How Patient-Centered Do Female Physicians Need to Be? Analogue Patients’ Satisfaction With Male and Female Physicians’ Identical Behaviors

Judith A. Hall, Debra L. Roter, Danielle Blanch-Hartigan, Marianne Schmid Mast & Curtis A. Pitegoff


To link to this article: http://dx.doi.org/10.1080/10410236.2014.900892

Published online: 30 Aug 2014.
How Patient-Centered Do Female Physicians Need to Be? Analogue Patients’ Satisfaction With Male and Female Physicians’ Identical Behaviors

Judith A. Hall  
Department of Psychology  
Northeastern University

Debra L. Roter  
Department of Health, Behavior, and Society  
Johns Hopkins Bloomberg School of Public Health

Danielle Blanch-Hartigan  
Department of Natural and Applied Sciences  
Bentley University

Marianne Schmid Mast  
Faculty of Business and Economics  
University of Lausanne

Curtis A. Pitegoff  
Department of Psychology  
Northeastern University

Previous research suggests that female physicians may not receive appropriate credit in patients’ eyes for their patient-centered skills compared to their male counterparts. An experiment was conducted to determine whether a performance of higher (versus lower) verbal patient-centeredness would result in a greater difference in analogue patient satisfaction for male than female physicians. Two male and two female actors portrayed physicians speaking to a patient using high or low patient-centered scripts while not varying their nonverbal cues. One hundred ninety-two students served as analogue patients by assuming the patient role while watching one of the videos and rating their satisfaction and other evaluative responses to the physician. Greater verbal patient-centeredness had a stronger positive effect on satisfaction and evaluations for male than for female physicians. This pattern is consistent with the hypothesis that the different associations between patient-centeredness and patients’ satisfaction for male versus female physicians occur because of the overlap between stereotypical female behavior and behaviors that comprise patient-centered medical care. If this is the case, high verbal patient-centered behavior by female physicians is not recognized as a marker of clinical competence, as it is for male physicians, but is rather seen as expected female behavior.

Correspondence should be addressed to Judith A. Hall, PhD, Department of Psychology, Northeastern University, Boston, MA 02115. E-mail: j.hall@neu.edu
Female medical students and physicians excel over their male peers in communication skill and patient-centered style. This difference occurs for partnership and psychosocial orientation, positivity in verbal and nonverbal communication, accurate interpersonal perception, empathy, focus on feelings, verbal and nonverbal encouragement, good listening, expressions of respect or praise, and a focus on prevention (Hall, Irish, Roter, et al., 1994; Hall, Roter, Blanch, & Frankel, 2009; Lurie et al., 1993; Meeuwesen, Schaap, & Van der Staak, 1991; Mendez, Shyamsky, & Wolraich, 1986; Roter, Hall, & Aoki, 2002; Roter, Lipkin, & Korsgaard, 1991; Wasserman et al., 1984; Zandbelt et al., 2006). Female physicians spend more time with patients than male physicians do (Roter et al., 2002), and they have more humanistic and patient-centered attitudes about patient care (Krupat et al., 2000). Furthermore, patients generally prefer a patient-centered style (Swenson et al., 2004).

However, female physicians do not receive much higher satisfaction ratings from patients—usually, not at all higher—according to a meta-analysis (Hall, Blanch-Hartigan, & Roter, 2011). This lack of a difference in patient satisfaction suggests a bias, considering the large amount of research showing that female physicians better fulfill the goals of patient-centered medicine.

How can this paradox be explained? We believe it reflects a gender bias resulting from the fact that the valued behaviors that are embodied in the concept of patient-centeredness (Mead & Bower, 2000a; Smith, Fortin, Dwamena, & Frankel, 2013) coincide closely with the behavioral repertoire that women typically possess more than men. These include a warmer, more responsive, more expressive, and more personal nonverbal style, as well as more accurate interpersonal perception (Hall & Gunnery, 2013). Women score higher than men on openness to self-disclosure, empathy, egalitarianism, and emotional intelligence, and they exhibit a greater interest in interpersonal relationships, psychosocial and lifestyle issues, and emotions (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006; Dindia & Allen, 1992; Eagly & Johnson, 1990; Kring & Gordon, 1998; O’Brien, Konrath, Gruhn, & Hagen, 2013; Su, Rounds, & Armstrong, 2009). Women not only possess this repertoire more than men, but stereotypes about women conform rather closely to the documented differences (Britton & Hall, 1995; Hall & Carter, 1999).

Because of the overlap with patient-centeredness, it is likely that these behaviors when enacted by a female physician are assimilated to the female stereotype and result in patients seeing a “good woman” (i.e., prototypical, behaving as expected) rather than a “good doctor.” When enacted by a male physician, in contrast, these patient-centered behaviors do not fit the male stereotype, with the result that the behaviors are instead attributed to the physician being a “good doctor.” Thus, though patient-centered behaviors are not derogated in female physicians, these behaviors do not add to the patient’s evaluation of female physicians as physicians.

The phenomenon of women physicians not receiving credit for their patient-centered repertoire was clearly demonstrated in a study of medical students interacting with a standardized patient (Blanch-Hartigan, Hall, Roter, & Frankel, 2010). Patient-centered behavior was coded by trained observers and the videotapes were shown to analogue patients (nonpatients who assume the role of the patient) who rated the competence of each medical student. For male medical students, more patient-centeredness was positively correlated with ratings of competence, but for female medical students there was no correlation. Thus, the female medical students’ competence in patient-centeredness was not recognized as an aspect of overall competence.

A different study found partial support for this hypothesis (Schmid Mast, Hall, & Roter, 2007). Analogue patients interacted with standardized “virtual reality” physicians and reported their satisfaction. The virtual physicians were male or female and what they said varied on two dimensions of patient-centeredness: caring (e.g., emotional responsiveness, empathy, reassurance) and sharing (e.g., shared decision making, open questions, seeking the patient’s opinion, partnership statements). For the low versus high sharing conditions, the same gender bias already described was found, with the female physician not receiving any additional patient satisfaction from being high on the sharing dimension, while the male physician received a substantial boost. This pattern did not occur in the low versus high caring conditions, however.

Finally, a study of real physicians and patients found highly suggestive evidence for this same gender bias, such that the correlations between patient satisfaction and physician patient-centeredness were higher for male than for female physicians (Hall, Gulbrandsen, & Dahl, 2014).

If patient-centered behavior (i.e., behavior that is seen as “feminine”) in female physicians is not appropriately credited, this is not only unfair but ironic because medicine, unlike many other male-stereotypic professions, actually requires physicians to possess a combination of stereotypically “masculine” and “feminine” qualities. The masculine qualities include competence, authority, expertise, independence, and self-confidence, while the feminine qualities include warmth, sensitivity, a caring attitude, a relationship orientation, and interpersonal responsiveness (Bem, 1974; Spence, Helmreich, & Stapp, 1975). Because both kinds of qualities are important, any physician exhibiting them should be evaluated in an appropriate and equitable fashion. Therefore, a gender bias in evaluation is a significant problem.

Furthermore, patients’ behavior toward female physicians may subtly convey this bias if, for example, patients act less appreciative of females’ patient-centeredness compared to male physicians. This same bias may be shared by female physicians’ male student peers and colleagues, as well as by senior physicians who supervise and evaluate them, thereby undermining female physicians’ patient-centered values and
behaviors. Female medical students are documented to have lower self-confidence than their male peers (Blanch, Hall, Roter, & Frankel, 2008), which could make them especially vulnerable to the expectations of peers and clinical instructors. Finally, female physicians whose skills are not recognized in patient satisfaction ratings could suffer economic discrimination, as patient evaluations are increasingly used for performance improvements and incentives (Fowler, Saucier, & Coffin, 2013).

**THIS EXPERIMENT**

In this experiment we sought to pursue this important hypothesis further, focusing on what physicians say to patients. Verbal patient-centeredness has been extensively studied and shown to be influential in physician–patient interactions (Mead & Bower, 2000a, 2000b). Nonverbal behavior is also relevant to patient-centeredness (Schmid Mast, 2007) but was held constant in the present experiment.

This study used trained actors who spoke to the patient in a naturalistic manner. Two male and two female actors role-playing a physician followed scripts to portray high or low patient-centeredness when talking to a patient, while holding their nonverbal cues constant. Each actor enacted both scripts. Therefore, there were eight physician videos (four actors × high vs. low patient-centeredness). Analogue patients watched one of the physician portrayals and rated their reactions to the physician. The hypothesis was that even though the female physicians said exactly the same things the male physicians said, high patient-centered male physicians would receive a disproportionate boost in patient evaluations relative to female physicians.

**METHOD**

**Analogue Patients**

One hundred ninety-two Northeastern University undergraduates (96 male, 96 female; mean age 19.73 years) served as analogue patients in partial fulfillment of their introductory psychology requirement (n = 174) or for $10 (n = 18). The analogue patient methodology has received validation as an alternative to real patients (Blanch-Hartigan, Hall, Krupat, & Irish, 2013; van Vliet et al., 2012).

**Physician Videos**

The stimuli were scripted portrayals showing the face and shoulders of an actor playing a physician. Four actors were trained for these portrayals (African-American male and female, Caucasian male and female, all in their 30s or 40s). Each actor wore a white coat and spoke “to the patient” (i.e., directly into the camera) in a naturalistic manner.

Their statements were organized into nine themes: greeting, elicitation of a presenting concern, probing the full spectrum of patient concerns, follow-up on stated concerns and symptoms, inquiry about family history, diagnostic considerations, treatment recommendations, counseling regarding the treatment plan, and visit closing with plans for follow-up. Each of these statements had both a high and a low patient-centered version. Thus, each actor delivered two different scripts, one that displayed high patient-centeredness and one that displayed low patient-centeredness. High patient-centeredness was operationalized as in a number of prior studies as emotionally responsive (i.e., statements of empathy, concern, partnership, legitimation), facilitative of patient disclosure (i.e., asking for patient opinion and open-ended questions), and informative (provision of information and counseling, especially in the psychosocial and lifestyle domain) (Cooper et al., 2003; Mead & Bower, 2000b; Roter & Hall, 2004). The high and low patient-centered scripts differed in emphasis but did not present a stylistic caricature. The actors were instructed to maintain a pleasant demeanor and not vary their nonverbal expression across conditions.

Extracts from the scripts are shown in Table 1. The higher patient-centered script was more emotionally responsive (14 vs. 6 statements) and facilitative (10 vs. 7 statements), and it was less directive with fewer closed-ended questions (2 vs. 8). The two scripts contained an equal number of information statements (14 vs. 14), orientations (3 vs. 3), and social remarks (3 vs. 3). The total number of statements in each script was the same; there were 31 unique statements and 19 statements that were common to both scripts. The number of words differed; the high patient-centered script

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Extracts From Physician Scripts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Patient-Centered</strong></td>
<td><strong>Low Patient-Centered</strong></td>
</tr>
<tr>
<td>I am sorry to hear that.</td>
<td>Okay, so you are having some trouble.</td>
</tr>
<tr>
<td>What I would like to do today is get to know you a bit and understand what is happening. Then, we can make a decision together about what can be done to help you.</td>
<td>What I would like to do today is talk about your symptoms and what I think could help.</td>
</tr>
<tr>
<td>Your problem is having a negative impact on many aspects of your life and I can see you are suffering.</td>
<td>Your problem is having a negative impact on many aspects of your life.</td>
</tr>
<tr>
<td>What do you think is going on?</td>
<td>Could it be depression in your case?</td>
</tr>
<tr>
<td>I know many patients have trouble following through with the kinds of things we discussed. Tell me, what kinds of problems do you think you will have?</td>
<td>It will be very important for you to follow through on treatment. Will you be able to do that?</td>
</tr>
</tbody>
</table>
contained 476 words (tape duration 3.45 minutes), while the low patient-centered script contained 364 words (tape duration 2.78 minutes).

Coding of Physicians’ Nonverbal Behavior

To confirm that actors did not vary their nonverbal expression style, two coders independently assessed the frequency of the actors’ smiling, nodding, frowning, and brow raises and also rated smile intensity. Each of these variables was operationally defined, and coders received training from the first author on how to apply the coding criteria. A given nonverbal behavior was coded for all eight physician videos before starting over with a different nonverbal behavior.

Cronbach’s alpha reliability for the two coders ranged from .61 to .93. Examination of the mean levels of behavior demonstrated that the nonverbal behavior in the high and low patient-centered conditions did not differ meaningfully. The rates of occurrence of smiling and frowning were identical, and the rates for nodding and brow raising and the average smile intensity were very similar between the high and low patient-centered enactments. (Significance tests are not reported because of the small number of videos.)

Particularly relevant to the present study was the possibility that male and female actors used different nonverbal cues during their high versus low patient-centered enactments. This was important to investigate because although the high and low patient-centered scripts were identical for male and female physicians, the male and female physicians’ nonverbal behavior might still have differed in a way that would confound the results. For example, if male physicians in the high patient-centered condition used a more warm or sympathetic nonverbal style than the female physicians in that same condition, this would be an alternative reason why high patient-centered male physicians would receive disproportionately high evaluations, confounding the gender bias hypothesis.

Each nonverbal behavior was examined in the four cells of the design (physician gender × physician style). For no behavior was the mean for high patient-centered male physicians the highest of the four means, and for frown rate (which would be suggestive of concern), nod rate, and brow raises it was the lowest. Therefore, there is no reason to see the physicians’ nonverbal behavior as a confounding factor in the results presented in the following sections.

Analogue Patient Questionnaire

Analogue patients filled in one overall satisfaction item and 14 specific satisfaction items, all on a scale of 1 (unsatisfied) to 9 (extremely satisfied). The items covered technical/cognitive skills and communication style/skill as shown in Table 2. A principal components analysis with Varimax rotation revealed two factors consistent with expectations: One factor consisted of the seven items about technical/cognitive competence and the other consisted of the seven items about communication style/skill. Internal consistency reliability (Cronbach’s alpha) was .93 for the technical items and .92 for the communication items. Composites were made that averaged the items of each type. Analogue patients also rated the following items on 1–9 scales: how caring the physician was, how much trust they would place in the doctor, likelihood to recommend the doctor to a friend, and whether they would personally like to see the doctor again.

Procedure

Analogue patients were randomly assigned to view one of the eight videos and each participated individually in a laboratory room. After signing the informed consent, they watched the video, filled in the questionnaire, and were debriefed.

Analysis

The main analysis model was a between-subjects analysis of variance (ANOVA) in which the independent variables were physician gender and physician communication style (high or low patient-centered) and the dependent variables were, in separate analyses, overall satisfaction, satisfaction with technical/cognitive competence, satisfaction with communication style/skill, caring, trust, likelihood to recommend the doctor to a friend, and desire to see the doctor again. For all of these, it was expected that there would be a main effect of physician style, such that high patient-centered physicians would receive better evaluations than low patient-centered physicians. The key effect of interest in the current study was the interaction of physician gender and physician

<table>
<thead>
<tr>
<th>TABLE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Satisfaction Items</strong></td>
</tr>
<tr>
<td>Overall:</td>
</tr>
<tr>
<td>My overall satisfaction with the doctor</td>
</tr>
<tr>
<td>Technical/cognitive competence:</td>
</tr>
<tr>
<td>The doctor’s technical competence</td>
</tr>
<tr>
<td>The doctor’s ability to diagnose</td>
</tr>
<tr>
<td>The doctor’s understanding of treatment options and medications</td>
</tr>
<tr>
<td>The confidence I place in the doctor’s medical judgment</td>
</tr>
<tr>
<td>The respect I have for the doctor’s advice to me</td>
</tr>
<tr>
<td>The competence of the doctor in investigating my problem</td>
</tr>
<tr>
<td>The doctor’s skill and expertise</td>
</tr>
<tr>
<td>Communication style/skill:</td>
</tr>
<tr>
<td>The respect and consideration the doctor showed me</td>
</tr>
<tr>
<td>How much the doctor thought of me as a whole person</td>
</tr>
<tr>
<td>The explanations the doctor gave me for why he/she was doing things</td>
</tr>
<tr>
<td>How much the doctor made me feel personally important</td>
</tr>
<tr>
<td>How much the doctor empathized with me or felt concern for me</td>
</tr>
<tr>
<td>How much the doctor allowed me to participate in decision making</td>
</tr>
<tr>
<td>How much the doctor encouraged me to ask questions</td>
</tr>
</tbody>
</table>
style, with the specific prediction that male physicians would receive a disproportionately large boost in satisfaction ratings between low and high patient-centeredness, relative to female physicians.

Preliminary analyses were conducted to find out whether physician ethnicity or analogue patient gender interacted with the two-way interaction of interest; there were no significant three-way interactions of physician gender, physician style, and analogue patient gender (or physician ethnicity). The analyses presented are based on models without analogue patient gender or physician ethnicity included. Unless stated otherwise, significance tests are one-tailed because specific directions of effect were predicted.

RESULTS

As expected, analogue patients reacted more favorably to the high patient-centered physicians than the low patient-centered physicians, with the main effects (df = 1, 188) being significant at p < .001 for overall satisfaction and satisfaction with communication, and at p < .005 for satisfaction with technical competence. High patient-centered physicians were rated as more caring (p < .001) and more trustworthy (p < .005). Analogue patients were also more likely to recommend the high patient-centered physicians to a friend and reported being more willing to see them again (both p < .001). The physician gender main effect was not significant for any of the patient ratings.

The predicted interaction of physician gender and physician style was significant at p < .025 (df = 1, 188) for satisfaction with communication and for trust in the physician, and at p < .05 for overall satisfaction, satisfaction with technical competence, recommend to a friend, and willingness to see the doctor again. The interaction for caring was not significant. However, these seven patient variables were highly correlated with each other, and the interaction pattern was the same for all of them even when not statistically significant. Therefore, a composite (average) of them was made, which showed a significant physician gender × physician style interaction, F = 4.16, p < .025. Figure 1 presents the means associated with this interaction. Low patient-centeredness was evaluated equivalently in male and female physicians, but high patient-centeredness benefited male physicians much more than it benefited female physicians.

These effects were further explored by calculating t-tests on the composite patient ratings, comparing the low and high patient-centeredness conditions separately for male and female physicians (Table 3). For some ratings, female physicians received higher evaluations when they were high rather than low patient-centered (e.g., caring, satisfaction with communication), while for others there was little difference (e.g., trust, satisfaction with technical competence). However, even when being patient-centered helped female physicians’ evaluations by analogue patients, those effects were dwarfed by the much more potent effects for male physicians. For male physicians, the advantage of being high rather than low in patient-centeredness was highly significant for all of the patient evaluations and always much stronger than the analogous result for female physicians.

DISCUSSION

In this experiment, analogue patients watched identically scripted and behaviorally comparable high and low patient-centered communication from actor-physicians and rated their evaluations of the physician. Consistent with literature showing that patients favor patient-centered communication (Swenson et al., 2004), high patient-centered physicians were evaluated much more favorably than low patient-centered physicians.
Also consistent with previous research (Hall et al., 2011), there was no overall physician gender difference in patient satisfaction. However, the male and female physician behavior style likely varied in the naturalistic studies reviewed in Hall et al. (2011) (considering that physician gender differences in practice style are common; Roter et al., 2002), but in the present study the male and female physician behaviors were identical. This means that physician gender, independent of communication style, appears not to trigger satisfaction differences, suggesting that the mechanism at work is not blatant antifemale bias.

The main goal was to test the prediction that patients would react especially favorably to high patient-centeredness in a male physician compared to the identical level of patient-centeredness in a female physician. The predicted gender bias emerged significantly for six of the seven patient evaluations, including satisfaction with communication style/skill and trust in the physician, and it took the same form for all seven. In each case, high rather than low patient-centeredness produced a larger boost in analogue patient evaluations if the physician was male rather than female, and sometimes there was no boost at all if the physician was female.

The guiding theoretical framework for understanding this effect was that the unequal attributions of competence and differential satisfaction ratings associated with patient-centeredness for male and female physicians are due to an overlap between the stereotypical female behavior repertoire and the patient-centered model of medical care. In this light it is plausible to suggest that many patients think of female-linked behavior in female physicians as indicative of femininity but not of competence. Some research suggests that women who are successful in a male-stereotypic task domain are liked less (Heilman, Wallen, Fuchs, & Tamkins, 2004), but we do not think this is the case in medicine because female physicians are well liked, in one study more so than their male peers (Hall, Horgan, Stein, & Roter, 2002).

The solution to the problem highlighted in the present article is not for female physicians to act less “like women,” as this would violate the principles of patient-centered medicine and could produce backlash in patients who are disappointed in a female physician whom they perceive to be behaving in a less “female” style than expected (Schmid Mast, Hall, Klöckner, & Choi, 2008). Perhaps public education about the importance of patient-centeredness will, over time, correct the bias we believe exists. In the meantime, it is a loss for the health care system if female physicians are not recognized for their entire repertoire of skills.

Limitations

A limitation of the present research was that the physicians’ nonverbal behavior was not manipulated. Future research could manipulate nonverbal patient-centeredness while holding verbal content the same, or could manipulate both kinds of cues in a fully crossed design. Such a design would permit analysis of verbal–nonverbal discrepancy (e.g., the face appears much more friendly than the words would suggest), as well as analysis of additive effects of verbal and nonverbal patient-centeredness.

A second limitation was that neither the physicians nor patients were real: The physicians were actors and the patients were analogue. However, corroborative evidence exists from the research described earlier that differed in methodology. The present study design, although artificial, was necessary to confirm that the effects are due to judgment processes and not the nature of the male and female physicians’ communication.

In addition, we gathered only analogue patients’ gender to analyze as a possible patient moderator effect. Future studies could include other attributes of patients, such as ethnicity or age. Given the student population we used, these variables were not likely to vary enough to produce detectable effects. However, in future studies patient attributes could be important moderators.

ACKNOWLEDGMENTS

The authors thank Elizabeth Curtin, Jessica Katz, Emily Korzec, and Julia Zuroff for assistance in data collection and videotape coding.

REFERENCES


