

Effects of Social Ties on Self-rated Physical Health Among African American Adults

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Objectives: To examine associations between social ties and self-rated physical health among midlife and older African Americans.

Methods: Cross-sectional analysis of the 2005-2006 Milwaukee African American oversample of the second Midlife Development in the United States (MIDUS II) study. Multivariate logistic regression examined associations between type of social ties (family or friends), their frequency (number of contacts), and their quality (support and strain) with better self-rated physical health (SRPH). We defined better SRPH to include self-reports of good, very good, or excellent SRPH; this category was compared with fair or poor SRPH. Control variables included demographic factors; social engagement characteristics such as working, volunteering, and caregiving; and measures of social structure such as types of discrimination experience and ratings of neighborhood quality.

Results: In adjusted results, each additional degree of family support was associated with better self-rated physical health (odds ratio [OR], 1.59; 95% confidence interval [CI], 1.14-2.22). Each additional reported incident of daily discrimination was associated with 9% lower odds of reporting better SRPH (OR, 0.91; CI, 0.83-0.99).

Discussion: Results suggest quality of family support may contribute importantly to the health of African Americans. When working with midlife and older African Americans, providers should engage and support families as a vital resource to improve health.

Keywords: African Americans ■ health ■ discrimination

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Associations between social ties and health have been observed for many years.¹ Social ties are the web of social relationships and interactions that individuals experience in their daily lives. They often signal an individual's level of engagement with society. In research in this area, social ties have typically been measured by the frequency of interactions with people, membership or attendance at clubs or churches, marital status, and/or having children.^{1,2} People with more social ties have lower risk of mortality than those who are socially isolated.³ They may also experience lower levels of disease severity.⁴

Effects of social ties on health may vary with the type of relationship. Marital ties have been associated with lower morbidity and mortality.⁵ Family ties may differ in their effects on health from ties with friends⁶ although little research has examined whether health is differently affected by relationships with spouses, family, or friends.^{7,8} Few studies have examined how relationships that individuals view as positive or negative may affect health.^{7,9,10} Further, researchers have suggested that a life course perspective may provide additional insight into relationships between social ties and health,^{11,12} although little research has examined this possibility.

The social networks of African Americans often differ from those of non-Hispanic white Americans (whites), yet little research has examined associations between social ties and the physical health of African Americans. This study examines these associations, using data from the second Midlife Development in the United States study (MIDUS II).¹³ The data provide measures of relationship type (spouse or partner, family, and friends), frequency of contact with family and with friends, and the perceived quality of the relationships represented by those contacts. Better knowledge of the relative importance of various social ties for physical health may improve our understanding of critical determinants of health for African Americans.

BACKGROUND

Most studies that examine associations between social ties and health measure social ties as the presence or absence of relationships, or the frequency of social

contact. Few studies have assessed the *quality* of these ties.^{10,14} Studies have suggested that perceptions of support contribute to health, rather than the level of support or the role of the person who provides support.¹⁵

The *type* of relationship, such as friendships or relationships between older parents and their adult children, may also be important. Relationship type may be particularly important for adults with less-traditional family structures, including many African Americans. African Americans are less likely to be married than whites; they marry later in life and are less likely to remain married.¹⁶ Thus, for African Americans, friends and family may contribute more importantly to health than spouses. African Americans are also more likely than whites to have extended family, both kin and nonkin,^{2,17} as well as church “families.”¹⁸ Many African American households are multigenerational,^{19,20} with a high degree of intergenerational resource sharing and reciprocity.^{17,21} Many African Americans have close ties with extended family who can provide support when needed.²² Among older women, African Americans are more likely than whites to report having friends and family who can help them if they need it.²³ This interdependence can also create physical, emotional, and financial burdens, as family members may often expect some form of help in exchange. For example, older African American women who receive support also commonly provide care for other relatives and small children,^{24,25} even though they themselves may be in poor health.

Social ties may differ substantially between women and men. Research focused on whites suggests that women have larger and more diverse social networks than men, and that the quality and quantity of social ties are more strongly associated with well-being for women than for men.²⁶⁻²⁸ Women are more likely than men to report strain from social network members.¹⁴ It is not known whether African American women and men may differ in these ways.

In addition to having different family structures than whites, African Americans are affected by substantial health disparities, particularly for chronic diseases.^{29,30} Among African Americans, social ties have been found to be influential in chronic illness self-management.^{22,31-33} For example, intergenerational relationships have been positively associated with medication adherence among African Americans with hypertension.³² Early onset of chronic conditions accelerates aging, increases disability, and reduces life expectancy.^{25,34-36} Most studies have found that African Americans live shorter lives than whites and spend a larger percentage of life with substantial disability.^{35,37} Thus, the characteristics and health effects of social ties may be especially important for African Americans.

Self-rated health is a well-established indicator of actual health and a strong predictor of morbidity and physical functioning.^{38,39} African Americans typically

report lower self-ratings of health than whites regardless of disability or physical functioning.^{40,41} Research suggests that African Americans’ self-ratings of health are sensitive to changes in physical health, particularly declines in health that occur soon before death.⁴² When asked to define *health*, older African Americans describe aspects of health that are related to physical health and functioning as well as to emotional health and feelings,⁴³ suggesting that self-rated health is comprised of multiple domains. To better understand these health domains, surveys increasingly ask respondents to separately rate their physical and emotional health; such surveys include MIDUS II⁴⁴ and the National Social Life, Health, and Aging Project.⁴⁵ Focusing on more clearly defined health domains should increase the predictive capability of self-rated health by reducing measurement error. This clarification may be especially important for African Americans, who often experience chronic disease much earlier in life than those in other ethnic groups. Thus, examining self-reported physical health at midlife is useful for this population.

Many African Americans experience social conditions that are associated with poor health. Studies have found a consistent relationship between discrimination and poor self-rated health and with other measures of physical health.^{46,47} There is evidence that perceived discrimination, in the form of either daily hassles or lifetime discriminatory events, may increase disease risk.⁴⁸ Experiences with discrimination may also increase an individual’s need for supportive ties to buffer the negative effects.⁴⁹ Another structural factor related to the health of African Americans is geography. Neighborhoods appear to have significant effects on the health of African Americans,⁵⁰ including self-rated health.⁵¹ Problems with the built environment, such as broken sidewalks, lack of green space, poor street lighting, and crime, are frequently associated with poor health behaviors, which may contribute to a higher risk of chronic disease.^{52,53} Neighborhood segregation and disadvantage have been associated with poor health, possibly due to lower-quality health care.⁵⁴ Crime and violence may reduce social interactions with neighbors but increase social reliance on immediate family members. Structural disadvantage may increase family strain, contributing to health problems.

Other forms of social engagement are also associated with health. Volunteering is positively associated with the health of older adults⁵⁵ and improves the health of older African Americans.⁵⁶ In contrast, caregiving is a well-established risk factor for poor physical and mental health,⁵⁷ although research findings about effects of caregiving on the health of African American women are mixed. Rozario et al⁵⁸ report that African American women feel a greater sense of “familialism” and duty to provide caregiving, which increases their stress and their incidence of mental health problems. Another study found that African Americans reported less stress and

more benefits from caregiving than whites.⁵⁹ Productive engagement in the form of work, caregiving, social support, and volunteering has been associated with better self-rated health among whites but not African Americans.⁶⁰ High unemployment rates among African Americans may not only cause economic distress but also contribute to social isolation and poor health, especially among men.⁶¹

Our analyses were informed by the work of Berkman et al,¹ who suggest that the influence of social networks on health occurs within a social-structural context. Social relationships are formed in the context of cultural, economic, political, and social influences such as neighborhood quality and discrimination. Social networks consist of types of relationships and the contacts and content that describe them. These relationships, in turn, influence an individual's level of social engagement and social influence, including individual characteristics such as work and volunteering, which affect health through behaviors, psychological mechanisms, or biological pathways. We used these conceptual categories to organize our analyses and examine the social ties of African Americans and their associations with self-rated physical health.

Study Objectives

This study examines associations between social ties and the self-rated physical health of African Americans. MIDUS II offers a unique opportunity to study the relationship between social ties and health in a sample of midlife and older African Americans. Participants in MIDUS II reported their perceptions of the quality of the support they received from family and friends. They also reported the degree of strain they experienced in these relationships. The data include measures of types of lifetime and daily discrimination experiences and perceptions of neighborhood quality. The study contributes to life course research on this topic by examining associations between individuals' reports of previously experienced discrimination and their current physical health. Thus, we are able to examine differential effects of the type, frequency, and quality of social ties on self-rated physical health, controlling for additional factors that may influence the social ties and health of African Americans. Social support and emotional health are highly intercorrelated; thus, it was not statistically appropriate to include both variables in this analysis. A better understanding of associations between the type and quality of social ties and physical health is useful for identifying populations that might benefit from public health interventions, or from focused efforts by medical care or social services designed to address health disparities affecting African Americans.

METHODS

Data

The data are from the Milwaukee African American oversample 2005-2006 of the MIDUS II study.¹³ MIDUS II is a longitudinal study sponsored by the National Institute on Aging, designed to examine the health and well-being of US adults. Data were collected by the University of Wisconsin Survey Center, and the human subjects protocol was approved by the institutional review board of the University of Wisconsin. The African American sample used for this study came from a survey of households in Milwaukee County, Wisconsin. The sampling frame included all census tracts with populations at least 40% African American. The goal was to stratify participants by age, gender, and socioeconomic status.⁶² The sample includes 592 adults aged 35 to 85 years; most participants were at midlife or older. Data were collected in face-to-face, computer-assisted personal interviews and with subsequent, mailed self-administered questionnaires. The participation rate was 70.7%. No data were collected regarding nonrespondents. A small number of respondents were excluded from this analysis due to missing data for the variables of interest ($n = 24$, 4.1%).

Measures

The outcome, self-rated physical health, was measured using responses to the question: "In general, would you say your physical health is excellent, very good, good, fair, or poor?" Based on the common practice in related research, and also on the distribution of self-rated health in the data used for this analysis, responses were dichotomized into excellent/very good/good (1) (hereafter, better self-reported health) and fair/poor (0).

We focus on associations between social ties with family or friends, controlling for the presence of a spouse or partner (yes = 1), and self-rated physical health. Social ties were assessed by the frequency of family contacts (several times per week or more, yes = 1) and frequency of friend contacts (several times per week or more, yes = 1). The quality of respondents' relationships was measured by their self-reported levels of strain and emotional closeness—or intensity, in social network terms—for the type of relationship (family or friend). These relationships were measured using 2 validated scales from Walen and Lachman.¹⁴

For family relationships, the scale items asked for information "not including your spouse or partner." Thus, responses to the questions about family focus on family members other than spouses or partners. As shown in the Box, the measures of family support and friend support each consisted of 4 items, with responses from 1, not at all, to 4, a lot. Summary scores representing each respondent's relationship ratings were calculated as the average of the 4 items; higher average values

indicate greater levels of family or friend support. Family strain and friend strain were assessed with scales consisting of 4 items, with responses ranging from 1, never, to 4, often. Summary scores representing each respondent's relationship strain ratings were calculated as the average of the 4 items; higher average values indicate greater levels of family or friend strain. Cronbach α for these 4 scales ranged from 0.80 (family strain) to 0.90 (friend support), indicating a good level of internal consistency.

Demographic characteristics included age (continuous), sex (female = 1), education, household income, and insurance status. Education was measured as: no high school degree, high school or General Education Development, some college or 2-year degree, and 4-year college or graduate degree. Total household income in dollars was divided by the number of individuals living in the home to adjust for economies associated with household size. Respondents self-reported whether they currently had health insurance (yes = 1).

Perceived discrimination was assessed using 2 variables that measured types of discrimination events: a count of reported types of lifetime discrimination (0-11 possible types) and a count of reported types of daily discrimination (0-9 possible types). For lifetime discrimination, items were phrased as, "Due to discrimination, have you ever been..." A sample item was, "Due to discrimination, have you ever been denied or provided inferior medical care?" For daily discrimination a sample item was, "On a day-to-day basis, due to discrimination, are you treated with less courtesy than other people?" Both scales were developed for a previous study.⁶³

Perceived neighborhood quality was measured using a 4-item scale,⁶⁴ with responses ranging from 1, low, to 4, high. A sample item was: "I feel safe being out alone in my neighborhood at night." Cronbach α for this scale was 0.59. The modest level of internal consistency of this

control is acknowledged as a limitation of this measure.

Multiple self-reported social engagement factors were assessed, with dichotomized responses. These included whether the respondent had been a caregiver in the last 12 months (1 = yes), and whether she or he volunteered in the previous month (1 = yes). Respondents also indicated if they had no job or were retired (1 = yes).

Statistical Analysis

Analysis included descriptive, χ^2 , and logistic regression. Data were analyzed using SPSS (version 17, SPSS Inc, Chicago, Illinois).⁶⁵ Unadjusted odds ratios (ORs) were calculated to measure associations between the individual social tie variables and self-rated physical health. Social ties and their effects on health may differ for women and men.²⁸ Thus, we calculated unadjusted ORs to examine the association between each of the social tie variables and self-reported health, separately for women and men. In general, the unadjusted results and additional analyses suggested that the effect of social ties on self-rated physical health did not differ meaningfully between women and men. In addition, the sample did not provide adequate statistical power for separate adjusted models for women and men; gender was included as a control variable in a single model estimated using data representing women and men. Multivariate logistic regression calculated adjusted ORs and 95% confidence intervals (CIs) that controlled for relevant covariates. Tests of multicollinearity were conducted for the multivariate analysis. There was no evidence of notable multicollinearity.

RESULTS

Participant Characteristics

The analytic sample used for this study included 568 participants. Table 1 shows participant characteristics.

Box. Effects of Social Ties on Self-Rated Physical Health of African Americans, Family Support Scale, and Family Strain Scale Items^a

Family Support Scale^b

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

Responses: 1, not at all, to 4, a lot

Family Strain Scale^c

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

Responses: 1, never, to 4, often

^a Data source: the second Midlife Development in the United States study (MIDUS II) (Almeida et al, 2008).

^b The same items comprise the Friend Support Scale with the first item worded, "How much do your friends really care about you?"

^c The same items comprise the Friend Strain Scale with the first item worded, "How often do your friends make too many demands on you?"

Nearly two-thirds of participants reported better self-rated physical health. Women and men did not differ in reporting better self-rated physical health ($\chi^2 = 0.33, p = .568$; results not shown). Approximately 38% of both women and men were married or had a partner. Nearly 65% of the sample reported family contact several times each week, whereas only 57% reported contact with friends several times a week. The score on the family support scale averaged 3.4. The comparable scale representing support from friends averaged 3.1. Consistent with the goal of MIDUS, most participants were at midlife or older. Average age in the sample was 51.7 years (SD, 11.9). About 17.6% of participants were aged less than 40 years, 29.9% were aged 40 to 49 years, 28.2% were aged 50 to 59 years, about 15% were aged 60 to 69 years, and the remainder were aged 70 or more (age categories not shown).

MIDUS is an oversample of African Americans stratified by income (<\$40 000 vs \geq \$40 000), age (35-54 vs 55-85 years), and gender. Participants' education levels are roughly comparable to those of the US African American population aged 25 years and more. In the United States, 19.4% of African Americans have less than a high school degree, 36% have a high school degree or equivalent, 27% have taken some college classes, or

have earned a 2-year degree, and 17.6% have a baccalaureate or graduate degree.⁶⁶ The median household income of this sample is \$28 000 (not shown), less than the median household income of African American families in the United States⁶⁷ in 2005, which was \$32 000. The 30.3% of participants in our MIDUS sample who were married did not differ meaningfully from the 30.4% US estimates for African Americans in 2006-2008.

Unadjusted Results

Table 2 shows unadjusted ORs measuring the association between the social tie variables and self-rated physical health for women, men, and the total sample. In the total sample, having a spouse or partner was associated with better self-rated physical health (OR, 1.44; 95% CI, 1.00-2.07). Having family contact several times each week was associated with 43% greater odds of better self-rated physical health (OR, 1.43; 95% CI, 1.00-2.05). Each additional unit on the family support scale was associated with 75% higher odds of reporting better self-rated physical health (OR, 1.75; 95% CI, 1.35-2.27). Also associated with better self-rated physical health was support from friends (OR, 1.37; 95% CI, 1.12-1.68).

Table 2 also shows separate unadjusted results for women and men. Factors associated with better self-rated

Table 1. Characteristics of African American Women and Men Participating in the MIDUS II Study (n = 568)^a

Characteristics	% of Sample or Mean (SD)
Good/very good/excellent self-rated physical health (yes/no)	65.7
Social support	
Married or has partner (yes/no)	38.4
Has family contacts several times per week (yes/no)	64.4
Family strain (scale = 1, never; 4, often)	2.2 (0.8)
Family support (scale = 1, not at all; 4, a lot)	3.4 (0.7)
Has friend contacts several times per week (yes/no)	56.9
Friend strain (scale = 1, never; 4, often)	1.9 (0.7)
Friend support (scale = 1, not at all; 4, a lot)	3.1 (0.9)
Demographic Characteristics	
Age, y	51.7 (11.9)
Female (yes/no)	62.5
Household income per person	\$19 612 (\$21 703)
Education	
1, No high school degree	18.5
2, High school degree or General Education Development	36.6
3, Some college or 2-year degree	31.2
4, Four-year or graduate degree	13.7
Currently has health insurance (yes/no)	86.6
Social structural characteristics	
Types of lifetime discrimination (0-11)	2.5 (2.6)
Types of daily discrimination (0-9)	2.2 (2.7)
Perceived Neighborhood Quality, self-rated (scale = 1, low; 4, high)	3.1 (0.7)
Social engagement characteristics	
Has no job or is retired (yes/no)	39.8
Caregiver in last 12 mo (yes/no)	14.8
Volunteers (yes/no)	33.8

^a Data source: the second Midlife Development in the United States study (MIDUS II) (Almeida et al, 2008).

physical health among women included having a spouse or partner (OR, 2.19; 95% CI, 1.29-3.72), the degree of family support (OR, 1.53; 95% CI, 1.12-2.10), and the degree of support from friends (OR, 1.31; 95% CI, 1.01-1.70). Factors associated with better self-rated physical health among men included having contact with family several times each week (OR, 2.41; 95% CI, 1.34-4.34), the degree of family support (OR, 2.27; 95% CI, 1.45-3.55), and the degree of support from friends (OR, 1.52; 95% CI, 1.10-2.10).

Adjusted Results

Table 3 reports results of 2 multivariate logistic models. Each set of results provides adjusted ORs, 95% CIs, and *p* values. Model 1 shows results adjusting for all of the social tie variables and the demographic variables. Each additional degree of family support was associated with 81% higher odds of better self-rated physical health (OR, 1.81; 95% CI, 1.33-2.47). Model 2 includes all of the variables in the analytic model. After adjusting for all potential confounders in model 2, the magnitude of the association between quality of family support and better self-rated physical health was attenuated but remained substantial. Each additional degree of family support was associated with 59% higher odds of better self-rated physical health (OR, 1.59; 95% CI, 1.14-2.22). No other characteristics of social ties were significantly associated with self-rated physical health in the full analytic model.

Turning to results for the structural and social engagement factors of interest in the fully adjusted model (model 2), each additional reported type of daily discrimination reduced the adjusted odds of better self-rated physical health by 9% (OR, 0.91; 95% CI, 0.83-0.99). Thus, the odds that individuals with the mean number of types of daily discrimination events (2.21) would report better self-rated physical health were about 19.9% ($2.21 \times 9\%$) lower than the corresponding odds for someone reporting no types of daily discrimination.

African Americans who reported not having a job or being retired had 73% lower odds of better self-rated physical health (OR, 0.27; 95% CI, 0.18-0.42).

DISCUSSION

This study is the first to examine associations among multiple forms of social ties as well as assessments of the frequency and quality of those ties, with self-rated physical health among a large group of midlife and older African Americans. Unadjusted results suggested that frequent contact with family members, and having quality relationships with both family and friends were positively associated with self-rated physical health. In the fully adjusted results, only the quality of family support was positively associated with better self-rated physical health. The findings suggest that the quality of family ties was more important for better self-rated physical health than the frequency of contact or any reported relationship strain, even after controlling for other types of social ties. These findings provide further evidence of the importance of family in African American social networks.^{21,22} The findings also are comparable to analyses using this same sample and theoretical model that examined the effects of social support on self-rated emotional health.⁶⁸ With emotional self-rated health, however, the quality of friend support was also a significant positive factor.

The separate unadjusted results for women and men suggested that having a spouse or partner may be associated with better self-rated physical health for women, whereas having family contacts and family support may be more important for self-rated physical health for men. In addition, in the unadjusted analyses, friend support was significantly related to better self-rated physical health for both women and men;¹⁴ this result was not statistically significant in adjusted results.

Consistent with previous research, we found a significant association between self-rated physical health and reports of daily, but not lifetime, types of discrimination

Table 2. Associations Between Social Relationship Variables and Self-Reports of Good, Very Good, or Excellent

Social Relationship Variables	Women (n = 355)			
	OR	LB	UB	p Value
Has spouse or partner (yes/no)	2.19	1.29	3.72	.004
Has family contact several times per week (yes/no)	1.07	0.66	1.74	.777
Family Strain Scale ^a	0.88	0.67	1.16	.369
Family Support Scale ^b	1.53	1.12	2.10	.008
Has friend contact several times per week (yes/no)	1.21	0.77	1.88	.409
Friend Strain Scale ^c	0.91	0.66	1.25	.556
Friend Support Scale ^b	1.31	1.01	1.70	.043

Abbreviations: LB, lower bound of the 95% confidence interval; OR, odds ratio; UB, upper bounds of the 95% confidence interval.

^a Data source: Milwaukee African American sample, 2005-2006, of the Midlife Development in the United States (MIDUS II) study

^b Support scales = 1, not at all; 4, a lot.

^c Strain scales = 1, never; 4, often.

experiences.⁴⁶ At least some research has suggested that daily acts of discrimination may be negatively associated with self-rated health.⁴⁶ The results did not provide evidence suggesting that perceived neighborhood quality might be associated with self-rated physical health. While our data were limited to individuals residing in the same county, there is evidence that variation in socioeconomic status of the sampled census tracts may be sufficient to identify such differences if they exist.⁶⁹ However, our analysis did not detect such differences.

With respect to social engagement, there was a significant negative association between being unemployed or retired and better self-rated physical health.⁶⁰ This association may reflect participants' inability to work due to poor health or could indicate declining health in retirement associated with less social contact; the measures in our data, coupled with the study's cross-sectional design, did not permit us to examine this association in greater detail. No association was found between either caregiving or volunteering and self-rated physical health. This result is inconsistent with some studies,^{56,58} but consistent with others.⁵⁹

The data were cross-sectional; they do not provide a basis for causal inferences. Although we used the framework developed by Berkman et al¹ to guide our selection of the control variables, it would be useful for future research to apply the model using longitudinal data. Several additional factors should be considered when interpreting these results. All data were from 1 geographic area, a large urban county in the north central United States. The results may not be generalizable to rural areas or to other regions of the United States. Although self-rated physical health is a robust measure of health, it does not enable us to understand specific aspects of physical health that may be associated with social ties. It would be useful for future research to examine associations between social ties and specific health status measures such as diabetes control. Although MIDUS II is one of the largest social science surveys of

African American women and men at midlife and older, the sample size limited the available statistical power, particularly for examining adjusted results separately for women and men, and for assessing effects of the quality or strain of marital ties. The measures used to assess relationship strain and support did not allow participants to characterize relationships as generally positive and supportive or chronically negative and strained, as compared with temporary bouts of intimacy or disagreement.¹⁴ This issue would be likely to affect the results only if resulting measurement error were nonrandomly distributed among groups in the study. We have no reason to believe that this would be the case.

The findings of this study suggest that the quality of family relationships is importantly associated with the physical health of African Americans. Relative to other types of relationships, family ties may be a primary influence on physical health among midlife and older African Americans. The results suggest that it is useful for providers of health care and social services, including physicians, physicians' assistants and nurse practitioners, other nurses, clergy, and social workers, to assess African American adults' social ties and the quality of those ties, especially as they relate to family members. Inquiring if a family member accompanied a patient to the medical encounter might provide an opening to start a dialog about social ties. Questions during the encounter such as "How are you getting on with your family?" or "How supportive is your family?" may be useful. Emphasis should be placed on open-ended questions rather than those that can be answered yes or no. Social ties may be especially important for African Americans who are unemployed or retired. Responses to these questions may help to identify individuals who are at greater risk of declining health. Results also suggest that it may be useful for public health interventions to engage families as a vital resource for improving the health of midlife and older African Americans.

Physical Health Among African Americans—Unadjusted Results for Women, Men, and the Total Sample (n = 568)^a

Men (n = 213)				Total Sample (n = 568)			
OR	LB	UB	p Value	OR	LB	UB	p Value
0.85	0.48	1.51	.578	1.44	1.00	2.07	.049
2.41	1.34	4.34	.003	1.43	1.00	2.05	.050
1.02	0.71	1.47	.904	0.93	0.74	1.15	.491
2.27	1.45	3.55	<.001	1.75	1.35	2.27	<.001
1.60	0.90	2.84	.111	1.33	0.94	1.88	.113
0.79	0.56	1.13	.206	0.86	0.68	1.09	.218
1.52	1.10	2.10	.012	1.37	1.12	1.68	.002

(Almeida et al, 2008).

Table 3. Adjusted Results of Logistic Analyses Predicting Good, Very Good, or Excellent Self-rated Physical the MIDUS II Study (n = 568)^a

Characteristics	Model 1			
	OR	LB	UB	p Value
Social support				
Has spouse or partner (yes/no)	1.29	0.86	1.93	.221
Has family contact several times per week (yes/no)	1.14	0.76	1.70	.534
Family strain ^b	1.18	0.90	1.56	.233
Family support ^c	1.81	1.33	2.47	<.001
Has friend contact several times per week (yes/no)	1.17	0.77	1.78	.456
Friend strain ^b	0.78	0.59	1.03	.081
Friend support ^c	1.18	0.91	1.52	.214
Demographic characteristics				
Age, y	0.97	0.96	0.99	<.001
Female (yes/no)	0.90	0.59	1.35	.603
Household income per person (/ \$10000)	1.14	1.03	1.26	.013
Education ^d	1.08	0.88	1.32	.452
Currently has health insurance (yes/no)	1.08	0.63	1.87	.774
Social structural characteristics				
Types of lifetime discrimination (0-11)				
Types of daily discrimination (0-9)				
Perceived neighborhood quality (scale = 1, low; 4, high)				
Social engagement characteristics				
Has no job or is retired (yes/no)				
Caregiver in last 12 mo (yes/no)				
Volunteers (yes/no)				
-2 × log likelihood			679.7	

Abbreviations: LB, lower bound of the 95% confidence interval; OR, odds ratio; UB, upper bounds of the 95% confidence interval.

^a Data source: Milwaukee African American sample, 2005-2006, of the Midlife Development in the United States (MIDUS II) study (Almeida

^b Strain scales = 1, never; 4, often.

^c Support scales = 1, not at all; 4, a lot.

^d Education coded as 1; no high school degree; 2, high school degree or GED; 3, some college or 2-year degree; 4, 4-year or graduate degree.

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Health Among African American Participants in

Model 2

OR	LB	UB	p Value
1.26	0.82	1.93	.286
1.32	0.86	2.01	.207
1.24	0.92	1.66	.154
1.59	1.14	2.22	.006
1.22	0.79	1.90	.370
0.78	0.58	1.04	.085
1.09	0.83	1.43	.531
0.99	0.97	1.01	.343
0.80	0.51	1.24	.319
1.08	0.97	1.19	.151
0.98	0.78	1.22	.843
1.05	0.59	1.85	.871
1.00	0.91	1.09	.927
0.91	0.83	0.99	.032
1.28	0.96	1.72	.091
0.27	0.18	0.42	<.001
0.90	0.52	1.54	.701
1.48	0.95	2.29	.084
630.4			

et al, 2008); Results are from standard logistic regression.

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