

Gender Disparities in Physician-Patient Communication Among African American Patients in Primary Care

M. Robin DiMatteo
Carolyn B. Murray
Summer L. Williams

University of California, Riverside

This study investigates the role of gender in physician-patient communication among African American patients in primary care. Patients (N = 137) aged 33 to 67 were nested within 79 southern California primary care physicians' practices. In 48 interactions (35%), the physician was female and/or a member of a minority group. The study directly assessed gender differences through audiotaped physician-patient interactions as well as by measuring patients' and physicians' perceptions of their visit. This study employed a multi-informant design, in which independent raters assessed both physician and patient in audiotaped interactions, and both physician and patient self-reported on aspects of their visit. Discussions of prevention and health promotion were found to be significantly more common with male patients than with female patients but only when the physician was a nonminority male; these disparities disappeared when the physician was female and/or minority. Findings are discussed in terms of physician training, particularly for men and nonminorities.

Keywords: *physician-patient communication; gender disparities*

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Improved medical care and prevention efforts have contributed to dramatic increases in life expectancy in the United States, particularly over the past century. At the same time, however, the health status of racial and ethnic minorities lags far behind that of the majority population (National Center for Health Statistics [NCHS], 2007). This situation is especially true for African Americans who, for a variety of reasons, including poverty and overt discrimination, experience significant health disparities in comparison to European Americans. In particular, research indicates that European Americans receive more aggressive primary care intervention (e.g., disease screening and treatment) than do African Americans (Smedley, Stith, & Nelson, 2003). Even though recent research has investigated Black-White health disparities (Smedley et al., 2003) and White male/White female health disparities (Correa-de-Araujo, 2006), there is a dearth of research on the role of patient gender among African Americans in the receipt of health care. To partially address this void, the present study investigates physician-patient communication in a primary care setting with African American male and female patients.

HEALTH CARE DISPARITIES

Health inequality in the United States is a serious problem, and while there have been some improvements in particular areas, the overall picture remains bleak, and the life expectancy gap across ethnic groups is staggering. The gap between the highest and lowest life expectancies for race by county in the United States is over 35 years (Murray et al., 2006). In the case of African Americans, disparities in mortality and life expectancy are predicted to increase (Levine et al., 2001). In 2004, the mortality rate was 31% higher for African Americans than for European Americans (NCHS, 2007).

Given the cost and long-term consequences of health disparities (e.g., decreased productivity, diminished quality of life), identifying their causes can be of the utmost importance. Racial disparities in care tend to remain, even after controlling for patient differences in socioeconomic status (SES), insurance status, and access to a regular primary care provider (Johnson, Roter, Powe, & Cooper, 2004). While the causes are numerous and complex, a report by the Institute of Medicine (IOM) on racial disparities in health care suggests that various aspects of the physician-patient relationship may be a major cause of health disparities in the United States (Smedley et al., 2003). Specifically, research demonstrates that African American patients receive less positive communication, less information, fewer treatment options, and overall less instrumentally and interpersonally

effective care when compared with European American patients (Cooper-Patrick et al., 1999; Smedley et al., 2003).

Physicians diagnose disease and recommend treatment alternatives, and even when patients desire to participate in their medical decisions, they are typically dependent upon their physicians for guidance, options, and appropriate care. This is especially true for patients who have lower levels of education, health literacy, and SES (Lillie-Blanton, Bowie, Ro, Falik, & Collins, 1996). Furthermore, research suggests that some physicians remain unenthusiastic about treating non-White patients, particularly African Americans (Murray, 1998). African American patients who visit European American physicians tend to report having less opportunity for involvement in medical decision making, less partnership with their physicians, lower levels of trust in physicians, and lower satisfaction with their care (Cooper et al., 2003). Several studies report that physicians are more verbally dominant with African American patients than with European American patients, and they generally talk more and are more patient centered with European American patients (Gordon, Street, Kelly, Soucek, & Wray, 2005; Johnson et al., 2004; Roter & Hall, 1992). In one study, African American men reported that their physicians tended not to explain the need for certain types of preventive screening (i.e., prostate cancer screening) or even inform them that they needed to be screened (Woods, Montgomery, Herring, Gardner, & Stokols, 2006). When physicians interact with African American patients, they tend to show less positive affect, which is central to patient recall of information, treatment adherence, and satisfaction with health care process and outcomes (Johnson et al., 2004; Stewart, 1995).

GENDER HEALTH CARE DISPARITIES

Until recently, most medical research has focused on European American males (Bass & Howe, 1992; Liponis, 2008; Munch, 2004) and has rarely considered race or gender differences as important factors in health care interventions and outcomes. Although European American women outlive European American men (NCHS, 2007), research indicates a tendency for women to receive less adequate health care than men, such as less disease screening and less aggressive treatment procedures (Munch, 2004). To date, these gender-based tendencies have not been investigated adequately among African American subjects.

There are gender differences in life expectancy in both European American and African American populations, although life expectancy is

lower in African American females (76.5 years) than in European American females (81 years) and is lower in African American males (69.5 years) compared with European American males (75 years; NCHS, 2007). The probable causes of lower life expectancy for males of all races are multifaceted and complex. These include accidents, chronic conditions such as cardiovascular diseases, lifestyle choices such as smoking, and homicide rates (Saha, Arbelaez, & Cooper, 2003; Schädler, 2006). Although women do outlive men, empirical studies have found that physicians pursue less aggressive disease management with their female patients (Steingart et al., 1991). Such studies also show that compared with men, hospitalized women receive fewer diagnostic and therapeutic procedures (Ayanian & Epstein, 1991).

While there exists a plethora of literature indicating that physician-patient communication favors European American men, in contrast to European American women, there is sparse research investigating the role of patient gender in physician-patient communication within the African American population, and the findings are conflicting. In general, African American men perceive more discrimination than do African American women (Williams, Neighbors, & Jackson, 2003); however, in the health care arena, African American women tend to be at a disadvantage (Munch, 2004). Much of the existing literature has investigated "perceived" discrimination, however, and has not directly observed behavior and practices (Williams et al., 2003). The purpose of the present research was to investigate gender disparities among African American patients from ratings of audiotaped physician-patient communications as well as from physicians' and patients' perceptions of the medical visit process.

DISPARITIES DUE TO RACE AND GENDER

When both race and gender are considered, lower rates of invasive cardiac procedures have been reported for African American patients and for women compared with European American men (Geiger, 2003; Giles, Anda, Casper, Escobedo, & Taylor, 1995; Mandelblatt, Andrews, Kao, Wallace, & Kerner, 1996). European American men are consistently offered the most opportunities for medical interventions, followed by European American women, African American men, and least of all African American women. Race and sex differentials in the rates of necessary cardiac procedures remain, despite matching for the hospital of admission and controlling for other factors that influence procedure rates, suggesting that the race and gender of the patient influence whether physicians prescribe these procedures

(Geiger, 2003; Giles et al., 1995). Although the gap in receipt of cardiac procedures has decreased from 1979 to 2004, significant disparities by race and gender remain (Brown, Ross, Lopez, Thornton, & Kiros, 2008).

Much of the physician-patient literature documents health care disparities in services ordered and in provision of medical treatment for African Americans compared with European American patients (Johnson et al., 2004; Smedley et al., 2003). The evidence that African Americans receive inferior treatment is compelling. The National Cancer Institute Black-White Cancer Survival Study examined whether cancer treatment varied for European American and African American women. They found that African American women received less aggressive and less appropriate treatment than European American women (Breen, Wesley, Merrill, & Johnson, 1999). Although European American women have a higher incidence of breast cancer, they do not have the highest mortality rate; African American women are more likely to die from breast cancer than European American women (Lantz et al., 2006). Income and education do not account for racial differences in stage of breast cancer diagnosis, and racial disparities in early-stage diagnosis remained significant even after controlling for income and education. Even when controlling for disease stage, the risk of death is 50% higher for African American women with breast carcinoma than for European American women (Bradley, Given, & Roberts, 2001).

The past literature has focused on disparities such as access to care, racial discrimination, cultural beliefs, high-risk behaviors, treatment aggressiveness, compliance with treatment, and possible biological differences to explain the disparities between African American patients and European American patients in diagnosis and survival from diseases such as cancer. It may be, however, that more subtle factors such as physician-patient communication, counseling about prevention, interpersonal affect, partnership, and support of patient involvement also contribute to disparities in health outcomes. The present study focuses on these more subtle elements of the medical care process and examines an aspect of health disparities research that has to date received little attention—gender disparities within an African American patient sample.

RACE AND GENDER CONCORDANCE

Recent research has addressed the effects of physician-patient concordance on the process and outcomes of medical care; concordance refers to the similarity or shared identity between physician and the patient in the delivery

of health care. Most concordance research has examined similarities and differences in the demographic characteristics of race, gender, and age, and this research provides some evidence that medical visits in which physician and patient are similar may be somewhat different in process and outcome than those in which physician and patient are very different. For example, race-concordant medical visits (compared to discordant visits in which patient and physician are of different races) tend to be longer, with a more participatory, partnership-oriented style (Cooper et al., 2003). Race-concordant care also results in higher patient satisfaction, greater patient trust in and access to the physician, greater trust in the health care system, and greater respect and listening in the process of communication (Cooper-Patrick et al., 1999; Cooper et al., 2003). In particular, African American patients cared for by African American physicians were more likely to rate their physicians as excellent and to report receiving preventive care compared with those who had European American physicians (Saha, Komaromy, Koepsell, & Bindman, 1999). In a recent study, African American patients and their companions received significantly less information from physicians and produced significantly fewer active participation utterances than did European American patients (Gordon, Street, Sharf, & Souchek, 2006). Also, patients in racially discordant interactions received significantly less information and were significantly less active participants when compared with patients in racially concordant interactions. Controlling for patients' participation reduced the effect of concordance on information giving, suggesting that racial discordance might increase patient passivity and reduce information exchange. It is possible that African American patients in discordant interactions do less to prompt their physicians for information, resulting in physicians offering less information to these patients (Gordon et al., 2006).

Several studies have examined the role of gender concordance, with mixed results in terms of improved care for female patients (Beran, Cunningham, Landon, Wilson, & Wong, 2007; Bischoff, Hudelson, & Bovier, 2008; Chan et al., 2006; García, Paterniti, Romano, & Kravitz, 2003). Although females tend to have more medical visits than males for both preventive and illness care, males receive significantly more exercise, diet, and substance abuse counseling but only if the physician is male (Tabenkin, Goodwin, Zyzanski, Stange, & Medalie, 2004). Female physicians did not generate gender disparities in their care of their patients (Tabenkin et al., 2004). In other research, female physicians provided more counseling and immunization services to all of their patients than did male physicians; male physicians provided more preventive services to their male patients than their female patients (Flocke & Gilchrist, 2005). Research on these issues is sparse, however, and more is needed to examine the interplay of gender disparities and physician-patient concordance.

Bertakis (2003) found that compared with male physicians, female physicians typically saw more female patients, had longer visit durations, and were more likely to deliver female preventive care and make follow-up arrangements and referrals. Although there were no other significant differences between female and male physicians in other non-gender-specific preventive care (Bertakis, 2003), these findings are key, given the paramount importance of reproductive care of women in the medical setting.

In health care delivery, both race disparities (Smedley et al., 2003) and gender disparities (Thorburn & Bogart, 2005) in process and quality are well documented. The physician-patient concordance literature further hints at the possibility that racial and/or gender similarity of physician and patient may mitigate or even eliminate these differences. Past research, sparse as it is, also suggests that female physicians may be more likely to treat their male and female patients equally, while male physicians may show a positive bias toward male patients.

THE CURRENT STUDY

This present study addresses physician and patient gender as factors in the communication process of primary care physicians with their male and female African American patients. The purpose of this study is to assess the degree to which male and female physicians differentially treat their male and female African American patients in terms of the communication of information, the offering of prevention counseling, the affective (or socioemotional) aspects of care, and the opportunity for patients to be active participants in the medical visit. The study employs a multi-informant design involving ratings (by independent raters) of the audiotaped physician-patient interactions as well as questionnaire assessments by both patients and physicians of their perceptions of each other and their medical visit.

The following research questions (RQs) are addressed in this study:

RQ1: Are there differences in ratings of the audiotaped interaction of physicians communicating with their male versus female African American patients on the following dimensions: physician affective behavior, preventive health counseling, physician-patient collaboration, and patient involvement in care?

1a: Do physician characteristics (i.e., ethnicity and gender) moderate these patient gender differences?

1b: Do gender concordance effects (i.e., physician and patient of the same gender) moderate these patient gender differences?

RQ2: Are there differences between male and female African American patients in patients' questionnaire-stated perceptions and ratings of their physicians, and in physicians' questionnaire-stated perceptions and ratings of their patients?

2a: Do physician characteristics (i.e., ethnicity and gender) moderate these patient gender differences in questionnaire responses?

2b: Do gender concordance effects (i.e., physician and patient of the same gender) moderate these patient gender differences in questionnaire responses?

METHOD

PARTICIPANTS

The present study examined a subset of data from a sample of 2,191 patients aged 18 and older who had seen an enrolled physician at least once in the past. These interactions were with 156 primary care physicians at three health care sites: 62.6% of patients at a university medical center, 3.3% at a Veteran's Health Administration clinic, and 34% in a primary care staff model HMO. The original study was designed to examine the effects of physician and patient training in communication.

SAMPLE

The present sample involved the entire subsample of 137 African American patients (70 males, 67 females), with mean age 50.74 years (standard deviation [*SD*] = 16.99). Median family income was between 10,000 and 19,999 thousand dollars (1996 dollars), and median education was completion of high school. There were 79 physicians in the sample: 53 males and 26 females. Physician ethnicity was as follows: 39 Asian American, 32 European American, 4 Latino American, 1 African American, and 3 reporting "Other." Among the 134 interactions in which physician ethnicity was identified (in 3 cases, the physician did not state an ethnicity), 86 (64.2%) involved a male non-minority (Asian or European American) physician, and 48 (35.8%) involved a minority and/or female physician. In 63.8% of the cases, patients reported being a patient of their doctor for less than 1 year.

PROCEDURES

Patients scheduled to see a study physician were recruited as they waited for their medical appointments; they received \$5.00 for participating, and

the response rate exceeded 95%. Participating patients completed an informed consent form and were told that they were free to withdraw from the study at any time. Patients filled out their postvisit questionnaire at the clinic or mailed it back in a postage-paid envelope. The overall study involved a training program for physicians and patients, but the current study's focus was on baseline data not involving training effects. Only data from African American patients are examined here, including independent ratings of audiotapes of their medical visits; in this research, both patients and physicians also report on questionnaires regarding their satisfaction and experiences of the medical visit.

MEASURES

The medical visit was assessed from three perspectives: that of the physician, the patient, and independent raters of the care process as recorded on an audiotape of the visit.

Global ratings of communication. Ratings of audiotaped primary care visits were made with the Physician-Patient Global Rating Scale developed by Rosenthal (2005), following dimensions of global affect recommended by Cooper et al. (2003). Direct global ratings of affect were chosen because they show higher validity than do coded measurements (e.g., number of gazes; Rosenthal, 2005). In the parent study of 2,175 physician-patient interactions, a set of 28 raters assessed both physician and patient communication from the audiotapes, with individual item interrater reliabilities averaging .35 and reliability of composite measures used for analysis (see below) considerably higher. Raters were diverse and had the following characteristics: 65.4% female, 23.1% European American, 46.2% Asian American, 7.7% African American, 7.7% Latino American, 3.8% Native American, and 11.5% South Asian Indian. In order to account for differences between raters, raw scores were *z* scored within raters, and scales were formed from *z*-scored ratings on each of the individual rating variables.

Physician positive global affect was assessed with 8 items, each rated on a 7-point Likert-type rating scale, from *poor* to *excellent*. These items were the following: the physician connected with the patient as a person; was empathic; was informative; invited the patient to share their understanding, perspective, and feelings; was sensitive to potential communication problems, acknowledging them and facilitating repair; invited the patient to participate in decision making; and shared control and power with the patient; the last item was an overall rating of the physician's communication. Chronbach's alpha reliability for this 8-item scale is .93.

Five global assessment items were each rated on a 7-point Likert-type rating scale, from *poor* to *excellent*. Two scales were formed after principal components analysis accounting for 83.55% of the variance. Patient-Physician Collaboration was composed of the following 3 items (Cronbach's $\alpha = .88$): the patient was able to take initiative and introduce his/her agenda; the patient was an active participant in a discussion about treatment options; this was a collaborative relationship with a two-way conversation. Patient Questioning was composed of the following 2 items (Cronbach's $\alpha = .81$): the patient asked the doctor questions; the patient understood what she or he was supposed to do or was able to get clarification.

Prevention and health promotion occurring during the visit was assessed with 1 rating item on a 7-point Likert-type rating scale, from *poor* to *excellent*. Raters assessed the degree to which the interaction: included discussions of prevention and health promotion.

Patient self-report ratings. Patients completed a postvisit questionnaire, with several subscales assessing their perceptions of the medical visit and satisfaction with the interaction with their physician. The Patient Choice Scale (4-item scale, $\alpha = .96$; Heisler, Bouknight, Hayward, Smith, & Kerr, 2002) assessed patients' rating (on a 5-point Likert-type scale from *none* to *all of the time*) of the following: the physician offered choices in your medical care, discussed the pros and cons, asked preferred choice, and took your preferences into account. The Patient Ratings of the Physician Scale (5-item scale, $\alpha = .96$) assessed patients' ratings of physician and quality of care (on a 5-point Likert-type scale from *poor* to *excellent*) on the following: the physician's personal manner, communication skills, and technical skills, and overall care and the quality of medical care received. The Physician Information Giving Scale (6-item scale, $\alpha = .95$; Heisler et al., 2002) had patients rate (on a 5-point Likert-type scale from *none* to *all of the time*) the following: the physician told you everything, let you know test results, explained treatment alternatives, included you in treatment decisions, explained side effects of medications, and told you what to expect. The Prevention Counseling Scale (5-item scale, $\alpha = .97$) asked patients to report how often (1 = *never* to 5 = *every visit*) their physician gave them help or counseling with weight loss, exercise, quitting smoking; quitting drinking; and stress. Analyses are reported on each item separately, as well as on a scale formed from the mean of these 5 counseling items.

Physician satisfaction with the visit ratings. Physician satisfaction with the patient and medical visit was assessed with the physician satisfaction

questionnaire (Suchman, Roter, Green, & Lipkin, 1993). This is a 20-item (5-point Likert-type) scale ($\alpha = .89$) on which the physician rates total satisfaction with various aspects of patient and information exchanged in the visit. There are four subscales: Satisfaction With Physician-Patient Relationship (4-item scale; $\alpha = .75$), Satisfaction With Data Collection Process (3-item scale; $\alpha = .71$), Satisfaction With Use of Time in the Visit (3-item scale; $\alpha = .67$), and Satisfaction With Patient (3-item scale) $\alpha = .73$.

Physician report of counseling. One additional item involved asking the physician whether or not, in that visit, lifestyle and motivational issues were discussed with the patient (answered "yes" or "no").

Patient demographics. The patient, at the time of the visit, completed a questionnaire that solicited self-reported gender, age, education level, ethnicity, and income. Patients also rated their health on 2 items: "In general would you say your health (from 1 to 5) is poor, fair, good, very good, excellent"; and "My health is excellent (from 1 to 5) definitely false to definitely true." The α for this 2-item scale is .81.

STATISTICAL ANALYSES AND RESEARCH QUESTIONS

The goal of this project was to assess the degree to which physician-patient communication differs for male and female African American patients in primary care. The focus was on affective (socioemotional) care, the communication of information, and the offering of health promotion and disease prevention counseling to patients.

Three perspectives on the visit were examined: (1) raters who listened to and rated audiotapes of the visit, (2) patients who assessed their physician and the visit on a postvisit questionnaire, and (3) physicians who reported on their satisfaction with the visit and with the patient. All analyses were done at the interaction level because the median and modal number of patients per doctor was one. The number of patients per physician ranged from 1 to 5, and there were 1.71 patients on average per doctor.

The primary analyses (RQs 1 and 2, delineated above) involved independent sample *t* tests, comparing male versus female African American patients on the dependent variables described above. Physician characteristic (gender/ethnicity) moderators of the patient gender difference were examined with *t* tests (RQs 1a and 2a), and gender concordance/discordance was examined with 2×2 ANOVAs (RQs 1b and 2b). All probabilities reported for statistical tests are two tailed.

RESULTS

GLOBAL RATINGS OF COMMUNICATION

Prevention and health promotion was significantly higher for male compared with female African American patients, $t(110) = 2.06, p = .042$, providing affirmative evidence in response to RQ1. Raters agreed that interactions of physicians with the male African American patients more often included discussions of prevention and health promotion. This difference disappeared for interactions in which the physician was female and/or minority. If the physician was male and European American or Asian American, the patient gender difference was slightly more significant than for the whole sample, $t(73) = 2.10, p = .039$ (RQ1a). In Table 1, columns 1 and 2 present means for male versus female patients of male European/Asian American physicians, and columns 3 and 4 present means for male versus female patients of female and/or minority physicians.¹ A gender difference in Patient-Physician Collaboration was also significant (RQ1). Male African American patients were rated as taking a more active, collaborative part in their medical visit than females, $t(110) = 2.14, p = .035$. Again, this difference disappeared for interactions in which the physician was female and/or minority and was slightly more significant if the physician was male and European American or Asian American, $t(73) = 2.46, p = .01$ (RQ1a; see Table 1). There were no gender differences in Patient Questioning, $t(110) = 0.40, p = .691$ (see Table 1).

The 8-item Physician Positive Global Affect Rating Scale showed no overall gender differences in how physicians treated their male versus female African American patients, $t(110) = 0.59, p = .558$, and there were no differences on any of the individual 8 items. However, differences were in opposite directions for male and female physicians. Exploration of differences between male and female physicians toward their male and female patients (RQ1b) with a 2×2 ANOVA (Physician Gender \times Patient Gender) showed a significant interaction effect, $F(1, 108) = 4.86, p = .03$, such that male physicians were more positive to their male patients, and female physicians were more positive to their female patients. In other words, in same-sex dyads, physician positive global affect was higher than in opposite-sex dyads (see Table 2 for means).

PATIENT SELF-REPORT RATINGS

There were no patient gender differences in Patient Choice Scale, Patient Ratings of the Physician Scale, or the Physician Information Giving

TABLE 1

Means, Standard Deviations, and Sample Sizes for Comparisons of Male Versus Female Patients With Physicians Who Are Male Nonminority Versus Female and/or Minority

| Measure | Male Nonminority Physician | | | | | | Female and/or Minority Physician | | | | | |
|--|----------------------------|------|----|-----------------|------|----|----------------------------------|------|----|-----------------|------|----|
| | Male Patients | | | Female Patients | | | Male Patients | | | Female Patients | | |
| | M | SD | N | M | SD | N | M | SD | N | M | SD | N |
| Prevention and health promotion ^a | 0.19 | 0.76 | 47 | -0.21 | 0.86 | 28 | 0.32 | 0.73 | 17 | 0.10 | 1.00 | 19 |
| Patient-physician collaboration ^a | 0.11 | 0.74 | 47 | -0.38 | 0.99 | 28 | -0.04 | 0.92 | 17 | -0.11 | 1.03 | 19 |
| Counseling overall ^b | 3.38 | 1.46 | 35 | 2.42 | 1.49 | 22 | 2.83 | 1.09 | 9 | 2.56 | 1.63 | 21 |
| Weight loss counseling ^b | 3.28 | 1.59 | 25 | 2.39 | 1.50 | 18 | 2.00 | 1.22 | 5 | 2.50 | 1.69 | 18 |
| Exercise counseling ^b | 3.57 | 1.47 | 28 | 2.56 | 1.50 | 18 | 2.63 | 1.30 | 8 | 2.47 | 1.64 | 19 |
| Stress counseling ^b | 3.35 | 1.66 | 23 | 2.17 | 1.70 | 17 | 2.20 | 1.30 | 5 | 2.06 | 1.57 | 16 |
| Physician rating of patient as typical/nonchallenging ^c | 1.62 | 0.49 | 29 | 1.41 | 0.50 | 22 | 1.58 | 0.51 | 12 | 1.36 | 0.49 | 22 |
| Physician rating of patient as interesting ^b | 4.04 | 0.59 | 47 | 3.80 | 0.47 | 35 | 3.78 | 0.43 | 18 | 3.83 | 0.65 | 30 |
| Physician rating of patient as personable ^b | 3.72 | 0.93 | 47 | 3.97 | 0.62 | 35 | 3.61 | 0.61 | 18 | 3.97 | 0.67 | 30 |
| Physician rating of understanding the patient ^b | 3.62 | 0.82 | 47 | 3.94 | 0.42 | 35 | 3.28 | 1.01 | 18 | 3.82 | 0.72 | 28 |

a. Measure is z scored.

b. Measure is on a 1 to 5 scale.

c. Measure is on a 1 to 2 scale.

TABLE 2
Means, Standard Deviations, and Sample Sizes for 2 × 2
ANOVA (Patient Gender × Physician Gender)

| <i>Measure</i> | <i>Male Physician, Male Patient</i> | | | <i>Male Physician, Female Patient</i> | | | <i>Female Physician, Male Patient</i> | | | <i>Female Physician, Female Patient</i> | | |
|--|---|------|----|---|------|----|---|------|----|---|------|----|
| | M | SD | N | M | SD | N | M | SD | N | M | SD | N |
| Physician positive global affect ^a | 0.11 | 0.68 | 52 | -0.22 | 0.87 | 28 | -0.09 | 0.79 | 13 | 0.28 | 0.60 | 19 |
| Physician total satisfaction with visit ^b | 3.74 | 0.44 | 52 | 3.74 | 0.33 | 36 | 3.46 | 0.41 | 14 | 3.73 | 0.36 | 31 |
| Physician satisfaction with data collection process ^c | 3.66 | 0.61 | 52 | 3.62 | 0.64 | 36 | 3.17 | 0.91 | 14 | 3.65 | 0.63 | 31 |
| Physician rated that he/she understood patient ^c | 3.87 | 0.63 | 52 | 3.94 | 0.41 | 36 | 3.43 | 1.02 | 14 | 4.06 | 0.36 | 31 |

a. 8-item scale, z scored.

b. Measure is on 1 to 5 scale, mean of 20 items.

c. Measure is on 1 to 5 scale.

Scale. There were, however, consistent patient gender differences in patients' reports that their physicians had provided health promotion counseling to them (Prevention Counseling Scale and individual items; addressing RQ2). Female African American patients reported receiving significantly less frequent health behavior counseling overall (5-item Prevention Counseling Scale) than male patients, $t(87) = 2.51, p = .014$, as well as significantly less frequent counseling for exercise, $t(72) = 2.30, p = .024$, and for stress reduction, $t(59) = 2.44, p = .018$. There was also a borderline effect such that female African American patients also received less counseling for weight loss, $t(66) = 1.63, p = .107$.

Although there were no gender interaction effects in a 2 × 2 ANOVA (RQ2b), it is noteworthy that when physicians were separated into two groups, male and nonminority compared with female and/or minority physicians, different effects did emerge. In answer to RQ2a, when the physician was female and/or minority, there were no differences in their health behavior counseling of male versus female patients. However, when the physician was a European American or Asian American male, the pattern of gender differences for African American patients became stronger. Female patients, in contrast to male patients, self-reported receiving from their European American or Asian American male physicians less

counseling overall, $t(55) = 2.38, p = .021$, less counseling for weight loss, $t(41) = 1.85, p = .071$, less exercise counseling, $t(44) = 2.26, p = .029$, and less counseling for stress, $t(38) = 2.18, p = .036$ (see Table 1 for the male versus female patient means for European American/Asian American male physicians and for female and/or minority physicians).

There were no changes in this pattern of results when patient-doctor familiarity (being a patient of the physician less than vs. more than 1 year) was considered.

PHYSICIAN SATISFACTION WITH THE VISIT RATINGS

Although, as noted above, both independent raters and patients reported that physicians were less likely to offer preventive care and counseling to African American women, compared with men, the physicians themselves (of both genders) reported no awareness of differences in their own behavior on the physician report of counseling measure, $t(85) = 0.069, p = .945$.

On the 20-item Total Satisfaction Scale assessing physicians' ratings of the patient and the visit (RQ2b), physicians reported marginally greater satisfaction with female patients, $F(1, 129) = 3.12, p = .08$, male physicians reported greater overall satisfaction, $F(1, 129) = 3.48, p = .065$, and there was a significant interaction such that higher satisfaction ratings occurred in same-sex dyads, $F(1, 129) = 3.23, p = .074$ (see Table 2 for means). There were no effects on three of the physician satisfaction subscales, but on Satisfaction With Data Collection Process, physicians were marginally more satisfied with female patients, $F(1, 129) = 2.95, p = .088$, male physicians were more satisfied, $F(1, 129) = 3.37, p = .069$, and the interaction showed that physicians were more satisfied with data collection in same-sex dyads, $F(1, 129) = 4.12, p = .044$ (see Table 2 for means). Female patients were also rated as better understanding their physician's explanations, $F(1, 129) = 10.12, p = .002$, and for female physicians, this rated difference was very pronounced, $F(1, 129) = 6.14, p = .015$ (see Table 2 for means). Several individual items were noteworthy in that they had no interactions (RQ2b). Although, as noted in the physician report of counseling measure, physicians offered less prevention and counseling to female African American patients than males, they rated their visit with their female patients as more typical and nonchallenging, $t(86) = 2.15, p = .035$. They also rated visits with male patients as more interesting and with females as more boring, $t(131) = 1.70, p = .092$. However, physicians rated their female patients as more personable, $t(131) = 2.13, p = .035$, and said that they understood their female patients better than they did their male patients, $t(129) = 2.66, p = .009$, regardless of physician gender (see Table 1 for means).

PATIENT DEMOGRAPHIC MODERATORS

There were no significant differences between males and females in their level of education, $t(122) = 0.11, p = .91$, or income level, $t(103) = 1.38, p = .17$. Females did report higher self-rated health than male patients, however, $t(129) = 2.07, p = .041$, and on average, they were younger than males, $t(129) = 6.31, p < .001$. These differences had limited effect on the outcome measures. Interactions with older patients received higher ratings of prevention and health promotion ($r = .31, p = .001$) and positive physician global affect ($r = .22, p = .026$), but there were no significant correlations of these with patient self-reported health. Patients' self-reported health and patient age had no significant relationships with the outcomes of Prevention Counseling Scale, patient satisfaction, Patient Choice Scale, physician informativeness, physician satisfaction, or ratings of physician global affect, Patient-Physician Collaboration, and Patient Questioning.

DISCUSSION

The findings of the present study lend support to the proposal that disparities exist in the manner in which primary care physicians communicate with their African American male and female patients and, further, that these communication differences tend to disadvantage African American women. Discussions of prevention and health promotion were found to be more common with male than with female patients. One possible explanation is that on ratings of the audiotaped interactions, African American males were found to take a more active collaborative part in their medical visits. Previous research has indicated that physicians give more information and offer more support and encouragement to patients who ask more questions (Street, 2002). Interestingly, these gender differences appeared *only* when the physician was a European American or Asian American male. Among female and minority physicians, there were no differences in how patients were treated, nor were there differences in how male versus female patients collaborated in their care.

As mentioned earlier, a number of past studies have found that physicians give more information and offer more support and encouragement to patients who express their concerns (Street, 2002). This may have been the case in the present study as well and may have accounted for the gender difference in physician behavior. Furthermore, female African American patients *did* report higher self-rated health than male African American patients, and on average, they were younger than males. The higher activity on the part of African

American males may have been due, in part, to their greater health concerns, particularly since they were older than the females investigated. These differences had limited effect on outcome measures, however. Interactions with older patients received higher ratings in terms of prevention and health promotion as well as global affect, but there were no significant correlations of these with patient self-reported health. Patients' self-reported health and patient age had no significant relationships with the outcomes on any of the other correlates, such as physician information giving or patient questioning.

These explanations, of course, do not address the question of why female and minority physicians did not make gender distinctions while male, nonminority physicians did. Some previous research indicates that female physicians generally tend, with all their patients, to offer somewhat more time and information and to be less directive and more psychosocial than male physicians (Elderkin-Thompson & Waitzkin, 1999; Hall & Roter, 1998; Roter & Hall, 1998). Perhaps they are less likely than male physicians to offer disparate care for males versus females and to focus more on establishing rapport, while males focus more on establishing status and independence (Tannen, 1990). Lower emphasis on dominance and greater emphasis on rapport among female physicians might help explain reduced patient gender differences in the care of female physicians (Hall & Roter, 1998; Roter, Lipkin, & Korsgaard, 1991). Of course, while the female communication style is arguably more expressive and more accurate at perceiving the emotions of others, other researchers warn against assuming that women are better physicians. The research findings tend not to be very consistent, the magnitude of differences between men and women physicians is small, and patients do not show consistent preferences for physicians of one gender over the other (Roter & Hall, 1998).

What remains to be explained here, however, is the lack of gender disparities in care when physicians are female and/or minority compared with large patient gender disparities among nonminority male physicians. The commonality between female and minority physicians, in contrast to European American and Asian males, may be the experience of being the Other and belonging to a stigmatized group, resulting in greater sensitivity to issues of equality in interpersonal care. This possible explanation is suggested but requires further study.

While there were no overall gender differences in affect, there was slight evidence for gender concordance in communication: Male physicians tended to be more positive to their male patients, and female physicians tended to be more positive to their female patients; physicians expressed more positive affect in same-sex than in opposite-sex dyads.

Although there were no gender differences in how patients rated their physicians with regard to medical care choices, quality, and information, female African American patients did report receiving significantly less health behavior counseling (e.g., exercise, stress reduction, and weight loss) than did male African American patients. These findings were mirrored in the raters' assessments of prevention counseling as well and are quite consequential, especially given that there were no differences in other patient ratings. Lifestyle counseling of patients is extremely important in the prevention and control of many diseases, including heart disease—the number one killer (NCHS, 2007). Other literature confirms a tendency for (male) physicians to less frequently counsel women than men regarding issues of diet, exercise, and weight reduction (“Missed Opportunities,” 1998). In the present study, the findings suggest that differential lifestyle counseling may increase the vulnerability of African American women to serious disease.

Patient gender disparities were significant only when physicians were male and nonminority; among female and/or minority physicians, patient gender disparities in health behavior counseling disappeared. Although there was no interaction indicating gender concordance effects, it is noteworthy that different effects emerged when the physicians were separated into two groups: nonminority males versus minority and/or female physicians. Female and/or minority physicians did not perpetuate gender disparities in the care of their African American patients, but male, nonminority physicians did so, exhibiting differential care in the form of greater lifestyle counseling for male patients. Again, explanations concerning differences in communication style between male and female physicians seem to provide an appropriate interpretation of these results. Somewhat surprisingly, there were no physician-patient familiarity effects (i.e., being a patient of this physician less than or more than 1 year). Furthermore, neither male nor female physicians reported awareness of these gender differences in their preventive care treatment.

In terms of satisfaction, physicians overall reported marginally greater satisfaction with female patients; male physicians reported greater overall satisfaction, and a significant interaction showed greater physician satisfaction in same-sex dyads. Thus, overall, male physicians had greater visit satisfaction with male patients, and female physicians with female patients. A possibly counterintuitive finding was that female patients were also rated as better at understanding their physician's explanations, and for female physicians, this rated difference was very pronounced, supporting gender concordance.

Several interesting findings that had no interactions may facilitate our understanding of why male physicians offered less preventive counseling to

females compared with male African American patients. Physicians rated their visit with female patients as more typical and nonchallenging than those with male patients, and their visits with male patients as more interesting and challenging. These physicians rated their female patients as more personable, however. In addition, both male and female physicians said they understood their female patients better than they did their male patients. This pattern suggests that physicians perceived female African American patients as more affiliative, personable, and easy to deal with but their medical care as less interesting. Male African American patients, on the other hand, may have prompted greater medical concern and treatment involvement by their physicians, contributing to better lifestyle counseling.

Besides similarity, a physician's stereotypes and attitudes toward men and women may influence his or her assumptions about patient capabilities and needs. The fact that women seek medical care more frequently than men may contribute to the assumption that women are the sicker, weaker sex (Todd, 1989). Some have proposed that the frequency of women's medical visits is better explained by the fact that gender-role socialization leads to women's greater willingness to admit that there is a problem and seek help.

Thus, women's issues may be perceived as more the norm than that of their male counterparts. Phillips (1995) argued that gender stereotypes permeated medical pedagogy and practice, and noted that gender-role stereotypes may influence physicians' assessments, hypothesis generation, diagnoses, treatments, and conceptualizations of health and illness. These stereotypes may lead to women's complaints as being perceived as "more of the same" and less serious and, thus, boring. These same stereotypes may also influence a physician's assumption about the patient's intelligence and, therefore, may influence the physician's satisfaction with and affect toward the patient.

What may be most interesting about the finding that physicians viewed African American women as boring and unchallenging is that, stereotypically, African American women have been traditionally viewed as assertive or even aggressive (Weitz & Gordon, 1993). More research is certainly needed to fully explicate this finding, especially since patients who ask more questions and who are more participatory may be likely to receive better preventive health care. Furthermore, early research shows that medical racism overshadows medical sexism for African American women (Ehrenreich & English, 1973). Similarly, there is also some evidence to suggest that women of color and impoverished women are viewed by physicians as more "difficult" when they ask questions (Todd, 1989).

We cannot conclude that the characterization of African American men as more interesting but more difficult to understand is necessarily positive.

Men, regardless of race, tend to have more topics (e.g., sports) they can talk about with each other that make interacting more interesting and may facilitate greater bonds between male physicians and male patients. Across racial lines, African American males are often perceived as dangerous and/or threatening (Murray, 1998). Therefore, *interesting* and *difficult* may be buzzwords for something more ominous. Furthermore, the research design may actually contribute to the more “apparent,” as opposed to “real,” favorable physician-patient communication for African American men because they may be more feared. Thus, European American and Asian American physicians may be more careful when being audiotaped in their interactions with African American men, thereby offering them more preventive and health promotion suggestions.

In conclusion, when comparing these two stigmatized groups, one cannot assume that somehow one is receiving better or worse health care. This is particularly relevant since the health outcomes and life expectancy, even when holding SES, health insurance, and education constant, are extremely disparate for African American women, and especially for African American men, compared with their European American counterparts.

LIMITATIONS

Despite its strengths, this study also has limitations. First, although there are independent ratings of audiotapes of their interaction, patient and physician perceptions of each other and of the visit involve self-report questionnaires. The perspectives of unbiased raters do corroborate the perspectives of patients and physicians, lending some strength to the findings. Second, the data in this study were examined at the interaction level, with the patient as the unit of analysis, limiting the generalizability of the findings. A stronger, more robust analysis would involve examining the physician-patient interaction at the physician level (ideally with more African American patients per physician), making it possible to generalize to other physicians in the population. Third, the current data set is limited to the analyses of audiotaped interactions. Even more information would be available had videotapes of the physician-patient interaction been collected, allowing analysis of many elements of nonverbal as well as verbal communication.

IMPLICATIONS

Despite potential limitations, this research has implications for medical practice to increase patient participation and empower patients. While avoiding a “victim-focused” approach, the most efficient way to empower patients is

by training physicians how to engage their patients and to offer all patients the best medical care available. Some investigators have tried to defend physicians' limitations in providing life-saving information to African American patients with the rationalization that physicians may perceive minority or low-SES patients as less interested and/or less likely to adhere to a treatment regimen. Physicians, therefore, tend to forgo discussing important life-enhancing and life-saving procedures and recommendations in the first place (van Ryn & Burke, 2000). Such an excuse is unacceptable in the context of a physician's oath to put the health of the patient first. Limitations in provision of life-saving information to any patients, particularly those who are less educated and more vulnerable, cannot be justified, of course, and any patient seeking care from a physician should be able to be assured of the most appropriate medical treatment available.

NOTE

1. Analyses were also conducted to examine the question of whether the physician's gender made more of a difference to the gender disparity (male vs. female patients) than the split of physicians according to gender and ethnicity. In analyses of interaction ratings as well as in patient perceptions and physician satisfaction ratings, the pattern of results was similar to these results, although less stable because of a more skewed distribution of *ns* in the four cells. Noteworthy results from 2×2 ANOVAs (Physician \times Patient Gender) are described in the Results section, and means are presented in Table 2.

REFERENCES

- Ayanian, J., & Epstein, A. (1991). Differences in the use of procedures between women and men hospitalized for coronary heart disease. *New England Journal of Medicine*, *325*, 221-225.
- Bass, M., & Howe, J. (1992). Women's health: The making of a powerful new public issue. *Women's Health Issues*, *2*, 3-5.
- Beran, M., Cunningham, W., Landon, B., Wilson, I., & Wong, M. (2007). Clinician gender is more important than gender concordance in quality of HIV care. *Gender Medicine*, *4*, 72-84.
- Bertakis, F. (2003). Physician gender, patient gender, and primary care. *Journal of Women's Health*, *12*, 73-78.
- Bischoff, A., Hudelson, P., & Bovier, P. (2008). Doctor-patient gender concordance and patient satisfaction in interpreter-mediated consultations: An exploratory study. *Journal of Travel Medicine*, *15*, 1-5.
- Bradley, C., Given, C., & Roberts, C. (2001). Disparities in cancer diagnosis and survival. *Cancer*, *91*, 178-188.

- Breen, N., Wesley, M., Merrill, R., & Johnson, K. (1999). The relationship of socio-economic status and access to minimum expected therapy among female breast cancer patients in the National Cancer Institute Black-White Cancer Survival Study. *Ethnicity & Disease, 9*, 111-125.
- Brown, C., Ross, L., Lopez, I., Thornton, A., & Kiros, G. (2008). Disparities in the receipt of cardiac revascularization procedures between Blacks and Whites: An analysis of secular trends. *Ethnicity & Disease, 18*(2 Suppl. 2), S2-112-117.
- Chan, K., Bird, C., Weiss, R., Duan, N., Meredith, L., & Sherbourne, C. (2006). Does patient-provider gender concordance affect mental health care received by primary care patients with major depression? *Women's Health Issues, 16*, 122-132.
- Cooper, L., Roter, D., Johnson, R., Ford, D., Steinwachs D., & Powe, N. (2003). Patient-centered communication, ratings of care, and concordance of patient and physician race. *Annals of Internal Medicine, 139*, 907-915.
- Cooper-Patrick, L., Gallo, L., Gonzales, J., Powe, N., Nelson, C., & Ford, D. (1999). Race, gender, and partnership in the patient-physician relationship. *Journal of the American Medical Association, 282*, 583-589.
- Correa-de-Araujo, R. (2006). Introduction: Women, gender, and health care disparities. *Women's Health Issues, 16*, 40.
- Ehrenreich, B., & English, D. (1973). *Complaints and disorders: The sexual politics of sickness*. New York: Feminist Press.
- Elderkin-Thompson, V., & Waitzkin, H. (1999). Differences in clinical communication by gender. *Journal of General Internal Medicine, 14*, 112-121.
- Flocke, S., & Gilchrist, V. (2005). Physician and patient gender concordance and the delivery of comprehensive clinical preventive services. *Medical Care, 43*, 486-492.
- García, J., Paterniti, D., Romano, P., & Kravitz, R. (2003). Patient preferences for physician characteristics in university-based primary care clinics. *Ethnicity & Disease, 13*, 25-67.
- Geiger, H. (2003). Racial and ethnic disparities in diagnosis and treatment in the US health care system: A review of the evidence and a consideration of causes. In B. D. Smedley, A. Y. Stith, & A. R. Nelson (Eds.), *Unequal treatment: Confronting racial and ethnic disparities in health care* (pp. 415-454). Washington, DC: National Academies Press.
- Giles, W., Anda, R., Casper, M., Escobedo, L., & Taylor, H. (1995). Race and sex differences in rates of invasive cardiac procedures in US hospitals: Data from the National Hospital Discharge Survey. *Archives of Internal Medicine, 155*, 318-324.
- Gordon, H., Street, R., Kelly, P., Soucek, J., & Wray, N. (2005). Physician-patient communication following invasive procedures: An analysis of post-angiogram consultations. *Social Science & Medicine, 61*, 1015-1025.
- Gordon, H., Street, R., Sharf, B., & Soucek, J. (2006). Racial differences in doctors' information-giving and patients' participation. *Cancer, 107*, 1313-1320.
- Hall, J., & Roter, D. (1998). Medical communication and gender: A summary of research. *Journal of Gender-Specific Medicine, 1*, 39-42.
- Heisler, M., Bouknight, R., Hayward, R., Smith, D., & Kerr, E. (2002). The relative importance of physician communication, participatory decision-making, and patient understanding in diabetes self-management. *Journal of General Internal Medicine, 17*, 243-252.
- Johnson, R., Roter, D., Powe, N. R., & Cooper, L. A. (2004). Patient race/ethnicity and quality of patient-physician communication during medical visits. *American Journal of Public Health, 94*, 2084-2090.
- Lantz, P., Mujahid, M., Schwartz, K., Janz, N., Fagerlin, A., Salem, B., et al. (2006). The influence of race, ethnicity, and individual socioeconomic factors on breast cancer stage at diagnosis. *American Journal of Public Health, 96*, 2173-2178.

- Levine, R., Foster, J., Fullilove, R., Griggs, N., Hull, P., Husaini, B., et al. (2001). Black-White inequalities in mortality and life expectancy, 1933-1999: Implication for *Healthy People 2010*. *Public Health Report*, 116, 474-483.
- Lillie-Blanton, M., Bowie, J., Ro, M., Falik, M., & Collins, K. (1996). African American women: Social factors and the use of preventive health services. In M. M. Falik & K. S. Collins (Eds.), *Women's health: The Commonwealth Fund Survey* (pp. 99-122). Baltimore: Johns Hopkins University Press.
- Liponis, M. (2008, October 19). Women's health special report: 4 ways women are different from men. *Parade*, pp. 10-11.
- Mandelblatt, J., Andrews, H., Kao, R., Wallace, R., & Kerner, J. (1996). The late-stage diagnosis of colorectal cancer: Demographic and socioeconomic factors. *American Journal of Public Health*, 86, 1794-1797.
- Missed opportunities in preventive counseling for cardiovascular disease—United States. (1998, February 13). *Morbidity and Mortality Weekly Report*, 47, 91-95.
- Munch, S. (2004). Gender-biased diagnosing of women's medical complaints: Contributions of feminist thought, 1970-1995. *Women & Health*, 40, 101-121.
- Murray, C. (1998). Racism and mental health. In H. S. Friedman (Ed.), *Encyclopedia of mental health* (Vol. 3, pp. 345-357). San Diego, CA: Academic Press.
- Murray, C., Kulkarni, S., Michaud, C., Tomijima, N., Bulzacchelli, M., Iandiorio, T., et al. (2006). Eight Americas: Investigating mortality disparities across races, counties, and race-counties in the United States. *PLoS Medicine*, 3, 1513-1524.
- National Center for Health Statistics. (2007). *Health, United States, 2007 with chartbook on trends in the health of Americans*. Hyattsville, MD: Author.
- Phillips, S. (1995). The social context of women's health: Goals and objectives for medical education. *Canadian Medical Association Journal*, 152, 507-511.
- Rosenthal, R. (2005). Conducting judgment studies: Some methodological issues. In J. Harrigan, R. Rosenthal, & R. Scherer (Eds.), *The new handbook of methods in nonverbal behavior research: Series in Affective Science* (pp. 199-234). New York: Oxford University Press.
- Roter, D., & Hall, J. (1992). *Doctors talking to patients/patients talking to doctors: Improving communication in medical visits*. Westport, CT: Auburn House.
- Roter, D., & Hall, J. (1998). Why physician gender matters in shaping the physician-patient relationship. *Journal Women's Health*, 7, 1093-1097.
- Roter, D., Lipkin, M., & Korsgaard, A. (1991). Sex differences in patients' and physicians' communication during primary care medical visits. *Medical Care*, 29, 1083-1093.
- Saha, S., Arbelaez, J., & Cooper, L. (2003). Patient-physician relationships and racial disparities in the quality of health care. *American Journal of Public Health*, 93, 1713-1719.
- Saha, S., Komaromy, M. M., Koepsell, R. D., & Bindman, A. B. (1999). Patient-physician racial concordance and the perceived quality and use of health care. *Archives of Internal Medicine*, 159, 997-1004.
- Schädler, S. (2006). *Women live longer? (So) men have short lives???* *Research in gender and life expectancy*. Retrieved February 26, 2009, from http://www.genderkompetenz.info/eng/center/services/events/life_expectancy/
- Smedley, B., Stith, A., & Nelson, A. (Eds.). (2003). *Unequal treatment: Confronting racial and ethnic disparities in health care*. Institute of Medicine Washington, DC: National Academies Press.
- Steingart, R., Packer, M., Hamm, P., Coglianese, M., Gersh, B., Geltman, E., et al. (1991). Sex differences in the management of coronary artery disease. *New England Journal of Medicine*, 325, 226-230.

- Stewart, M. (1995). Effective physician-patient communication and health outcomes: A review. *Canadian Medical Association Journal, 152*, 1423-1433.
- Street, R. (2002). Gender differences in health care provider-patient communication: Are they due to style, stereotypes, or accommodation? *Patient Education and Counseling, 48*, 201-206.
- Suchman, A., Roter, D., Green, M., & Lipkin, M. (1993). Physician satisfaction with primary care office visits: Collaborative Study Group of the American Academy on Physician and Patient. *Medical Care, 31*, 1083-1092.
- Tabenkin, H., Goodwin, M., Zyzanski, S., Stange, K., & Medalie, J. (2004). Gender differences in time spent during direct observation of doctor-patient encounters. *Journal of Women's Health, 13*, 341-349.
- Tannen, D. (1990). *You just don't understand*. New York: Balantine.
- Thorburn, S., & Bogart, L. (2005). African American women and family planning services: Perceptions of discrimination. *Women Health, 42*, 23-39.
- Todd, A. D. (1989). *Intimate adversaries: Cultural conflict between doctors and women patients*. Philadelphia: University of Pennsylvania Press.
- van Ryn, M., & Burke, J. (2000). The effect of patient race and socio-economic status on physicians' perceptions of patients. *Social Science and Medicine, 50*, 813-828.
- Weitz, R., & Gordon, L. (1993). Images of Black women among Anglo college students. *Sex Roles, 28*(1-2), 19-34.
- Williams, D., Neighbors, H., & Jackson, J. (2003). Racial/ethnic discrimination and health: Findings from community studies. *American Journal of Public Health, 93*, 200-208.
- Woods, V., Montgomery, S., Herring, R., Gardner, R., & Stokols, D. (2006). Social ecological predictors of prostate-specific antigen blood test and digital rectal examination in Black American men. *Journal of the National Medical Association, 98*, 492-504.