Experience of Gender in the Workplace by Anesthesiologists

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Background

Medicine itself is moving toward gender parity, however anesthesiology remains predominately male. Although half of all medical students are women, only 23% of practicing anesthesiologists are female.1 This is further demonstrated in the residency application process, where during the 2015-2016 application cycle, only 34% of anesthesia residency applicants were female, versus 46% overall. 2 These numbers are no different than those seen in general surgery, which has historically been one of the specialties with the largest gender gap.2 A number of studies exist addressing different aspects of gender experience in general surgery, including reasons why women are deterred from the field, work-life balance, workplace satisfaction, perceived barriers to career advancement, self-efficacy, gender discrimination in the workplace and support at work.3 Unlike in general surgery, the gender gap in anesthesia is poorly recognized, and thus has remained in the background. Related studies in anesthesiology have focused on trends in part-time work and differences in compensation between men and women.1

We hypothesize that perceptions of the following variables differ between male and female anesthesiologists: workplace discrimination, social support, locus of control, career satisfaction, and career barriers.

Methods

After exemption determination by the institutional IRB, a survey was administered via RedCap survey software to current anesthesiology residents at Mount Sinai Hospital. Other demographic data collected included year of residency as well as ethnicity. The survey consisted of 30 questions adapted from existing validated tools used to measure attitudes and discrimination in the workplace, including the Carrier Barriers Inventory, Everyday Discrimination Scale, Social Support Scale, Organizational Commitment Scale and Work Locus of Control Scale (Appendix A).8-12 Twenty-eight of the questions were in Likert scale format. Two questions were in a â€œyes-or-noâ€• format. Responses were anonymous and were collected by RedCap. Results were analyzed using a total composite score for each respondent that consisted of the sum of all instrument responses, an aggregate score for each validated tool, and on a question-by-question basis.

Results

Eighty-three residents completed the survey for an 85% response rate. Respondents consisted of 27 women (32.5%) and 56 men (67.5%). Demographic data is presented in Table 1. All participants completed the survey. Shapiro-Wilk test for normality showed that composite scores within the male and female groups were not normally distributed. The highest possible composite score was 100
points. There was no difference in median total composite score between male and female
respondents (64 and 69 respectively; Mann Whitney U, p=0.703).

Kruskall–Wallis H test of independent samples was performed independently on each of the 4
validated tools compiled to make up our survey. Using the Bonferroni correction to adjust for testing
of multiple hypotheses, our p value for this part of the analysis is 0.0125 (a= desired alpha level, m=
number of hypotheses; 0.05/4= 0.0125). There was a statistically significant difference in the
composite score of one validated tool (maximum 25), the “Everyday Discrimination Scale,”
with males having a median composite score of 6 and females having a median composite score of
11 (p=0.004). Median scores of the other validated tools showed no statistically significant
difference based on gender.

Individual questions were analyzed using Kruskal-Wallis test as an exploratory measure, but not as
a primary endpoint (Table 2). In this exploratory analysis, women were more likely to feel that their
gender put them at a disadvantage in the workplace. They were also more likely to note the
existence of sexist statements, decisions, and policies at work.

Chi squared analysis showed that women were more likely to report that they had observed or
experienced discrimination from certain groups. Female residents were significantly more likely than
males to have observed discriminatory behaviors from patients (p=0.012), and to have experienced
discrimination from patients (p=0.001), attendings (p=0.020) and residents (p=0.018).

Linear regression showed that a person’s perceived locus of control at work was unable to
predict their experience with everyday discrimination (F (1,82)=0.137, p=0.713, adjusted R2= -
0.011).

Spearman’s rank-order correlation was performed to determine the relationship between
participants’ scores on each validated tool. In short, there were positive correlations between
scores on the Social Support Scale, Organizational Commitment Score, and Work Locus of Control
Scale. Negative correlations were seen between scores on the Social Support Scale and Everyday
Discrimination Scale as well as between scores on the Organizational Commitment Score and
Everyday Discrimination Scale. (Table 3)

Discussion

Clearly there is a significant gender gap in anesthesiology. However, its existence is surprising to
many as anesthesiology is viewed as a “lifestyle” specialty with flexibility in terms of work
hours and type of practice.

A natural comparison can be made between anesthesiology and general surgery. Both are rigorous,
operating-room-based specialties with equivalent percentages of women physicians. In general
surgery, the gender gap is widely acknowledged and the whole specialty is still referred to
colloquially as an “old boys’ club.” The very existence of this stereotype has brought
gender issues to the forefront for women in surgery, and there have been a number of studies
addressing these issues. Interestingly, though lifestyle and family preferences have been put forth
as a reason for women to stay away from general surgery, women are less likely than men to cite
these as deterrents.4 Perceptions of gender-based discrimination seem to play a larger role than
previously thought. 3
According to our results in which women were more likely to report observing and experiencing gender-based discrimination from a variety of sources, similar forces may be at work in anesthesiology. Female respondents reported a higher rate of discrimination at work, but they did not demonstrate any overall difference in terms of whether they felt invested in the workplace, felt supported by colleagues, or whether they had control over their careers.

We did find that persons who feel socially supported at work are more likely to report a greater commitment to the organization. We also saw that those who felt they had control over their fate at work were more likely to report high feelings of social support and workplace investment. Those who earned higher scores on the Everyday Discrimination Scale were likely to report lower feelings of social support and organizational commitment. It was not true that those who felt they had a poor locus of control over their work life were more likely to report being discriminated against at work.

Lack of outward gender stereotypes and recognition of gender disparities in anesthesiology puts women in the field at a great disadvantage. Related studies in anesthesiology have focused on trends in part-time work and differences in compensation between men and women.1 In 2012, men in anesthesiology earned 29% more than women.1 Women were found to work 6 hours fewer per week and were three times as likely to work part-time. Adjusting for these differences in practice, men earned 11% more per hour than women of the same experience level.1

Our study was limited in terms of the small number of total participants, and even smaller number of female participants. Furthermore, it only represents the experience of resident physicians at one institution. Study of a larger population of anesthesiologists is needed.

Despite its limitations there are important points to take away from this study. Aside from the increased likelihood that they experienced or observed discrimination in the workplace, female anesthesiology residents are more likely to feel that their gender is a limitation, that their achievements are under-recognized and that their department fails to inspire the best in them.

The importance of mentoring in medicine and other fields is well known. The lack of female mentors for female anesthesiology residents may pose a problem as mentor-mentee relationships are often most successful when participants have similar experiences. Male physician mentors may be more likely to exhibit paternalism, less likely to address issues of gender discrimination, and may even withdraw when they feel that a female mentee is self-sufficient.3 Exacerbating the problem is the fact that male mentees are more likely to attract sponsors, have more extensive networks, and are perceived as more competent.3

Until recently, there has been little effort to improve the situation of female anesthesiology practitioners by providing support to women in anesthesia through structured mentoring and professional organizations. At the present moment there is a lot of interest regarding diversity in anesthesia and medicine as a whole. Groups such as the NYSSA are establishing task forces on women and minorities in anesthesia. Recently a number of studies have come out relating to women and diversity in anesthesia. Toledo et al recently published an observational study in Anesthesia and Analgesia entitled “Diversity in the American Society of Anesthesiologists Leadership,” which described the composition of ASA leadership.13 An article recently appeared in Anesthesiology News reiterating that female anesthesiologists earn less money than males.14
In order to attract women to anesthesiology and to accommodate the slow but steady increase in their number, it is necessary to bring gender disparities to the forefront, understand different experiences in the workplace, and move to change the culture of the field.