To date, the preponderance of medical and psychologic research on infertility has relied on European American samples consisting of couples with middle to high socioeconomic status. Approximately 13% of married women between the ages of 15 and 44 have some form of fecundity impairment, with over 6 million women in the United States affected by infertility (1–3), the inability to conceive after 1 year of unprotected intercourse. Members of infertile couples typically experience a barrage of stressful psychologic sequelae following the diagnosis of an infertility problem (4–11). Couples who have participated in research studies tend to be those who can afford highly specialized medical treatments (4). Among infertile women, obtaining some type of medical treatment is positively associated with age, being married, graduating from college, having a high income, and being non-Hispanic White (12). Even in Massachusetts, a state with mandated comprehensive insurance coverage for infertility, couples accessing medical care for infertility tend to be European American, of upper socioeconomic status, and highly educated (13). For example, among 561 women who attended a large infertility clinic in Massachusetts (at Brigham & Women’s Hospital), none of the patients had less than a high school diploma compared with 15% in the state population. Additionally, about half of the patients had advanced degrees compared with 12% in the population (13). The obstacles that poor and racial minority women face in receiving infertility treatment are potentially numerous, including economic disadvantage, lack of referrals, little or no insurance coverage, racial discrimination, and cultural sanctions against infertility treatment (2, 14). When African American women do seek medical care, they tend to have experienced difficulty conceiving for a longer period of time before seeking medical attention compared with European American women (2). It is quite likely, therefore, that many women who struggle with infertility never go beyond a single visit or conversation with a general/family practitioner or their gynecologist. In a society that glamorizes highly technical, medical interventions, how then are African American women and women of lower
income backgrounds likely to be treated when they discuss infertility with a medical practitioner?

**RACE- AND CLASS-BASED DISPARITIES IN HEALTH CARE**

In general, lower socioeconomic status is associated with receiving fewer preventative medical services such as papanicolau tests, mammograms, and immunizations, as well as lower quality hospital care (15). Similarly, in comparison to European Americans, membership in a racial minority group is linked to less preventative care including breast cancer screening, fewer cardiovascular procedures, less surgical treatment for cancers, fewer kidney and bone marrow transplants, and even less receipt of pain medication as part of routine hospital care (15–20). Studies evaluating medical care for coronary artery disease consistently report lower quality treatment for African American patients, in comparison to European Americans (21–23). Moreover, compared with their European American counterparts, African Americans are more likely to be denied authorization for emergency care by managed care gatekeepers, to encounter greater difficulties in accessing their primary care providers, and to rate their visits with physicians as less participatory (24–26).

Schulman and colleagues (27) designed a computerized survey instrument to experimentally assess physicians’ treatment recommendations for managing chest pain in hypothetical patient/actors. Participating physicians randomly viewed actors portraying patients in a video recorded interview of a patient with chest pain. The actors relied on scripted interviews about symptoms for three kinds of chest pain. A total of 720 doctors viewed 1 of 144 possible case scenarios that varied by patient race, sex, age, level of coronary risk, type of chest pain, and results of an exercise stress test. The results showed that both women and African Americans were less likely to be referred for cardiac catheterization in comparison to men and European Americans, respectively. Further, patients’ race and gender interacted so that African American women, in particular, were less likely to be referred for catheterization in comparison to European American men. The compelling nature of this study rests in the use of a randomized design, with actors sharing identical demographic characteristics, insurance, clinical symptoms, and clinical presentations.

**Infertility: including race and social class**

Regrettably, the research on infertility has virtually ignored racial minorities and couples of lower socioeconomic classes, relying instead on the sample of people who appear for treatment at medical clinics. Hence, glaring limitations exist in our understanding of the impact of infertility on racially and socioeconomically diverse groups of people (4, 5, 28). By the same token, virtually nothing is known about the many people who experience infertility but do not seek medical treatment, estimated to be almost half of all infertile couples (4). In 1988, for example, only 43% of all women with infertility reported having ever obtained any medical infertility service (29). Further, many infertility clinics can selectively provide services to married, heterosexual couples who can afford private fee-for-service health care (14). Ironically, couples who are most likely to be infertile in the United States do not match the demographic profile of couples who are most likely to seek medical treatment and to participate in research investigations.

In contrast to popularly held perceptions, it is African American, less well-educated, and low-income couples who are most likely to struggle with infertility in the United States (1, 2, 4, 13, 28, 30–33). Scholars have proposed several possible explanations for the racial disparity in infertility rates, such as inadequate access to treatment for sexually transmitted diseases and occupational hazards (34). African American women also experience high rates of reproductive problems, such as pelvic inflammatory disease and ectopic pregnancies, which can cause infertility (28). For example, among 561 women who sought medical care for infertility, a greater proportion of African American and Hispanic women received a diagnosis of tubal factor infertility compared with European American women (2). Likewise, women with less than a high school education also have higher rates of infertility than do women with more education (1). Age is also associated with infertility, such that women over the age of 35 are much more likely to experience infertility than are younger women. Thus, there is a startling mismatch between the demographic profile of women who seek medical care for infertility and women who are most likely to suffer with infertility. The present study surveys physicians about their knowledge of infertility among different demographic groups of women and examines how patient and physician characteristics may influence physicians’ treatment responses to hypothetical infertile patients.

**MATERIALS AND METHODS**

**Participants and procedure**

All of the research undertaken in this study received approval from the institutional review board at the first investigator’s university. A three-page survey was mailed to 1,000 physicians randomly selected from 6,000 physicians in the state of Michigan. The survey was both anonymous and confidential, and thus, returning the survey represented a physician’s informed consent to participate in this study. The cover letter explained that we were surveying general and family practitioners, obstetricians, gynecologists, and internists because we were interested in the initial interactions that women have with medical professionals before some decide to consult with a fertility specialist. We estimated that it would take doctors, on average, about 15 minutes to complete the short questionnaire. For our mailing, we randomly selected physicians who met all of the following four criteria: [1] members of the American Medical Association, [2] involved in patient care, [3] finished with their medical training (residents and fellows were excluded), and [4] affiliated with one of four specialties (general practice, family practice, internal medicine, or obstetrics/gynecology). A total of 205 surveys were returned for a final response rate of 20%. No follow-up mailings were possible.
Measures

Knowledge about the prevalence of infertility among different groups of women. Physicians were asked three questions about the prevalence of infertility among women in the United States. First, they were asked which racial group had the highest prevalence of infertility: European American, African American, Hispanic, or Asian American. Second, they were asked which age group of women had the highest prevalence of infertility: women under 25 years, 25 to 30 years, 31 to 35 years, or over 35 years. Third, they were asked which educational group of women had the highest prevalence of infertility: women without a high school degree, women with a high school degree, women with a college degree, or women with a professional degree. Different educational groups were used to reflect social class differences among women.

Physicians' characteristics and experiences. Physicians were asked to identify their area of medical specialty, how many years they had been in practice, and the number of infertile patients that they had seen in the past year. We constructed a scale assessing physicians' infertility experience by summing their affirmative responses to five dichotomous (yes/no) questions. These questions regarded whether or not they had ever made a referral to an infertility specialist, ever discussed adoption with a patient, ever discussed a child-free lifestyle with a patient, ever discussed the costs of fertility treatments with a patient, and ever referred a patient with infertility to a support group.

Recommended treatment for hypothetical patient. Physicians were asked how they would treat a fictional female patient, 32 years of age, who had been trying to get pregnant for 14 months without success, thereby clearly meeting the medical standard for a diagnosis of infertility. The patient’s race and social class varied across the surveys that were mailed in a 2 × 2 design, resulting in four possible patient profiles: [1] a European American professional woman, [2] a European American woman on Medicaid, [3] an African American professional woman, and [4] an African American woman on Medicaid. Each survey presented a physician with only one of the possible patient profiles for consideration, and surveys with different patient profiles were randomly distributed throughout the mailing. Response rates were generally equivalent across the patient profile types.

Physicians were asked what interventions they would typically make if presented with the hypothetical infertile patient briefly described in their survey. Intervention choices included a list of possible medical tests (e.g., basal body temperature charts, endometrial biopsy, postcoital test, laparoscopy, assessment of thyroid functioning, hysterosalpingogram, and semen analysis). Intervention choices also incorporated engaging in nonmedical interventions (e.g., provide assurance that there is no need to worry yet, suggest educational reading, recommend counseling services, discuss options of adoption or child-free lifestyle) and making referrals to infertility specialists. Physicians were instructed to check as many or as few of the interventions that they would typically conduct with such a patient.

To assess the adequacy of a physician’s treatment plan, standards developed by the American College of Obstetricians and Gynecologists and the American Society for Reproductive Medicine were used (35, 36). Following a fertility history and physical examination, these experts recommend that the basic workup include four components: a semen analysis, documentation of ovulation, a postcoital test, and evaluation of tubal patency. Three methods may be used to assess ovulation: basal body temperature, serum progesterone, or endometrial biopsy and two methods, a hysterosalpingogram or a laparoscopy, may be performed to evaluate tubal patency.

Based on this information, an acceptable medical standard of care score was created by summing participating physicians’ responses to the appropriate items. Scores ranged from 0 to 4 (mean = 1.9, SD = 1.4), and physicians acquired one point for each component of the workup by checking off any one of the acceptable methods. In other words, a physician who checked solely basal body temperature and a physician who checked basal body temperature and endometrial biopsy would both receive one point for assessing ovulation on the standard of care scale. Doctors could endorse either of the two interventions, “provide educational information about basal body temperature charts (if the patient has not done this already)” or “perform an endometrial biopsy” to receive credit for checking the patient’s ovulation.

A scale of acceptable nonmedical interventions included two items: suggest educational reading, and suggest psychologic or counseling services. We excluded the option of assuring the patient that there is no need to worry as an acceptable response. The American College of Obstetricians and Gynecologists technical bulletin specifically advises physicians against giving couples “nonspecific reassurance” or admonitions to relax. Most couples interpret the recommendation to “relax” as hurtful, because it implies that their worries and anxiety may cause their infertility. We also omitted the item about suggesting adoption or a child-free lifestyle because these options seem premature before any medical tests are completed or the cause of the infertility understood. A sum of the two nonmedical interventions, with possible scores ranging from 0 to 2 (mean = .35, SD = .58) was used as a scale of acceptable nonmedical interventions.

Finally, an index of specialized referral care included two items about providing referrals to infertility specialists [1] in hospital settings or [2] in private practice. Because some patients in Michigan may wish to avoid physician offices or infertility clinics located in urban hospitals, we specified the setting of specialist referrals to capture all types of referrals. Immediate referral to a specialist is not usually recommended (unless there are special circumstances) without first completing standard tests; thus, we did not consider making referrals to be part of a medical standard of care. The scores on these items were summed, with possible scores ranging from 0 to 2 (mean = .70, SD = .70).
RESULTS

Physician characteristics

Sixty-eight percent of the responding physicians were male; 32% were female. Physicians’ ages ranged from 25 to 73, with an average age of 46 years (SD = 11.3). The majority, 90%, of the responding sample identified themselves as European American. All four specialties were represented in the responding sample, with some physicians having multiple affiliations. Forty-two percent of the physicians were in family practice, 23% were in general practice, 23% were internists, and 17% identified as obstetricians or gynecologists. Including their residency years, participating physicians had been in practice for an average of 19 years (SD = 17.5). Out of these 205 physicians, the mean number of infertile patients seen in the past year was 12 (SD = 22.78) and the median number of infertile patients seen was 5.00. In addition, 186 (91%) reported that they had at some time made a referral to a fertility specialist for a patient, and 136 (66%) had made at least one such referral in the past year.

Physicians’ knowledge about the prevalence of infertility among different groups

Out of our total sample of 205 doctors, 155 responded to the question about which racial group of women has the highest prevalence of infertility. As illustrated in Table 1, only 16% of the responding physicians correctly identified African Americans as the racial group most at risk for infertility. Eighty-two percent of the participating physicians reported that European Americans were most likely to experience infertility. Of the 24 doctors who correctly identified African American women as being most at risk for infertility, 19 were male and only one was an obstetrician/gynecologist. Compared with the rest of the sample, these 24 physicians’ infertility experience score and mean number of infertile patients seen in the last year were equivalent to those of the rest of the sample.

Similarly, only 13% of those who responded to the question (N = 150) identified women without a high school degree as being most at risk for infertility. Thirty-one percent identified women with college degrees and 40% identified women with professional degrees as most likely to be infertile. Among the 19 doctors who correctly identified women without a high school degree as being most at risk for infertility, 15 were male and 17 were not specialists in obstetrics or gynecology. Once again, these doctors did not report having more experience with infertility patients than the rest of the sample. There were 12 doctors who accurately identified both African American women and women without high school degrees as most likely to experience infertility. Finally, a larger number of physicians, 43%, correctly identified people over the age of 35 as being most vulnerable to infertility. It is worth noting that only two physicians, a 44-year-old female general practitioner and a 47-year-old male family practitioner, were accurate on all three questions, and 44% of the 135 physicians who answered all three questions did not provide an accurate response on any of the questions.

Treatment recommendations and patient characteristics

Table 2 provides information on the percentages of physicians who endorsed specific types of interventions for a hypothetical infertile patient. The extent to which physicians recommended the medical standard of care was not significantly different for the African American female patients (mean = 1.93, SD = 1.44) compared with the European American patients (mean = 1.93, SD = 1.30), t (203) = -.01, ns, and only marginally significant between professional patients (mean = 2.09, SD = 1.34) and patients using Medicaid (mean = 1.74, SD = 1.38), t (193) = 1.82, P = .07.

Analysis of variances (ANOVA) were conducted to test for possible interaction effects between patients’ race and socioeconomic status; however, no significant interaction effects were found.

We examined whether the extent to which physicians would make nonmedical interventions (suggest educational reading and counseling services) and refer to specialists varied by the patient’s race and socioeconomic class. The socioeconomic class and race of the hypothetical patient were not significantly related to the nonmedical interventions proposed. Likewise, suggesting referrals to specialists did not vary by the patient’s race. However, physicians were significantly more likely to refer the professional female patient (mean = .81, SD = .68) to an infertility specialist compared with the patient using Medicaid (mean = .56, SD = .65), t (203) = 2.71, P < .01. Once again, no interaction effects between patients’ race and socioeconomic status were found.

Treatment recommendations and physician characteristics

Only 16% of the physicians indicated that they would provide the full standard of care, performing medical tests to assess all four components for the patient. Compared with the medical standard of care, physicians were more likely to endorse other types of interventions. For example, 28% of the doctors reported that they would recommend educational reading for the patient. Twenty-five percent of the physicians would refer the hypothetical patient to a specialist in private practice, 20% would refer to a specialist at a hospital, and 12% indicated that they would refer the patient to specialists in both settings. We used independent samples t tests and correlational analyses to determine whether physicians’ characteristics were associated with the standard of care provided to the hypothetical female patient. The variables tested included doctors’ age, sex, medical specialty, years in practice, number of infertile patients seen in the past year, and experience with infertility issues.

We found that female physicians (mean = 2.29, SD = 1.26) provided more components of the medical standard of care for an infertility evaluation than did male physicians (mean = 1.79, SD = 1.38) t (201) = 2.48, P < .05. A dichotomous medical specialty variable was created where 1 represented an Ob/Gyn specialty and 0 represented all other specialties. Physicians with a specialty in obstetrics and
gyneecology (mean = 2.86, SD = 1.40) also provided the hypothetical patient with more elements of the standard of care compared with the other respondents (mean = 1.75, SD = 1.28), $t(202) = 4.58, P < .001$. Similarly, physicians who had seen more infertile patients in the past year ($r = .37, P < .001$) and who had greater experience with infertility issues ($r = .41, P < .001$) provided more components of the standard of care. Physicians’ age and number of years in practice were not related to the medical standard of care score.

Physicians’ sex and infertility experience were significantly related to the endorsement of nonmedical interventions. Female physicians (mean = .55, SD = .71), in comparison to male physicians (mean = .26, SD = .49), endorsed more nonmedical interventions for the hypothetical patient presented to them, $t(201) = 3.01, P < .01$. Physicians with more infertility experience ($r = .28, P < .001$) and physicians who had seen more infertile patients in the past year ($r = .15, P < .05$) endorsed more nonmedical recommendations for the infertile patient presented to them in the survey.

### Multivariate predictors of physicians’ treatment recommendations

A standard multiple regression analysis was performed to assess the simultaneous contributions of patient and physician characteristics in predicting the extent to which the medical standard of care was endorsed for the patient. A dummy variable was created for patient’s race, coding African American patients as 0 and European American patients as 1. A dummy variable was also created for patient’s socioeconomic status, coding Medicaid patients as 0 and patients with professional occupations as 1. Only those physician characteristics that were significantly associated with the standard of care in bivariate analyses were included in the regression analysis. Physician characteristics used as predictors included physicians’ sex, specialty, number of infertile patients seen in the past year, and infertility experience. A dummy variable for the number of infertile patients seen in the past year was created to handle this variable’s skewed distribution. We based this variable on a median split, such that all numbers above 5.00 were given a value of 1 and all those equal to or <5.00 were assigned a value of 0. All variables were entered into the regression simultaneously.

The results of the regression analyses are presented in Table 3. Neither race nor socioeconomic status of the patient was a significant predictor of the medical standard of care.

### Table 1

Response frequencies: infertility prevalence among different demographic groups of women.

<table>
<thead>
<tr>
<th>Race (n = 155), %</th>
<th>Education (n = 150), %</th>
<th>Age (n = 164), y (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>European American 82</td>
<td>Professional degree 40</td>
<td>&gt;35 (43)(^a)</td>
</tr>
<tr>
<td>African American(^a) 16</td>
<td>College degree 30</td>
<td>31–35 (38)</td>
</tr>
<tr>
<td>Hispanic American 1</td>
<td>High school degree 17</td>
<td>25–30 (15)</td>
</tr>
<tr>
<td>Asian American 1</td>
<td>No high school degree** (^a)</td>
<td>&lt;25 (4)</td>
</tr>
</tbody>
</table>

\(^a\)Within the categories of race, education, and age, this is the demographic group most at risk for infertility.

### Table 2

Physicians’ treatment recommendations for the hypothetical patient.

<table>
<thead>
<tr>
<th>Intervention recommended</th>
<th>Percentage of physicians endorsed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical standard of care</td>
<td></td>
</tr>
<tr>
<td>Semen analysis</td>
<td>65</td>
</tr>
<tr>
<td>Basal body temperature</td>
<td>72</td>
</tr>
<tr>
<td>Endometrial biopsy</td>
<td>26</td>
</tr>
<tr>
<td>Postcoital test</td>
<td>25</td>
</tr>
<tr>
<td>Hysterosalpingogram</td>
<td>34</td>
</tr>
<tr>
<td>Laparoscopy</td>
<td>15</td>
</tr>
<tr>
<td>Nonmedical interventions</td>
<td></td>
</tr>
<tr>
<td>Suggest educational reading</td>
<td>28</td>
</tr>
<tr>
<td>Suggest psychological or counseling services</td>
<td>7</td>
</tr>
<tr>
<td>Provide referral to infertility specialist</td>
<td></td>
</tr>
<tr>
<td>Specialist in a hospital</td>
<td>20</td>
</tr>
<tr>
<td>Specialist in private practice</td>
<td>25</td>
</tr>
<tr>
<td>Specialists in both settings</td>
<td>12</td>
</tr>
<tr>
<td>Other interventions</td>
<td></td>
</tr>
<tr>
<td>Assure no reason to worry yet</td>
<td>18</td>
</tr>
<tr>
<td>Make no referrals</td>
<td>5</td>
</tr>
<tr>
<td>Raise option of adoption in future</td>
<td>19</td>
</tr>
<tr>
<td>Raise option of child-free lifestyle in future</td>
<td>7</td>
</tr>
</tbody>
</table>

\(^a\)Within the categories of race, education, and age, this is the demographic group most at risk for infertility.

However, all four physician characteristics remained significant. Female physicians, Ob/Gyn specialists, physicians who had seen more infertile patients, and physicians who had greater experience with infertility recommended more components of the medical standard of care. These four physician characteristics explained 33% of the variance in making recommendations along an acceptable medical standard of care.

Parallel multiple regression analyses were conducted to examine the predictors for providing nonmedical interventions and referrals to infertility specialists. As shown in the middle column of Table 3, the patient’s race and social class were not significant predictors of nonmedical interventions; however, physician’s sex and infertility experience were significant. Female physicians and physicians with greater infertility patient experience reported that they would provide more nonmedical interventions. The patient’s social class was a significant factor in the specialist referrals recommended by the doctors. Physicians were more likely to endorse referrals to infertility specialists when the hypothetical patient had a professional career compared with the patient who relied upon Medicaid. Finally, physicians who had seen fewer infertile patients in the past year were more likely to refer the hypothetical patient to a specialist.

**DISCUSSION**

This study’s findings suggest that many physicians are unaware of demographic risk factors associated with infertility. When asked about education, only 13% identified women without a high school degree as being at highest risk. When asked about age, only 16% identified African American women as being at highest risk. When asked about ethnicity, only 16% identified African American women age 35 and older as being at highest risk. It is not surprising that many physicians are unaware of the most common risk profile for infertility given societal portrayals of infertile women as hard driving professionals in their 30s. European American women with high incomes and educational levels are also most likely to seek treatment for infertility (4, 30); thus, it is easy to understand why many physicians assume that these women are at greatest risk. Even some African American women who are struggling with infertility believe that infertility is “a White thing; a White woman’s problem” [(37), p. 12] and may internalize stereotypes about African American women’s fecundity (38).

These findings demonstrate the importance of providing more information to physicians who are not infertility specialists about the characteristics of women with infertility and the unfortunate discontinuity between those who are most likely to seek treatment and those who are most likely to be experiencing a problem becoming pregnant. It is particularly important for physicians with general practices such as family practitioners, internists, and gynecologists to be aware of the high rates of infertility among ethnic minority women, less educated women, and low income women to ensure that they identify women in need of services. Women of childbearing age should routinely be asked if they have been trying to become pregnant, and if so, for how long. This will facilitate identification of individuals who might be having a fertility problem but who do not request treatment. Some of these women might assume that nothing can be done for them or that they cannot afford treatment, so they do not mention...
the problem. However, there may be options available that a well-informed physician can recommend.

Both because European American, professional women are more likely to seek medical treatment for infertility and because they have been the focus of most infertility research, we expected that the medical interventions suggested for the hypothetical European American professional patient would be most complete. Instead, we found that physicians’ suggested medical treatments did not vary based on hypothetical patients’ race or socioeconomic status. This suggests that once physicians know that infertility is a problem, they are likely to recommend comparable treatments for patients regardless of race or socioeconomic status. This lack of bias is admirable, particularly when one considers the preponderance of research which documents racial and class-based inequalities in health care (15, 17, 21, 25, 39). For example, van Ryn and Burke (40) found that physicians perceived African American and poor patients more negatively than European American patients on a number of dimensions. Even more recently, Green and colleagues (23) reported that it was not explicit racial biases, but rather implicit stereotypes of African Americans that accounted for racially discrepant treatment of patients with coronary artery disease.

Although the hypothetical patient’s race and social class were not related to medical interventions or nonmedical recommendations in our study, the hypothetical patient’s social class did emerge as a factor in predicting physicians’ referrals to infertility specialists. Physicians were less likely to provide referrals to specialists when they were told that the hypothetical patient relied upon Medicaid. Physicians’ reluctance to refer Medicaid patients to infertility specialists is understandable given the great expense of specialized infertility services and the lack of Medicaid insurance coverage for such services.

Nonmedical recommendations for the hypothetical patient included suggesting educational reading and suggesting that seeking psychological services might be helpful. Although van Ryn and Burke (40) found that physicians offer less information (e.g., educational reading) to racial minorities and low-income patients compared with their European American and more financially advantaged counterparts, these recommendations did not vary by the patient’s race or socioeconomic status in our survey. Providing patients with informational reading seems quite appropriate regardless of a patients’ race or social class background. In a practical sense, reading about infertility offers patients a low-cost, informative strategy for coping with their infertility. Although data certainly exist that suggest that race and class can affect physicians’ treatment of their patients, we did not find evidence for that conclusion using this particular survey instrument.

Several of the physicians’ characteristics were related to both the medical standard of care and the nonmedical interventions endorsed for the hypothetical patient. Results from our multivariate analyses revealed that all of the physician characteristics studied contributed to recommendations toward meeting a medical standard of care. Female physicians and Ob/Gyn specialists recommended more of the medical tests incorporated in the medical standard of care. Additionally, physicians who had seen more infertile patients in the past year and those with more infertility patient experience also recommended more interventions meeting the standard of care. Female physicians and doctors with more infertility experience were more likely to endorse nonmedical interventions as well. It is not surprising that physicians with greater infertility experience and specialization in a related area would provide more comprehensive medical care during an initial patient evaluation stage. It is also logical that those with more infertility patient experience would feel more adept at suggesting nonmedical resources (e.g., informational reading and counseling services).

We found that female physicians reported that they would provide a hypothetical infertility patient with more medical tests as well as nonmedical recommendations compared with their corresponding male physicians. As there is evidence that female physicians engage in more discussion with patients, talk more about psychological issues, and provide more counseling than their male colleagues (41–43), we conjecture that female physicians may feel greater empathy and affinity toward a hypothetical female patient, allowing female doctors to provide a more comprehensive evaluation in an abstract scenario. These results highlight the importance of attending to the demographic characteristics among all people involved in medical exchanges. In the complex and dynamic encounters between patients and physicians, we cannot ignore the demographic characteristics of the physicians themselves.

An important direction for future research includes replicating our findings with data from actual rather than hypothetical patients. As with all studies, several other limitations must be acknowledged. Our study used a nonrandomized, self-selected sample of physicians, thereby limiting the generalizability of our results. Additionally, the physicians surveyed in this study may share certain biases because of the fact that they all practice medicine in the state of Michigan, and they are all members of the American Medical Association.

Acknowledgment: The authors wish to acknowledge the invaluable support, feedback, and assistance provided by Professor Abigail Stewart at every stage of this research project.

REFERENCES
