anxiety about health declines, given the prominence of children, especially daughters, in the caregiving networks of later life (Barrett & Lynch, 1999; Dwyer & Coward, 1991).

Aging anxiety may be associated with attachment to the paid labor force. By providing greater economic security in retirement years and access to health insurance (DeNavas-Walt, Proctor, & Mills, 2004), paid work may reduce worries about health declines. However, it may have the opposite effect on anxiety about physical signs of aging. Supporting this argument, Harris (1994) finds that women are more likely than men to report that maintaining a youthful appearance is important for them in the workplace.

Social Relationships

Our connections to social institutions may influence aging anxiety, in part, through their effect on our social relationships. Having more supportive bonds may alleviate some sources of concern about later life. Our social ties also may influence aging anxieties by shaping our self-evaluations: They

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provide reflected appraisals of our selves and points of reference for our experiences (Gecas & Burke, 1995). Research tends to focus on spousal relationships; however, aging anxiety is likely to be influenced by the quality of other social ties, including other family members and friends. These relationships may be important, in particular, to incorporate into examinations of women's aging anxiety, given their higher risk of widowhood compared with men (Kreider & Simmons, 2003), as well as their greater perceived support from friends and family (Turner & Marino, 1994).

Research is needed that examines the influence of a range of social ties on various sources of aging anxiety, including the negative and positive dimensions of these relationships. Prior work has only examined the stressful aspects of spousal relationships. As noted in our discussion of marriage, having a more troubled relationship is associated with greater anxiety about declines in attractiveness (Rossi, 2004). Although negative rather than positive aspects of relationships are more strongly and consistently associated with well-being (Rook, 1998), the presence of supportive ties with spouses, as well as other family members and friends, may protect against some sources of anxiety. The central role of family in providing instrumental support in later life (Barrett & Lynch, 1999) suggests that worse relationships with spouses or partners and other family members may heighten anxiety about health declines. Because friends are less likely to become our caregivers (Barrett & Lynch, 1999), the quality of these relationships may not influence concerns about health decline; however, the strong effect of friends on psychological well-being in later life (Dean, Kolody, & Wood, 1990) suggests that better friendships may, more generally, diminish concerns about aging. Friends—who tend to be the same age and gender as ourselves (McPherson, Smith-Lovin, & Cook, 2001)—are likely to provide frames of reference and emotional support for dealing with aging-related physical changes.

Health

A factor that is linked with all of these social contexts—age, race, SES, sexual orientation, work, marriage, and parenthood—and strongly associated with aging anxiety is health. Although better health tends to predict fewer concerns about aging (Hurd, 2001; Klemmack & Roff, 1984; Lynch, 2000), this may vary across sources of anxiety and health indicators. Current health problems, as well as less favorable perceptions of one's health and recent physiological changes, are likely to increase anxiety about future health; however, they may have the opposite effect on anxiety with regard

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to attractiveness. Providing support for this argument, experiencing health problems can lead women to "downplay the importance of the body in the mind/body relationship" (Hurd, 2001, p. 457). A similar finding is reported by Rossi (2004) in her examination of body mass index and concerns about loss of attractiveness. She finds that, among married women between the ages of 40 and 59, heavier women were less likely to report this source of anxiety. However, she reports a different relationship with married women's perceptions of their recent physiological changes: Wives with more negative views of changes experienced in the past 5 years in their physique, energy, fatigue, and physical fitness report greater anxiety about the effects of aging on their attractiveness (Rossi, 2004). Although current health may influence anxiety about declines in health and attractiveness, there is less evidence to suggest that it would affect concerns about reproductive aging.

Aging Anxiety and Mental Health

We have argued that studies of aging anxiety fail to fully explore how the social contexts of women's lives may influence various sources of their concerns about aging. Illustrating a similar tendency, research on women's mental health gives limited attention to the unique issues that aging presents for women. In particular, it fails to take into account the influence that perceptions of the aging process may have on women's well-being as they grow old. Having greater anxiety about changes they are likely to experience in the future may erode their mental health in the present. Providing support for this assertion, greater fear of aging is associated with worse life satisfaction (Klemmack & Roff, 1984). However, studies have not examined indicators of mental health or considered how the relationship may vary across types of aging anxiety. Given the cultural emphasis on women's physical appearance, concerns about attractiveness may be strongly associated with current levels of psychological distress. Women's mental health also may be influenced by worry about health declines, which is the most commonly reported source of aging anxiety (Abramson & Silverstein, 2006; Rossi, 2004). Providing further support, surveys conducted by the American Association of Retired Persons reveal that the prevalence of anxiety about health and attractiveness increased between 1994 and 2004 (Abramson & Silverstein, 2006). In contrast, loss of fertility, which is a less common source of anxiety (Rossi, 2004) and is viewed by many women as a positive rather than negative aspect of aging (Dillaway, 2005), may not influence women's mental health.

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In sum, prior research gives limited attention to the multiple sources of concerns about aging and their differential associations with various contexts of women's lives. In addition, little is known about the relationship between sources of aging anxiety and mental health. We address these issues by examining the associations between several contexts of women's lives (i.e., their locations within systems of inequality, their attachments to social institutions, their social relationships, and their health status) and three sources of aging anxiety—their concerns about health declines, physical attractiveness, and reproductive aging. We also examine the association between each source of aging anxiety and women's current psychological distress. Because we expect relationships to vary across the sources of aging anxiety, our study involves the testing of a number of hypotheses, which are summarized in Table 1.

Method

Sample

Data are drawn from the MacArthur Foundation National Survey of Midlife Development in the United States (MIDUS), a national random-digit-dial telephone survey that was followed up with a mailed questionnaire (Brim et al., 2000). Data were collected in 1995-1996 from a sample of non-institutionalized, English-speaking men and women aged 25 to 74 ($N = 3,032$). The overall response rate was 60.8%. The study sample ($N = 1,406$) was restricted to women because the three aging anxiety items available in the data were only asked of women. The sample also is restricted by race because few respondents identified with groups other than African American and White. Like data employed in nearly all studies of aging anxiety, MIDUS is cross-sectional, which allows us to determine the associations between various social factors, sources of aging anxiety, and psychological distress; however, it prevents the determination of the temporal ordering of these relationships.

Measures

Aging anxiety. Three measures were created from responses to the following statements: "Women sometimes worry about the future and getting older. How much do you worry about each of the following? Being too old to have children? Being less attractive as a woman? Having more illness as you get older?" Responses ranged from *not at all* (0) to *a lot* (3). Because the

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Table 1
Summary of Hypothesized Relationships Between Sources of Aging Anxiety, Social Factors, and Psychological Distress

	Anxiety About Attractiveness	Anxiety About Health	Anxiety About Reproductive Aging
Systems of inequality			
Age	*Younger women are more likely to have anxiety.*	*Younger women are more likely to have anxiety.*[a]	*Younger women are more likely to have anxiety.*
Race	*African Americans are less likely than Whites to have anxiety.*	The literature supports two opposing predictions: African American women may have more anxiety than Whites—or less.	African Americans are less likely than Whites to have anxiety.
Sexual orientation	*Lesbians or bisexuals are less likely than heterosexual women to have anxiety.*	Lesbians or bisexuals are more likely than heterosexual women to have anxiety.	*Lesbians or bisexuals are less likely than heterosexual women to have anxiety.*
SES: Education	More educated women are less likely to have anxiety.	More educated women are less likely to have anxiety.	*More educated women are more likely to have anxiety.*
SES: Household income	Women with more household income are more likely to have anxiety.	Women with more household income are less likely to have anxiety.	—
SES: Financial independence	*More independent women are less likely to have anxiety.*	*More independent women are less likely to have anxiety.*	*More independent women are more likely to have anxiety.*

Social institutions			
Marriage	*Married women are less likely than separated/divorced women to have anxiety.*	Married women are less likely to have anxiety than all other groups of women.	—
Parenthood	—	Mothers are less likely to have anxiety.	*Mothers are less likely to have anxiety.*
Work	*Working women are more likely to have anxiety.*	Working women are less likely to have anxiety.	—
Social relationships			
Relationships with spouse/partner	*Women with more stressful and less supportive relationships are more likely to have anxiety.*[b]	Women with more stressful and less supportive relationships are more likely to have anxiety.	—
Relationships with other family members	—	*Women with more stressful and less supportive relationships are more likely to have anxiety.*[b]	—
Relationships with friends	*Women with more stressful and less supportive relationships are more likely to have anxiety.*[b]	*Women with more stressful and less supportive relationships are more likely to have anxiety.*	—

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Table 1 (continued)

	Anxiety About Attractiveness	Anxiety About Health	Anxiety About Reproductive Aging
Health			
Chronic conditions	Those with more health problems are less likely to have anxiety.	*Those with more health problems are more likely to have anxiety.*	—
Self-rated health	Those with worse health are less likely to have anxiety.	*Those with worse health are more likely to have anxiety.*	—
Self-assessed physiological changes	Those with worse perceptions are more likely to have anxiety.	*Those with worse perceptions are more likely to have anxiety.*	—
Psychological distress	*Reporting anxiety about attractiveness is associated with greater distress.*	*Reporting anxiety about health is associated with greater distress.*	—

Note: Italicized hypotheses are supported by the results of regression analyses reported in Tables 3-6. A dash indicates that no relationship is hypothesized. SES = socioeconomic status.

a. Although women older than 65 are less likely than all groups of younger women to have anxiety about health declines, results reveal a curvilinear relationship with women age 36 to 45 facing the highest odds.

b. Results support the hypothesis concerning negative, but not positive, aspects of relationships.

measures of aging anxiety are ordinal, we initially conducted ordinal logistic regression; however, we do not present these results because the parallel regression assumption did not hold. We also conducted multinomial models and logistic regression, treating each anxiety as a dichotomous variable. Because the substantive conclusions from these two sets of models do not differ, we present the results from logistic regression models that treat the anxieties as dichotomous variables. For loss of health and attractiveness, the responses of *a lot* or *some* were coded 1, and *a little* or *none* were coded 0. Forty percent of women reported having some or a lot of anxiety about health declines, compared with 29% worrying some or a lot about attractiveness. Because the distribution of anxiety about fertility was more skewed (i.e., 83% reported no anxiety), we coded responses of *a lot*, *some*, or *a little* as 1 and *none* as 0. Although the item about reproductive aging was asked of all women, regardless of their menopausal status, we ran models examining correlates of this source of aging anxiety using a sample limited to pre-menopausal women. Of this subsample ($n = 762$), 71% reported no anxiety about reproductive aging.[2] The intercorrelations for the three indicators of aging anxiety range from .10 to .47 in the full sample of women.

Locations in systems of inequality. Age is indicated by a set of five dichotomous variables: 25 to 35; 36 to 45; 46 to 55; 56 to 65; and 66 to 74. We use this set of variables rather than a continuous measure of age to examine potential nonlinear associations between age and aging anxiety. Race is coded 1 for African Americans and 0 for Whites. Sexual orientation is coded 1 for lesbian or bisexual women and 0 for heterosexuals.[3] To create a measure of years of education, we transformed an ordinal variable ranging from *no school* (0) to *PhD or other professional degree* (12) into a continuous measure by assigning respondents the midpoint of their chosen category. Household income is a continuous variable created by summing income from six sources: personal, spouse or partner, other family members, social security retirement benefits, government assistance programs, and all other sources. For each of the 36 income ranges, we recoded responses to the midpoint of the category (e.g., a response of annual income in the range of $25,000–29,999 was recoded as $27,500). We also examine an indicator of women's financial independence, indicated by the ratio of personal earnings to household income.[4]

Attachments to social institutions. Marital status is measured using a set of four dichotomous variables: married or cohabiting,[5] separated or divorced, widowed, and never married. A dichotomous variable indicates parental

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status.[6] A dichotomous variable indicates whether the respondent is currently working; it is coded 1 if the respondent is self-employed or working full-time.[7]

Social relationships. We include the following six subjective assessments of relationships with spouses/partners, other family, and friends: (a) a six-item scale of spouse/partner support ($\alpha = .92$); (b) a six-item scale of spouse/partner strain ($\alpha = .88$); (c) a four-item scale of family support ($\alpha = .84$); (d) a four-item scale of family strain ($\alpha = .79$); (e) a four-item scale of friend support ($\alpha = .88$); and (f) a four-item scale of friend strain ($\alpha = .79$). The scales are revised from items developed by Schuster, Kessler, and Aseltine (1990). Their psychometric properties and relationships with psychological distress (as measured in MIDUS) are described in Whalen and Lachman (2000).

Health. We examine four indicators of health and physiological changes: number of chronic physical conditions (up to 28); self-rated health (1 = *poor* to 5 = *excellent*); a four-item scale of self-assessed physiological changes ($\alpha = 0.85$); and a six-item scale of psychological distress ($\alpha = .88$). The psychometric properties of the distress scale (known as the K6) are described by Kessler and colleagues (2002).

On the health, social network, and sociodemographic variables, means were used to impute missing values on continuous and ordinal variables, and modal responses were used for dichotomous variables. The majority of cases on which data were imputed involved conditionally missing data (i.e., missing because the respondent did not report a husband/partner). Following the method outlined by Cohen and Cohen (1983), we imputed means and included the requisite control variable (i.e., has spouse/partner). As an illustration, respondents without a husband/partner were assigned the means on spouse/partner support and strain, and models including these variables control for whether or not the respondent reported a husband/partner. Measures are further described in the appendix and Table 2.

Analytic Strategy

Our study has two goals. First, we aim to provide a descriptive analysis of the associations between each of three sources of aging anxiety and a range of factors that we have grouped into four broad categories: locations in systems of inequality, attachments to social institutions, social relationships, and health. For each source of anxiety, we run four logistic regression models, which correspond with the four sets of factors. In Model 1, the

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Table 2
Description of Variables

Variable	*M* (*SD*)
Age 25-35 (%)	.230
Age 36-45 (%)	.232
Age 46-55 (%)	.238
Age 56-65 (%)	.203
Age 66-74 (%)	.097
African American (%)	.081
Lesbian or bisexual (%)	.021
Education (years completed ranging from 3-20)	13.540 (2.39)
Household income (thousand dollars ranging from 0-365)	55.573 (49.51)
Financial independence (ratio of personal to household income)	.354 (0.35)
Employed (% working full-time or self-employed)	.597
Married or cohabiting (%)	.629
Separated or divorced (%)	.193
Widowed (%)	.092
Never married (%)	.086
Parent (%)	.851
Spouse/partner support[a] (six-item additive scale ranging from 6 to 24; $\alpha = .92$)	20.943 (3.12)
Spouse/partner strain (six-item additive scale ranging from 6 to 24; $\alpha = .88$)	13.877 (3.18)
Family support[a] (four-item additive scale ranging from 4 to 16; $\alpha = .84$)	13.838 (2.43)
Family strain (four-item additive scale ranging from 4 to 16; $\alpha = .79$)	8.805 (2.47)
Friend support[a] (four-item additive scale ranging from 4 to 16; $\alpha = .89$)	13.409 (2.61)
Friend strain (four-item additive scale ranging from 4 to 16; $\alpha = .79$)	7.787 (2.04)
Chronic conditions (count ranging from 0 to 21)	2.622 (2.62)
Self-rated health[a] (1 = *poor* to 5 = *excellent*)	3.448 (1.00)
Self-assessed physiological changes[a] (four-item additive scale ranging from 4 to 12; $\alpha = .85$)	6.931 (2.49)
Psychological distress (six-item mean scale ranging from 0 to 4; $\alpha = .87$)	.615 (0.66)
Anxiety about loss of attractiveness (% having some or a lot of anxiety)	.286
Anxiety about health declines (% having some or a lot of anxiety)	.398
Anxiety about loss of fertility (% having any anxiety)	.168

Note: $N = 1{,}406$.
a. Higher values = more positive assessment.

following indicators of women's location in systems of inequality were entered: age, race, sexual orientation, education, income, and financial independence. Model 2 adds the indicators of attachments to institutions: marital status, parenthood, and work. In Model 3, we enter the six measures of the quality of social relationships: support and strain from spouse/partner, other family, and friends. We enter the following measures of health and physical

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change in Model 4: number of chronic conditions, self-rated health, self-assessed physiological changes, and psychological distress. The scale of psychological distress is our indicator of mental health that we examine as a dependent variable in regression models treating aging anxieties as independent variables. However, we also include it as an independent variable in models predicting aging anxieties, in an attempt to address the endogeneity issue arising from our use of cross-sectional data. In short, distress may be a cause, rather than a consequence, of aging anxiety. Because we lack a measure of distress collected prior to the indicators of aging anxiety (which would be ideal), we include the available measure of distress as a control variable in logistic regression models predicting aging anxiety.

The second aim of our study is the examination of associations between each source of aging anxiety and current psychological distress. We use OLS regression models to examine these relationships. The analysis proceeds in two steps. Drawing on prior work outlining social factors that influence mental health (George, 1996), we entered indicators of locations in systems of inequality, attachments to social institutions, social relationships, and health in Model 1. Model 2 added the three aging anxiety variables, permitting examination of whether they contribute to explaining variance in distress over and above other social factors. All analyses presented have been weighted to adjust for unequal probabilities of household selection and selection of respondents within households.[8]

Results

Table 3 reports the results of the logistic regression of anxiety about declines in attractiveness. Several indicators of women's location in systems of inequality reach significance. We find higher odds of having some or a lot of anxiety among younger women, Whites, heterosexuals, and those making smaller relative contributions to household income, compared with their respective counterparts.[9] Attachments to two social institutions, work and marriage, are significantly associated with this source of anxiety. As indicated by the elevated odds of some or a lot of anxiety among separated or divorced women, marriage appears to protect against concerns about declining attractiveness. However, as hypothesized, a similar protection is not found for involvement in the paid labor force. Compared with women who are working part-time or not at all, employed women have higher odds of reporting anxiety about changes in their attractiveness. These aging-related concerns also are associated with the quality of women's social relationships. Reporting more stressful spousal or friend relationships is related to higher

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Table 3
Logistic Regression of Anxiety About Loss of Attractiveness[a]

	Odds Ratio (*SE*)			
	Model 1	Model 2	Model 3	Model 4
Age 25-35[b]	8.498***	7.390***	6.814***	6.924***
	(2.984)	(2.746)	(2.573)	(2.709)
Age 36-45[b]	7.119***	6.098***	5.649***	5.464***
	(2.519)	(2.250)	(2.122)	(2.127)
Age 46-55[b]	4.801***	4.188***	4.015***	3.725***
	(1.707)	(1.541)	(1.500)	(1.439)
Age 56-65[b]	3.592***	3.421***	3.510***	3.504***
	(1.285)	(1.251)	(1.293)	(1.321)
African American	.568*	.548*	.524*	.502**
	(.140)	(.136)	(.133)	(.134)
Lesbian or bisexual	.396†	.344*	.344*	.326*
	(.201)	(.174)	(.177)	(.181)
Education	.972	.965	.966	.986
	(.027)	(.028)	(.028)	(.030)
Household income	1.001	1.001	1.002	1.003†
	(.001)	(.001)	(.002)	(.002)
Financial independence	.946	.558*	.544*	.595†
	(.180)	(.140)	(.140)	(.158)
Employed		1.376*	1.417*	1.460*
		(.219)	(.231)	(.245)
Separated or divorced[c]		1.708**	1.599*	1.554*
		(.301)	(.297)	(.291)
Widowed[c]		.895	.992	1.023
		(.261)	(.290)	(.302)
Never married[c]		1.544†	1.490	1.457
		(.402)	(.394)	(.387)
Parent		.950	.884	.941
		(.195)	(.186)	(.204)
Spouse/partner support[d]			.988	.997
			(.027)	(.029)
Spouse/partner strain			1.087**	1.068*
			(.030)	(.030)
Family support[d]			.970	.994
			(.029)	(.032)
Family strain			1.036	1.003
			(.032)	(.032)
Friend support[d]			.954†	.973
			(.024)	(.026)
Friend strain			1.086*	1.074†
			(.039)	(.040)

(continued)

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Table 3 (continued)

	Odds Ratio (*SE*)			
	Model 1	Model 2	Model 3	Model 4
Chronic conditions				1.031
				(.029)
Self-rated health[d]				1.024
				(.080)
Self-assessed physiological changes[d]				.952†
				(.026)
Psychological distress				1.815***
				(.207)
Observations	1,406	1,406	1,406	1,406
Log likelihood	–801.779	–794.549	–766.550	–742.687
Likelihood ratio statistic (*df*)	79.300 (9)	93.760 (14)	149.758 (20)	197.483 (24)

a. Modeling the odds of having some or a lot of anxiety.
b. Age 66-74 = reference group.
c. Married or cohabiting = reference group.
d. Higher values = more positive assessment.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

odds of having some or a lot of anxiety. We do not find significant relationships between anxiety and the positive aspects of these relationships. Contrary to our expectations, none of the indicators of physical health or physiological changes reach significance. Reporting greater psychological distress is associated with higher odds of this source of anxiety.

Table 4 reports the results of the regression of anxiety about health declines. As we anticipated, we find that all groups of younger women face lower odds of having some or a lot of anxiety about deteriorating health, compared with women between the ages of 66 and 74. However, the results reveal a curvilinear association, such that women between the ages of 36 and 45 have the highest odds. Our predictions concerning the association between race and anxiety about health declines are less clear because prior work supports opposing hypotheses. We find that African American women have lower odds than White women of having some or a lot of anxiety about this change associated with aging.[10] Our results support the prediction that more financially independent women face lower odds of worrying some or a lot about future health declines. Connections to marriage, parenthood, and work are not associated with health anxiety; however, this source of concern is related to the quality of women's social ties. Reporting greater strain from family and friends and less support from friends is associated with higher

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Table 4
Logistic Regression of Anxiety About Health Declines[a]

	Odds Ratio (*SE*)			
	Model 1	Model 2	Model 3	Model 4
Age 25-35[b]	1.877**	1.710*	1.515	1.637†
	(.434)	(.425)	(.389)	(.435)
Age 36-45[b]	2.659***	2.377***	2.156**	2.288**
	(.620)	(.587)	(.552)	(.611)
Age 46-55[b]	2.121***	1.914**	1.806*	1.708*
	(.491)	(.464)	(.452)	(.438)
Age 56-65[b]	1.973**	1.889**	1.929**	1.920**
	(.451)	(.442)	(.466)	(.474)
African American	.698†	.704	.682†	.588*
	(.150)	(.153)	(.151)	(.140)
Lesbian or bisexual	.766	.749	.764	.711
	(.300)	(.297)	(.319)	(.337)
Education	.978	.974	.976	1.013
	(.024)	(.025)	(.025)	(.027)
Household income	1.000	1.000	1.000	1.002
	(.001)	(.001)	(.001)	(.001)
Financial independence	.626**	.514**	.516**	.634†
	(.109)	(.117)	(.119)	(.152)
Employed		1.115	1.118	1.132
		(.161)	(.165)	(.172)
Separated or divorced[c]		1.289	1.196	1.137
		(.215)	(.207)	(.202)
Widowed[c]		.825	.895	.943
		(.185)	(.206)	(.233)
Never married[c]		.945	.890	.852
		(.240)	(.232)	(.230)
Parent		.895	.816	.843
		(.173)	(.161)	(.173)
Spouse/partner support[d]			.991	1.006
			(.025)	(.028)
Spouse/partner strain			1.031	1.012
			(.025)	(.027)
Family support[d]			.995	1.022
			(.026)	(.030)
Family strain			1.074**	1.033
			(.030)	(.031)
Friend support[d]			.937**	.968
			(.022)	(.024)
Friend strain			1.067*	1.046
			(.033)	(.035)

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Table 4 (continued)

	Odds Ratio (*SE*)			
	Model 1	Model 2	Model 3	Model 4
Chronic conditions				1.074**
				(.029)
Self-rated health[d]				.790***
				(.056)
Self-assessed physiological changes[d]				.915
				(.023)***
Psychological distress				1.730***
				(.198)
Observations	1,406	1,406	1,406	1,406
Log likelihood	–930.913	–928.517	–905.539	–850.650
Likelihood ratio statistic (*df*)	28.719 (9)	33.511 (14)	79.467 (20)	189.245 (24)

a. Modeling the odds of having some or a lot of anxiety.
b. Age 66-74 = reference group.
c. Married or cohabiting = reference group.
d. Higher values = more positive assessment.
$^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

odds of experiencing some or a lot of anxiety. As anticipated, Model 4 reveals that anxiety about health declines is significantly associated with all of the health indicators. Having more chronic conditions, worse self-rated health, worse assessments of recent physiological changes, and greater distress predicts higher odds of anxiety about failing health.

Turning to reproductive aging (see Table 5), Model 1 reveals that higher odds of having any anxiety about fertility loss are associated with being younger, more highly educated, and more financially independent. Of particular note, we find evidence of considerable concern among the youngest women in the sample: The odds of having any anxiety about reproductive aging are more than 20 times larger for women between the ages of 25 and 35, compared with women older than 45. Although only reaching significance in Model 3, we also find that lesbian or bisexual women have lower odds than do heterosexual women. Only one of the indicators of attachments to social institutions entered in Model 2 reaches significance: Women without children have higher odds of anxiety about their reproductive aging. This source of anxiety is associated with neither the quality of women's social relationships (Model 3) nor their current health (Model 4).

Table 6 reports the regression of psychological distress on aging anxieties. Model 1 shows that experiencing greater distress is associated with being

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Table 5
Logistic Regression of Anxiety About Reproductive Aging[a]

	Odds Ratio (*SE*)			
	Model 1	Model 2	Model 3	Model 4
Age 25-35[b]	20.779***	13.774***	14.126***	14.601***
	(7.752)	(5.097)	(5.355)	(5.588)
Age 36-45[b]	5.652***	5.072***	5.209***	5.300***
	(2.143)	(1.913)	(2.007)	(2.063)
African American	.762	.847	.872	.891
	(.235)	(.262)	(.270)	(.279)
Lesbian or bisexual	.855	.336	†.296*	.301†
	(.431)	(.194)	(.180)	(.185)
Education	1.140**	1.050	1.051	1.057
	(.051)	(.050)	(.051)	(.053)
Household income	1.001	1.001	1.001	1.001
	(.002)	(.002)	(.002)	(.002)
Financial independence	1.986*	.734	.718	.730
	(.579)	(.285)	(.286)	(.293)
Employed		1.305	1.293	1.303
		(.311)	(.314)	(.318)
Separated or divorced[c]		1.149	1.143	1.122
		(.331)	(.335)	(.334)
Widowed[c]		.609	.628	.625
		(.797)	(.800)	(.784)
Never married[c]		1.420	1.467	1.463
		(.467)	(.493)	(.493)
Parent		.175***	.163***	.170***
		(.045)	(.043)	(.046)
Spouse/partner support[d]			1.037	1.042
			(.040)	(.042)
Spouse/partner strain			1.060	1.057
			(.044)	(.044)
Family support[d]			.944	.955
			(.044)	(.046)
Family strain			.980	.974
			(.048)	(.047)
Friend support[d]			.960	.959
			(.037)	(.037)
Friend strain			.991	.988
			(.052)	(.052)
Chronic conditions				1.021
				(.045)
Self-rated health[d]				1.054
				(.121)

(continued)

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Table 5 (continued)

	Odds Ratio (*SE*)			
	Model 1	Model 2	Model 3	Model 4
Self-rated health[d]				1.054 (.121)
Self-assessed physiological changes[d]				1.027 (.042)
Psychological distress				1.209 (.185)
Observations	762	762	762	762
Log likelihood	–383.560	–350.952	–347.886	–346.821
Likelihood ratio statistic (*df*)	148.799 (7)	214.013 (12)	220.147 (18)	222.276 (22)

a. Modeling the odds of having any anxiety, using a sample limited to premenopausal women.
b. Older than age 46 = reference group.
c. Married or cohabiting = reference group.
d. Higher values = more positive assessment.
$^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Table 6
OLS Regression of Psychological Distress on Aging Anxieties

	Unstandardized Coefficient (*SE*)	
	Model 1	Model 2
Age 25-35[a]	.228 (.057)***	.175 (.056)**
Age 36-45[a]	.279 (.059)***	.221 (.059)***
Age 46-55[a]	.184 (.057)***	.145 (.056)**
Age 56-65[a]	.065 (.049)	.028 (.048)
African American	–.054 (.066)	–.023 (.064)
Lesbian	–.104 (.100)	–.066 (.103)
Education	–.022 (.007)***	–.021 (.007)**
Household income	–.000 (.000)	–.000 (.000)
Financial independence	–.032 (.070)	–.007 (.069)
Employed	–.046 (.042)	–.057 (.042)
Separated or divorced[b]	.065 (.049)	.047 (.048)
Widowed[b]	–.005 (.047)	–.006 (.046)
Never married[b]	.078 (.067)	.070 (.065)
Parent	–.119 (.054)*	–.114 (.054)*
Spouse/partner support[c]	–.012 (.008)	–.012 (.008)
Spouse/partner strain	.018 (.008)*	.016 (.007)*

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Table 6 (continued)

	Unstandardized Coefficient (*SE*)	
	Model 1	Model 2
Family support[c]	–.037 (.008)***	–.037 (.008)***
Family strain	.030 (.009)***	.028 (.009)***
Friend support[c]	–.014 (.007)*	–.012 (.007)†
Friend strain	.012 (.010)	.008 (.010)
Chronic conditions	.067 (.008)***	.063 (.008)***
Self-rated health[c]	–.076 (.019)***	–.070 (.019)***
Self-assessed physiological changes[c]	–.020 (.006)***	–.016 (.006)**
Anxiety about loss of attractiveness[d]		.158 (.040)***
Anxiety about health declines[d]		.105 (.035)**
Anxiety about fertility loss[e]		–.018 (.044)
Observations	1,406	1,406
Adjusted *R*-squared	.30	.33

a. Age 66-74 = reference group.
b. Married or cohabiting = reference group.
c. Higher values = more positive assessment.
d. 1 = *a lot or some anxiety*, 0 = *a little or some anxiety*.
e. 1 = *any anxiety*, 0 = *no anxiety*.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

younger, less educated, and a parent and having worse assessments of social relationships and poorer health. Model 2 reveals that psychological distress also is associated with aging anxiety. As we hypothesized, having anxiety about attractiveness and health—but not fertility—predicts greater distress.[11] Standardized coefficients (not shown) indicate that, compared with anxiety concerning health declines ($\beta = .077$), concern about loss of attractiveness ($\beta = .107$) is more strongly predictive of distress.

Discussion

This study extends the literature on the subjective experience of aging by examining multiple sources of women's concerns about their later years. In particular, we explore their associations with various contexts of women's lives, including their locations in systems of inequality, connections to social institutions, the quality of their social relationships, and their health. Our examination includes a number of social factors that have not been examined previously, such as women's employment status, their relative contributions to household income, and the quality of their relationships outside of marital unions. Our study also contributes to the literature on aging anxiety, as well

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as mental health, by examining the relationship between various sources of aging anxiety and women's current psychological distress. Although research has documented the link between aging anxiety and life satisfaction (Klemmack & Roff, 1984), the association with mental health has not been explored previously.

Our findings are consistent with our general expectation that the social contexts of women's lives shape their concerns about aging and these effects differ across types of aging anxiety. Some of the factors that we examined appear to protect against one source of aging anxiety yet exacerbate other concerns. Our findings also suggest that various types of aging anxiety have different consequences for women's mental health. Our study highlights the value of moving beyond summary measures of aging anxiety and exploring a range of factors that influence women's risk of having various concerns about growing older, in particular those that may diminish their current psychological well-being.

Of the sources that we explored, anxiety about loss of attractiveness and health is associated with greater psychological distress; however, we find a stronger relationship with attractiveness. Although this pattern is striking given the greater gravity of physical impairment, it resonates with the double standard of aging. Our study, which has implications for not only gerontological but also mental health research, raises the possibility that some sources of concern about aging play a role in producing women's greater risk of depression and other internalizing psychiatric disorders over adulthood (Kessler et al., 1993; Nolen-Hoeksema, 1990; Rosenfield, 1999). Mental health research should consider gender differences in various types of aging anxiety and explore the conditions that magnify these concerns.

We identify several ascribed social factors that are associated with women's likelihood of experiencing anxiety about appearance declines. Older women worry less than their younger peers about this consequence of aging, a finding that highlights the positive aspects of aging for women that are often overlooked in gerontological research (Gibson, 1996). Other marginalized groups—in particular, African American and lesbian or bisexual women—worry less than their respective counterparts about changes in attractiveness accompanying aging. The race pattern may be explained by cultural norms creating broader definitions of beauty (Calasanti & Slevin, 2001) and better body images (Altabe, 1998) among Black women. Better body image (Siever, 1994), along with immunity to the male gaze (Wolf, 1991), may protect lesbians and bisexuals from aging concerns related to appearance. Taken together, these patterns illustrate that resources minimizing the emotional costs of aging in an ageist society are not concentrated in the

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hands of women who are advantaged in terms of socioeconomic resources, social status, and power.

In addition to their social locations, women's attachments to institutions and the quality of their social relationships are associated with their concerns about attractiveness. As we hypothesized, separated or divorced women are more likely to report this source of anxiety than married women, a finding that qualifies the conclusions of other studies that examine composite groups of single women and find greater anxiety among the married (Giesen, 1989; Rossi, 2004). This finding is particularly relevant to understanding gendered aging, given the relatively high rate of marriage dissolution in the United States. Viewed along with our observation that marriages filled with more strain exacerbate anxiety about attractiveness, our study reveals an underexamined consequence of our culture of divorce (Hackstaff, 1999)—its effect on our concerns about later life. Whereas being happily married may shield against this type of aging anxiety, full-time employment does not offer a similar protection. As we anticipated, working women report more anxiety about their attractiveness; this result is consistent with research revealing women's greater concern relative to men about maintaining a youthful appearance in the workplace (Harris, 1994). Another factor associated with anxiety about attractiveness is the quality of women's relationships with their friends. Women with more strained relationships may report more aging anxiety because they receive more negative reflected appraisals from their friends, including those related to their aging bodies. Contrary to our predictions, having worse physical health does not appear to reduce women's concerns about attractiveness. None of the measures of physical health are significantly associated with this source of anxiety.

In contrast with the findings for anxiety about attractiveness, current health is a central determinant of women's anxiety about future health decrements. As hypothesized, better health protects against worries about future well-being. Also consistent with our expectations, older women are less likely to report health anxiety; however, our results reveal a curvilinear relationship, with the highest odds reported by women between the ages of 36 and 45. Our findings suggest that health anxiety may peak at the beginning of middle-age, a life stage in which many people not only experience the first signs of their own physical aging but also witness more serious declines in their parents. In addition to their age or life stage, women's race and degree of financial independence are associated with this source of aging anxiety. Prior work has suggested two opposing predictions concerning the association with race. Our results are consistent with the argument that African American women—despite their higher risks of actual health declines—worry less than

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do White women about future physical impairments. Possible explanations include African Americans' greater acceptance of tragedy (Davis, 1990) and the strong extended family networks that lower their risk of institutionalization as frail elders (Wallace et al., 1998). We also find lower odds of concern about health decline among more financially independent women. This finding, which is consistent with our expectation, suggests that greater economic power in the household has more far-reaching consequences than previously recognized: It improves women's images of their future health, which enhances their current mental health.

Similar to the findings for anxiety about attractiveness, we observe in our models examining health anxiety more consistent associations with negative than positive dimensions of social relationships. This pattern parallels research reporting that negative social exchanges are more strongly associated with well-being than positive interactions (Rook, 1998). We find that better relationships with family, as well as friends, reduce the likelihood of anxiety about health declines. Although friends are considerably less likely than family to perform caregiving roles (Barrett & Lynch, 1999), the quality of these relationships appears to influence our concerns about health declines. Rather than mapping onto the objective realities of aging, these patterns suggest that better social relationships affect our aging anxieties more indirectly by enhancing our projections of ourselves in later life and perceptions of our ability to handle future challenges.

In contrast with anxiety about loss of health and attractiveness, concern about reproductive aging is not influenced by the quality of women's social ties. This source of anxiety is associated with women's locations in systems of inequality and connections to social institutions. Concern about loss of fertility appears to be concentrated among women who are young, childless, heterosexual, and more highly educated and financially independent—in short, women who may have postponed or opted out of motherhood to pursue educational and occupational aspirations. Although reproductive aging represents a substantial concern to these women, we do not find that this source of aging anxiety is associated with current psychological distress. However, further research is needed that examines how the subjective experience of aging is influenced by the work/family choices and trade-offs faced by young and middle-aged women, many of whom struggle to accommodate their family goals to workplace norms and trajectories patterned around men's experiences.

Our study illustrates the value of examining the gendered construction of aging in research on the subjective experience of aging as well as mental health; however, it is limited in several ways. Of particular importance, we use cross-sectional data, which limits our ability to determine temporal

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relationships. Although our findings are consistent with the argument that various social factors shape aging anxieties that, in turn, influence current mental health, we cannot eliminate alternative explanations, such as the possibility that mental health determines aging anxieties, as well as SES, attachments to social institutions, perceptions of social relationships, and physical health. In addition, the MIDUS data do not allow us to examine the social correlates and mental health consequences of various sources of aging anxiety among men, which would allow, for example, a direct test of whether women's greater aging anxieties play a role in elevating their risk of depression and other internalizing disorders. Future research also should further examine the gendered nature of social roles and relationships and their association with various sources of aging anxiety. For example, norms surrounding marriage that lead many women to marry men who are older than themselves may increase women's anxiety. Supporting this possibility, one's own age identity tends to be "aged" by the presence of a spouse who is older or in poor health (Barrett, 2005). Concerns about aging also may be influenced by women's more extensive role in family caregiving (Dwyer & Coward, 1991). Pursuing these lines of research is timely, in particular, as our historically largest and most diverse cohort, the baby boomers, enter old age, perhaps with heightened expectations or anxieties—or both.

Appendix

Spouse/Partner Support ($\alpha = .92$)

1. How much does your spouse or partner really care about you?
2. How much does he or she understand the way you feel about things?
3. How much does he or she appreciate you?
4. How much can you rely on him or her for help if you have a serious problem?
5. How much can you open up to him or her if you need to talk about your worries?
6. How much can you relax and be yourself around him or her?

(1 = *not at all* to 4 = *a lot*)

Spouse/Partner Strain ($\alpha = .88$)

1. How often does your spouse or partner make too many demands of you?
2. How often does he or she make you feel tense?
3. How often does he or she argue with you?

(continued)

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Appendix (continued)

4. How often does he or she criticize you?
5. How often does he or she let you down when you are counting on him or her?
6. How often does he or she get on your nerves?

(1 = *never* to 4 = *often*)

Family Support (α = .84)

1. Not including your spouse or partner, how much do members of your family really care about you?
2. How much do they understand the way you feel about things?
3. How much can you rely on them for help if you have a serious problem?
4. How much can you open up to them if you need to talk about your worries?

(1 = *not at all* to 4 = *a lot*)

Family Strain (α = .79)

1. Not including your spouse or partner, how often do members of your family make too many demands of you?
2. How often do they criticize you?
3. How often do they let you down when you are counting on them?
4. How often do they get on your nerves?

(1 = *not at all* to 4 = *a lot*)

Friend Support (α = .88)

1. How much do your friends really care about you?
2. How much do they understand the way you feel about things?
3. How much can you rely on them for help if you have a serious problem?
4. How much can you open up to them if you need to talk about your worries?

(1 = *not at all* to 4 = *a lot*)

Friend Strain (α = .79)

1. How often do your friends make too many demands of you?
2. How often do they criticize you?

(continued)

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Appendix (continued)

3. How often do they let you down when you are counting on them?
4. How often do they get on your nerves?

(1 = *not at all* to 4 = *a lot*)

Chronic Physical Conditions

In the past 12 months, have you experienced or been treated for any of the following: asthma, bronchitis, or emphysema; tuberculosis; other lung problems; arthritis, rheumatism, or other bone or joint diseases; sciatica, lumbago, or recurring backache; persistent skin trouble; thyroid disease; hay fever; recurring stomach trouble, indigestion, or diarrhea; urinary or bladder problems; being constipated all or most of the time; gall bladder trouble; persistent foot trouble; trouble with varicose veins; AIDS or HIV infection; lupus or other autoimmune disorders; persistent trouble with your gums or mouth; persistent trouble with your teeth; high blood pressure; alcohol or drug problems; migraine headaches; chronic sleeping problems; diabetes or high blood sugar; MS, epilepsy, or other neurological disorders; stroke; ulcer; hernia or rupture; piles or hemorrhoids?

Self-Rated Health

In general, would you say your physical health is poor, fair, good, very good, or excellent? (1 = *poor* to 5 = *excellent*)

Self-Assessed Physiological Changes ($\alpha = .85$)

How would you rate yourself today compared with 5 years ago on the following: energy level; physical fitness; physique/figure; weight? (1 = *worse now* to 3 = *better now*)

Psychological Distress ($\alpha = .88$)

During the past 30 days, how much of the time did you feel so sad that nothing could cheer you up? Nervous? Hopeless? Worthless? Restless or fidgety? That everything was an effort? (0 = *none of the time* to 4 = *all of the time*)

Notes

1. Consistent with the use of this term by others (e.g., Lasher & Faulkender, 1993; Lynch, 2000), our use distinguishes anxiety about one's own aging from several related constructs, including attitudes toward aging or the elderly, fear of death, and more general psychological states or psychiatric disorders (e.g., generalized anxiety disorder).

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2. We also ran models predicting anxiety about reproductive aging using the full sample of women (n = 1,406). Results were similar to those reported for the subsample of premenopausal women, with one exception. In the subsample, we found that lesbians or bisexuals are significantly less likely than heterosexual women to report anxiety about reproductive aging (see Table 5); but, this difference does not reach significance in the models employing the full sample.

3. We combine lesbians and bisexuals for statistical and theoretical reasons. The small numbers of women who are lesbian (n = 16) or bisexual (n = 14) prohibit the separate analysis of these groups. We also argue that these groups are likely to share the experience of having much greater immunity to the "male gaze" (Wolf, 1991) than heterosexual women, which may decrease their anxiety about declining attractiveness.

4. For respondents missing on personal income (5.5%), the mean of personal income was imputed for women who were currently employed and a value of zero was imputed for those not currently employed. Missing values on each of the six sources of household income were imputed before calculating their sum. For those missing on spousal income (6.8%), those with spouses who were employed were assigned the mean of spousal income, whereas those without working spouses were assigned a value of zero on this source of income. Mean imputation was used for missing values on each of the four remaining sources of income (i.e., 7.1% on other family income; 6.1% on social security income; 6.2% on government assistance; 6.8% on other income). We also note that the inclusion of household income and the ratio of personal to household income does not create multicollinearity problems in the regression models. The correlation between these two measures is –.20 ($p < .001$).

5. We also conducted analyses allowing a comparison between the married and the cohabiting. Across the three sources of aging anxiety, we find no significant differences between these groups.

6. Because of the centrality of daughters in the provision of caregiving for elder family members (Dwyer & Coward, 1991), we also examined a dichotomous variable coded 1 for women with at least one daughter. This variable did not reach significance in models predicting any of the sources of aging anxiety.

7. We also ran models including an alternative measure of current employment status that was coded 1 for those working part-time, working full-time, or self-employed. This variable is not significantly associated with any of the aging anxieties, which suggests that the association between paid work and anxiety about attractiveness does not hold for women working only part-time.

8. We used the "pweight" command in STATA, which applies sampling or probability weights that denote the inverse of the probability that the observation is included due to the sampling design. We also note that, in addition to the weighted analyses, we ran models using unweighted data. The substantive conclusions drawn from these analyses do not differ from the weighted analyses presented.

9. We note that the difference between lesbian or bisexual women, compared with heterosexuals, only reaches significance at the .05 level when marital status variables are entered in Model 2. Similarly, financial independence reaches significance with the addition of the work status variable in Model 2.

10. We note that the race coefficient falls short of significance at the .05 level until indicators of health are entered in Model 4.

11. We also ran models predicting distress using only the subsample of premenopausal women (n = 762). The substantive conclusions drawn from these models do not differ from those derived from the full sample: Although having some or a lot of anxiety about declines in health or attractiveness is associated with greater psychological distress, anxiety about reproductive aging is not.

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