RESEARCH ARTICLE

The Roles of Gender and Demeanor in Perceptions of Female Surgeons

Hillary J. Braun MD[1]; Patricia S. O'Sullivan DEd[1]; Marie N. Dusch MD [2]; Mary H. McGrath MD, MPH[1]; Nancy L. Ascher MD, PhD[1*]

Affiliations:

[1] *Department of Surgery, University of California, San Francisco*

[2] *Department of Orthopedic Surgery, University of Southern California*

*** Corresponding Author:** Dr. Nancy L. Ascher, MD, PhD, 505 Parnassus Avenue, Room M-896, San Francisco, CA 94143-0780, Fax: 415.353.1590, Phone: 415.353.8709, Email: nancy.ascher@ucsf.edu

ABSTRACT

Societal expectations vary according to gender. Men are expected to be direct and assertive ("agentic"), while women are expected to be supportive and nurturing ("communal"). In professions that are traditionally male-dominated, such as surgery, agentic traits are expected and rewarded. This creates a double standard for female surgeons, who are simultaneously expected to be communal and agentic. We conducted a series of studies between 2006 and 2015 with the goal of characterizing the demeanor of female surgeons, how female surgeons perceive their demeanor, and how professional colleagues, trainees, and patients perceive their demeanor. We first conducted a series of focus groups with female nurses and surgeons, next administered a survey to female surgical trainees and staff surgeons, and finally conducted a series of survey-based studies to characterize the perceptions of trainees and colleagues. We found that there is still a mismatch between expected and actual demeanor for female surgeons, that female surgeons and trainees believe that their demeanor consists of both agentic and communal traits, and that communal surgeons are preferred by nurses, trainees, and colleagues, but not by patients.

KEY WORDS: Gender, demeanor, surgeon, implicit bias, communal, agentic

INTRODUCTION

Society has evolved to expect a certain demeanor based on an individual's gender: a man is expected to have "agentic" traits, which include being direct and assertive, while a woman is expected to display "communal" traits, such as being supportive and nurturing [1-4]. These expectations also extend into professions. In occupations traditionally dominated by men, such as business or surgery, agentic traits are respected and rewarded; in traditionally female fields such as childcare, social work, or nursing, communal traits are valued and expected [5,6].

These gendered expectations are intensified in same-gender interactions, particularly in those between two or more women. A commonly referenced example of this conflict in the patient care setting is the relationship between female nurses and female surgeons. The root of this conflict is

thought to be that female nurses view their occupation secondary to gender, while female surgeons view their gender secondary to occupation [7].

Female surgeons face a double standard. They must simultaneously display agentic traits to achieve success within the field of surgery and communal traits to gain the social approval of others, including health care professionals and patients. To investigate this double standard and the perceptions that contribute to it, we conducted a series of studies at our institution between 2006 and 2015. The purpose of these studies was three-fold: 1) to characterize expected versus actual demeanor of female surgeons in the health care setting, 2) to gauge how female surgeons at all levels of training perceived their own demeanor, 3) to understand how patients, trainees, and professional colleagues perceive female surgeons. Insight into these aspects of the role of demeanor would enable us to advise female surgeons and surgical trainees on how to best navigate their interpersonal interactions in the healthcare setting.

First, we conducted focus groups at our institution with female surgeons and female nurses; second, we administered a survey to female medical students, surgical residents, and staff surgeons to evaluate their perceptions of their own demeanor and the role of gender and demeanor in the relationship between surgeons and nurses; and finally, we conducted a series of studies using theoretical case scenarios to determine whether patients, nurses, medical students, or physicians had a preference for surgeon gender or surgeon demeanor.

Study 1: Focus Groups

METHODS

In 2006, we conducted three focus groups with female surgeons, female operating room nurses, and female surgical floor nurses at our West Coast academic institution for the purpose of better understanding expected versus actual demeanor. Focus groups were deemed appropriate because they provide an environment that stimulates recall, facilitates inter-participant dialogue, and enables discussion of sensitive subjects [7]. Community and academic female surgeons were invited to attend a single session moderated by an expert facilitator with extensive prior experience in gender-based research. Nurses were recruited to participate in separate sessions with the same structure and facilitator. Sessions were approximately one hour long and were guided by a list of six questions (Supplemental Document 1). The number of participants ranged from 2-5 per group. All sessions were audiotaped and reviewed line by line by one researcher to identify themes that related to demeanor and communication style in the surgeon/nurse relationship.

RESULTS

Overall Themes

The following major themes were identified through grounded theory analysis of focus group audio recordings: societal forces, conforming to stereotypes, hostility, tough not seen as admirable, softer side, double standard for performance, interpersonal relations, and communication.

Nurses

Nurses noted that the female surgeons were originally "…trying to be in the boys club" and "tried to act like a man". They acknowledged the difficulty of ascending the professional ladder in a relatively grueling, traditionally male occupation. They also reported that they found the present working environment to be "more humane" and that "…with more women working together, it's changed". One nurse also explicitly noted that women "… are working harder at their relationships with nurses". Nurses also

spoke about the camaraderie and more collaborative nature of the female surgeon-female nurse relationship. They indicated female surgeons were "more likely to be collegial", "easier to approach", and "more comfortable". One nurse remarked that "There are closer interpersonal relations between female nurses and female surgeons". Another spoke to the idea of being female first, professional second, "Despite whatever you do as a female for a profession, there's still a lot that ends up on your shoulders. How many childcare things have you ever gotten on the male surgeon's beeper?"

Nurses commented that female surgeons communicated differently compared to their male colleagues and that, "typically females can be seen as better communicators". One nurse said, "I feel more eye contact and recognition of just being there with female surgeons. And asking my input as well, more so than male surgeons." They also remarked that women surgeons were "more contemplative" and would "think outside and verbalize it".

Surgeons

The female surgeons did not echo these comments. One surgeon said, "You cannot just do your job. If you do your job in a matter-of-fact way, the interpretation is that you are – there's something negative there. Whereas a guy comes and just does his job, more people just see him as that's business as usual." Multiple female surgeons echoed this sentiment of not being able to conduct oneself in a "matter-of-fact" way. As one surgeon put it, "If (female) surgeons want a nice life, and want things to work out they have to learn (to interact with nurses differently than male surgeons)." Another surgeon stated, "I think the disadvantage is to the woman who doesn't know that she has to do this, who hasn't figured out the game – and it's a bit of a game – she's just doing her job, interacting in what she perceives to be a professional manner. And she's perceived as offish and in a negative way."

There were two notable remarks from surgeons on this topic. First, one surgeon said "Women expect women to interact with them in a much more collegial fashion. They (female nurses) do not accept women in a position of power over them." Another remarked, "Because we had to learn to communicate with nurses earlier, it may be to our benefit, and our patients' benefit."

Study 2: Survey of Female Medical Students, Residents, and Staff Surgeons

METHODS

The Women in Surgery Symposium (WIS) is a "professional and academic event dedicated to encouraging women to pursue a medical career in surgery" attended by medical students, residents, fellows, and staff surgeons who are either interested or involved in surgery. In June 2013, 180 WIS attendees received a questionnaire consisting of 1) demographic questions, 2) a 29-question survey designed to address the roles of gender and demeanor in the relationship between surgeons and nurses generated from the focus groups in study 1, and 3) two open-ended questions. The demographic items consisted of gender, age, practice setting, level of training, years of experience, and specialty. Respondents answered the 29 questions using a 5-point, Likert scale rating from 1, "strongly disagree" to 5, "strongly agree". The first five questions assessed the respondent's perception of her own demeanor. The remaining 24 questions focused on the role of gender, demeanor, and professional status in the surgeon-nurse relationship. Here we report only the results of the respondents' perception of her own demeanor (questions 1-5), as we were ultimately interested in understanding how our survey respondents' self perceptions.

We obtained descriptive statistics of percentages and means to describe our

respondents and their perceptions. In our first five questions, we evaluated whether participants considered themselves to have "communal" traits (2 questions), "agentic" traits (2 questions), and a fixed professional demeanor (1 question). We averaged the responses to communal questions and to agentic questions, and compared these across training levels.

RESULTS

Participant Demographics

We received 83 completed surveys (response rate 46.1%). Respondents were 98.8% female with an average age of 35.2±12.4 years. Primary work setting favored the academic environment (85.7%), with 11.7% in community practice, and 2.6% in private practice. 42.7% of our respondents were medical students, 20.7% residents, and 36.6% staff surgeons. Of residents surveyed, the average level was post-graduate year 3.5±1.7, and our staff surgeon respondents had an average of 14.2±11.5 years in practice. 52% of respondents reported having an interaction with a nurse that they felt was influenced by their gender and 66.7% reported having an interaction with a nurse that they felt was influenced by their demeanor.

Demeanor Self-Assessment

Medical students (4.49±0.74), residents (4.41±0.67), and staff surgeons (4.58±0.51) all strongly agreed that their professional demeanor included the traditionally communal traits of being supportive and encouraging (p=0.667). Similarly, all three groups strongly agreed that their professional demeanor included the traditionally agentic traits of being assertive and direct (4.27±0.69 vs. 4.18±0.81 vs. 4.48±0.5, respectively) that did not differ by training level (p=0.246). Interestingly, staff surgeons most strongly agreed (4.55±0.51) with the statement "My professional demeanor changes according to the circumstance", a finding that was significantly greater than residents' level of agreement (3.76±1.25, p=0.014).

Study 3: Case Scenarios

Unlike studies 1 and 2, which have not been previously published, the data presented hereafter has been previously published as individual papers describing the outcomes of case-based survey administration [8-11]. We will summarize and review our findings here.

METHODS

We surveyed general internal medicine patients, nurses, and medical students at the University of California, San Francisco and the University of California, Los Angeles, and female surgeons using the Association of Women Surgeons email list serve. Patients, nurses and medical students received a survey with one of eight variations of a scenario that differed by surgeon gender, type of surgery (breast cancer vs. lung cancer), and surgeon demeanor (agentic vs. communal). Women surgeons received a survey with one of four variations of a scenario that differed by surgeon gender and surgeon demeanor. We modified the survey for surgeons to account for the difference in expertise and to address professional as well as personal preferences.

In all studies, participants read a description of the surgeon and responded to a series of questions using a rating from 0, "not at all" to 5, "very much". The questions asked the respondent to rate the following aspects of the surgeon: competency, possession of necessary skills, likeability, likelihood of choosing this surgeon, and how likely the surgeon would be to report an error. These responses were then averaged to create a preference score from 0 (low) to 5 (high) that was initially established by Dusch et al [11] in which a score closer to 5 indicates a stronger and more favorable preference. We

obtained descriptive statistics of percentages and means to describe our respondents and their perceptions. We used analysis of variance and correlation coefficients to determine association of perception with various demographic.

We also solicited demographics of gender, age, and additional variables relevant to each population (prior surgery (patients), years of experience (nurses, surgeons), family members in medicine (nurses, medical students), anticipated or actual field of training (medical students, surgeons)). For each population, a univariate analysis of variance was conducted in SPSS based on the factors varied in the surveys. Correlations were assessed using Pearson's correlation coefficient. Significance was set at $p<0.05$ for all statistical tests.

RESULTS

Patients: Data was obtained from 476/522 (92%) patients approached during the nine week data collection. The overall average preference score was 3.91±1.06. There were no statistically significant main effects of surgeon gender, surgeon demeanor, or patient gender. There was, however, an interaction between the type of surgery and the demeanor of the surgeon. Patients preferred an agentic surgeon for lung cancer (4.05±0.92 vs. 3.77±1.07, p=0.03), and a communal surgeon for breast cancer 4.08±0.85 vs. 3.72±1.31)[11].

Nurses: We received 493/1701 (29.2%) surveys. The overall average preference score was 3.8±0.99. Respondents had a statistically significant preference for the communal surgeon (4.1±0.91) versus the agentic surgeon (3.6±1.0, $p<0.001$). In every individual item (competence, skills, likeability, likelihood of choosing surgeon, likelihood of surgeon reporting perioperative error), the communal surgeon scored higher than the agentic surgeon. There were no significant main effects of surgeon gender or surgery type [9].

Medical Students: Surveys were administered to 475 medical students and completed responses were received from 348 participants (73.3% response rate). Of these respondents, 31.6% were fourth year medical students (110) and the remaining 68.4% were first year medical students (238). Respondents were 54.2% female with an average age of 25.6±3.2 years. The overall average preference score was 3.99±0.76. There was no significant difference between first (4.05±0.72) and fourth year medical students (3.88±0.83, p=0.05). Our respondents had a significant preference for the communal surgeon (4.2±0.06) versus the agentic surgeon (3.83±0.06, $p<0.001$). The communal surgeon scored higher than the agentic surgeon in every item except whether the surgeon would be likely to report an error. Our respondents also had a statistically significant preference for the female surgeon (4.1±0.06) versus the male surgeon (3.9±0.05, p=0.016). There was no significant effect of respondent gender (p=0.076) and there were no statistically significant interactions between these three main factors (p-values > 0.05)[8].

Female Surgeons: In addition to asking the modified questions as outlined above to obtain a "preference score", we also added an additional five questions to the female surgeon survey to create a "professional score". These additional five items asked the respondent whether 1) they would like to work with the surgeon, 2) the surgeon would work well with residents and students, 3) the surgeon would fit in with a medical team, 4) they would feel comfortable referring a patient to this surgeon, and 5) they would respect this surgeon. We received 212/550 responses for a response rate of 39%. Respondents were 100% female with an average age of 48 years (± 9.7, range: 31-78) and 14.4 years (±10.0 years range: 0.5-43) since completion of training. The majority of respondents held the role of Assistant Professor (31%), with 23% Professor, 20%

Associate Professor, and 26% non-academic physicians. The average preference score was 4.5± 0.6 and the average professional score was 4.2± 0.9. There was a significant correlation between the preference and professional scores (Pearson's r=0.834, p<0.001). In both scores, the female surgeon was rated significantly higher compared with the male surgeon (p-values<0.001) and the communal surgeon was rated significantly higher compared with the agentic surgeon (p-values<0.05). There was no significant interaction between gender and demeanor (p-values>0.05)[10].

DISCUSSION

The purpose of the studies presented here was to explore the role of demeanor in perceptions of female surgeons to advise trainees about their interactions with patients and other health care professionals. The significant findings presented here are as follows: 1) the mismatch between expected and actual demeanor is still a point of frustration for female surgeons, especially within their relationship with female nurses, 2) female surgeons and trainees believe that their demeanor is multifactorial, consisting of both agentic and communal traits, and 3) communal surgeons are preferred by nurses, trainees, and colleagues, but not by patients.

Discussion of the frustrating double standard of behavior that exists for female surgeons is not new. Joan Cassell's 1998 book, *The Woman in the Surgeon's Body*, was the first work that focused on the discord between expected and actual demeanor of female surgeons and since that time, much work has been done outside the field of surgery to illustrate the challenges faced by female leaders in any male-dominated occupation [1-6]. More recently, this subject has received increased mainstream media attention with New York Times essays, Sheryl Sandberg's *Lean In*, and peer-reviewed publications. However, a series of studies by Duguid et al. showed that raising awareness of stereotypes may actually have the deleterious effect of increasing belief in stereotypes and expectations consistent with stereotypes [12]. These findings suggest that continuing to draw attention to the challenges women face with regard to gender, demeanor, and navigating interprofessional relationships may actually be a hindrance to progress in this area. Instead, it has been suggested that interventions aimed at empowering women to reframe their experiences might find more success.

In 2007, Walton and Cohen described a state of "belonging uncertainty", whereby minority students subconsciously monitor their learning environment for signs of lack of fit and, in turn, suffer adverse effects on their motivation and academic achievement [13]. The authors subsequently developed a "social belonging intervention" where students were offered non-threatening explanations for their feelings of lack of fit and found that the academic decline nearly halved as a result of the intervention [14]. By reframing the way in which students perceived and internalized their environment, the authors created a measurable improvement in performance. In light of our study results, we wonder whether this might also work for female surgeons and surgical trainees.

In the case of female surgeons and surgical trainees, such an intervention could involve reading materials to normalize feelings of lack of fit, reading or viewing anecdotal reports from more senior surgeons or trainees with similar experiences, and writing and speaking exercises aimed at internalizing the content of the intervention. The underlying concept of the belonging intervention is to encourage non-threatening interpretations of adversity. The theory behind the belonging intervention is based on studies that have shown that subjective interpretation of relationships or situations, as opposed to objective measures of these things, more strongly affects well-being [14].

Encouraging findings in our specific study comparing female surgeons and trainees were that respondents believe they have a multifactorial demeanor and more experienced surgeons report a flexible demeanor. Although agentic traits are stereotypically associated with men and communal traits are associated with women, in reality the spectrum of demeanor characteristics is less binary and more of a continuum. Appropriately navigating and utilizing this continuum in a variety of personal and professional contexts is a high-level skill. In her book, *The Charisma Myth,* Olivia Cabane details her approach to professional coaching and encourages readers to become aware of their personality, to strengthen weak elements, and to apply various behavioral and personality skills selectively during interactions to maximize gain [15]. From our study, women surgeons and trainees are already following some, if not all, of these recommendations. Perhaps instead of viewing the demeanor discrepancy as a handicap and inconvenience, we can start by reframing it as a professional advantage for women, who must develop these skills and insight early in their training. These skills will be sought by all professionals, regardless of gender or race, at some point in their careers.

A second encouraging finding is that patients do not have a preference for communal versus agentic surgeons. While employing communal traits may be advantageous in female surgeons' interactions with their professional colleagues and trainees, the results of this study illustrate that demeanor and gender are less concerning for patients.

As with any program of studies, this body of work was subject to several limitations. First, our focus groups were conducted in Northern California, which represents only a small portion of the population and may not be fully generalizable. Second, our WIS survey respondent sample size was relatively small and further analyses may have been possible with a larger group. Finally, the topics of gender and demeanor in patient care and perceptions of physicians can be viewed through a variety of frameworks and additional frameworks including stereotypes and identity formation may be worth exploring further. Despite these limitations, however, we believe the results of this study may serve as an impetus for encouraging research on interventions as opposed to observations and for reframing the demeanor double standard as an opportunity for women to cultivate traits that will ultimately confer a professional advantage.

CONCLUSION

The findings of this program of studies illustrates that the mismatch between expected and actual demeanor is still a point of frustration for female surgeons, particularly in their relationships with female nurses, and that female surgeons and trainees believe that their demeanor is complex, consisting of both agentic and communal traits. These investigations may serve as an opportunity for reframing the professional challenges faced by female surgeons. Interventions targeted at trainees that focus on normalizing social adversities and viewing these challenges as professional advantages may be beneficial.

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Supplemental Document 1

Focus Group Guide

The focus group questions are general and the probes listed with the questions provide general guidance but do not represent the exact questions that may be asked. The focus group facilitator will determine at the end of the session if additional questions are needed to address issues that were not mentioned. These are listed at the end of this guide.

Introduction: We are asking both surgeons and nurses, from the operating room and from the wards, these questions. We will ask a broad question and then will follow up with probes to get more details as necessary.

1. Describe your professional relationships with female nurses [surgeons]. Does this characterize the relationship most physicians have with female nurses? To what extent does your gender influence the nature of the relationship? That is do you believe female surgeons interact differently with female nurses than male surgeons do? What about interpersonal relationships between female surgeons and female nurses? Could you provide some scenarios that illustrate the nature of these relationships? How do you interpret this dynamic? How do nurses and surgeons address each other?
2. In your personal experience or in your observations of others, do female nurses provide as much assistance to female surgeons as they do to male surgeons? DO female surgeons ask for assistance to the same degree as their male peers? Does the assistance given effect patient care in any way?
3. What are the greatest strengths of the female nurse-female surgeon professional relationship? What are its biggest challenges? What about the female nurse-male surgeon?
4. Has the increasing number of female surgeons changed the hospital environment? If yes, how? Does the age gap between nurses and surgeons make any difference in the interaction? Does this depend on gender?
5. Do descriptions of surgeons/residents reflective gender differences? (i.e.: do terms aggressive, abrupt, rough show up more often for women than men?)What descriptive words are attached to nurses' performance?
6. How could communication and interaction skills be taught? What information should be taught? What teaching method should be used? Is role modeling sufficient or is curriculum needed?

