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Patient perceptions of female surgeons: how surgeon demeanor and type of surgery affect patient preference

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ABSTRACT

Background: As more women become surgeons, knowledge of patient perceptions is necessary to educate this new pool of surgeons on how to maximize patient trust and foster the optimal surgeon–patient relationship.

Materials and methods: Patients in a general medicine clinic in San Francisco were surveyed. Study respondents read one of the eight short scenarios that differed by surgeon gender, surgery type (lung cancer *versus* breast cancer), and surgeon demeanor (more masculine—agentic *versus* more feminine—communal). In all scenarios, the surgeon was described as accomplished and well trained. After reading the short description, respondents rated five items from 0–5, which were averaged to create a measure of preference.

Results: Based on the 476 completed surveys, respondents did not have a significant preference for either female or male surgeons ($P = 0.76$). We found a significant interaction in respondent choice between the surgeon demeanor and the type of surgery ($P < 0.05$). Respondents preferred an agentic surgeon for lung cancer surgery and a communal surgeon for breast cancer surgery regardless of surgeon or respondent gender. No other interactions or main effects were statistically significant.

Conclusions: Our respondents did not overtly prefer a surgeon based on gender, which suggests that patients may not contribute to the traditional gender biases reported by female surgeons. Further work needs to be done to determine if our results can be replicated in different geographic regions and if there is gender stereotyping within the field of surgery.

1. Introduction

The literature on women in surgery has focused on deterrents for entering surgery, lack of representation in leadership roles, need for more effective mentoring, and sexism in the medical environment [1–9]. To obtain professional success, surgeons need to build a strong reputation with colleagues, residents, nurses, staff, and most importantly, patients [10–12]. As the

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number of female surgeons increases, how patients perceive them will become an important factor in attaining career success, leadership roles, and recognition of their skills and talents in the field of surgery. For women surgeons to be truly equal, patients should be equally willing to be operated on by a woman or a man.

Many studies in nonsurgical fields have elucidated the "female" approach to patient care. Women physicians have been found to be more patient-centered, spend more time with patients, display more empathy and psychosocial orientation, and are less likely to be sued [13–15]; however, female physicians are not evaluated as highly by patients as one would expect based on physicians' practice style and patients' values [16]. This discrepancy can be at least partly explained by the effect of gender stereotyping and implicit bias within patients' perception of their physicians.

Gender carries powerful social messages about how men and women both should and should not behave. Expected gender norms for men include being assertive and independent, and these attributes are defined as agentic. Expected gender norms for women include being supportive and nurturing, and these attributes are defined as communal. The gender norms that are expected for men, such as demonstrating agency, are unexpected for women, and *vice versa*. Research has shown that women are penalized for demonstrating unexpected behavior, such as agency [17–19].

Female surgeons face a unique challenge, as there is an even greater discrepancy between expected feminine behavior and the qualities that embody the traditional surgeon. Studies have shown surgeons to be more tough-minded, resolute, and unempathetic than non-surgeons [20]. Research has also suggested that in male-dominated occupations, male values are modeled for women as standards for success or expertise [21,22]. Thus, we see the catch-22 that women looking to fulfill the surgical role face the confidence, assertiveness, and leadership qualities (agency) set forth by men in the surgical field represent a stark contrast to the communal qualities of general practitioners. Patients may be prone to the same implicit and explicit biases concerning gender that are operative within the community at large when they are considering a surgeon. As more women enter surgery, knowledge of patient perception is necessary to educate this new pool of surgeons on how to maximize patient trust and foster the optimal surgeon–patient relationship.

To determine how patients perceive similar-behaving female and male surgeons, we conducted a survey that examined patient preference of surgeons depending on the surgeon gender, surgeon demeanor (more masculine—agentic; more feminine—communal), and type of surgery to be performed (breast cancer surgery or lung cancer surgery). Previous studies on patient attitudes of general practitioners have assessed explicit biases toward female physicians and were administered such that patient evaluation was associated with a single visit to a specified physician. In contrast, we used standardized scenarios to assess implicit bias as opposed to explicit bias. We hypothesized that respondents would perceive female surgeons, especially those described as agentic, as less preferable than similar-behaving male surgeons for both breast cancer surgery and lung cancer surgery.

2. Materials and methods

2.1. Study design

We based our study design on research conducted by Rudman *et al.* [23]. In our study, respondents read one of the eight possible scenarios. Each scenario began with a short description of a surgeon who was described as accomplished and well trained. The surgeon was further described as being male or female and either agentic (assertive and independent) or communal (supportive and nurturing). The type of surgery was either breast cancer surgery or lung cancer surgery. In all scenarios, the respondents were asked to consider surgery for their mother. After reading the scenario, respondents were then asked to complete a short survey. Research assistants were available to answer questions or receive feedback about the survey from the respondents.

2.2. Setting

The study was administered at a primary care clinic to respondents waiting to see their primary health care provider. We did not use a surgical clinic because respondents would already be interacting with a surgeon and may have had perspectives linked to that specific experience. Our respondents were told that the purpose of the study was, "to assess patients' perceptions of surgeons" and were not told of a specific focus on gender. The Division of General Internal Medicine at our institution provides comprehensive primary care and expert internal medicine consultation for adults aged 18 y or older. Patients in this clinic are predominantly female (65.8%) and have an average age of 59 y. Eligible respondents were those who voluntarily agreed to be approached by a researcher to hear about the study and could read English. This study was approved by the Institutional Review Board at the University of California, San Francisco.

2.3. Measures

The scenarios were modeled from previous work [23] and written at the sixth grade level to be appropriate for patients. Each scenario was presented in 14 point font to be readable. Appendix 1 provides an example of one scenario.

After reading the scenario, respondents answered five questions using a rating from 0, "not at all" to 5, "very much." The five items asked the patient to rate how competent the surgeon was, how much the surgeon possessed necessary skills, how likeable the surgeon was, how likely they would be to choose this surgeon for their mother, and how likely the surgeon would be to report a possible error during surgery. The respondents also completed demographic items related to gender, age, and prior surgical history.

2.4. Statistical analysis

To determine the representativeness of our sample to the typical clinical population, we compared the mean age of respondents with that of the average age for the clinic using a single sample *t*-test. Our five-item surgeon perception scale had a reliability of 0.86. As a result, we summed the five items and divided by five to create a composite perception score scaled