Does gender discrimination exist in a gynecology training program in a private hospital?

J. P. Geisler, C. S. Mernitz, M. J. Geisler, C. G. Harsha, P. N. Eskew Jr.

Department of Obstetrics and Gynecology, St. Vincent Hospital and Health Services, Indianapolis (Indiana)

Summary

Purpose: Does gender discrimination by attending physicians exists in a residency in regard to residents' opportunities to perform complete/operative management of hysterectomies versus just being surgical assistants?

Materials and Methods: The program studied is a 4-year program in obstetrics and gynecology residency with 3 residents per year. All cases involving a resident were recorded in a computer program designed by one of the authors (C.S.M.) to collect data for Residency Review Committee reports. Data were able to be sorted in a variety of methods including level of management, date of procedure, Physicians' Current Procedural Terminology codes, and attending physician name or resident name. Only intrafascial and extrafascial hysterectomies for benign disease were included in the study. Data were collected from July 1, 1996 to March 31, 1997.

Results: Five hundred and forty-nne hysterectomies with residents participating as primary surgeon (complete/operative management) or surgical assistant were performed during the study period. Complete/operative management was performed by the resident in 82.5% of cases while the resident was surgical assistant in 17.5%. Male residents were responsible for complete/operative management in 81.6% of cases and female residents in 83.2% of cases (P=0.33). Male attending physicians were more likely to allow residents (male or female) to participate as the primary surgeon in abdominal hysterectomies (95.3%) and vaginal hysterectomies (68.5%) than female attending physicians (abdominal, 87.0% and vaginal, 57.3%) (P<0.001 and P=0.006, respectively).

Conclusions: Although male attending physicians were more likely than female attending physicians to allow residents to perform complete/operative management, there was no discrimination as to whether the resident in question was male or female.

Precis: When determining the level of management private gynecologists will allow residents to perform they do not practice gender discrimination.

Introduction

Sexual discrimination has been ignored in medicine until recently [1]. Both male and female residents and medical students have reported favoritism or opportunities denied based on gender [2]. The existence of such discrimination has been shown to be a factor in the choice of specialty and place of residency in over 20% of applications [3, 4]. Traditionally 60% of women practicing medicine have been involved in primary care fields, including obstetrics and gynecology, or psychiatry. Their reasons often appear to be influenced by treatment received while rotating on other services [3]. Discrimination has actually been shown to subjectively decrease from medical school to residency, but this may be influenced by a resident's choice of a field to escape actual or perceived discrimination.

Discrimination arises from a variety of sources including faculty, support staff, other residents, and patients. Bias from any of these sources can be detrimental to one's self esteem, but those with the greatest authority over an individual, namely the attending staff, can exert the greatest influence over a resident's education.

The purpose of this paper was to determine whether gender discrimination existed in an obstetrics and gynecology residency program based in a large tertiary care center in which most of teaching is administered by physicians engaged in private practice.

Materials and Methods

The hospital studied is a 617 bed tertiary care center with an obstetrics and gynecology residency consisting of 3 residents per year. At the time of the study, eight residents were female and four residents were male. Thirty-five of the attending physicians were male and 17 were female. Only private practice cases were analyzed. All cases from the resident clinic were eliminated from the analysis in order not to bias the data. Data were collected from July 1, 1996 through March 31, 1997. All cases involving a resident were recorded by that resident in a worksheet designed by one of the authors (C.S.M.) for use with Lotus Approach for Windows version 3.1 (Lotus Development Corporation, Cambridge, Massachusetts). The worksheet was configured to collect data in a fashion reportable to the Residency Review Committee (RRC). Data from this worksheet were able to be sorted in a variety of methods including level of management, date of procedure, Physicians' Current Procedural Terminology (CPT) codes, attending physician or resident name. Only intrafascial and extrafascial hysterectomies done for benign disease were included in the study. Complete/operative management was defined as a resident performing at least 50% of a procedure. Surgical assistant was defined as a resident performing less than 50% of a procedure. Data were evaluated using SPSS 7.5 (Chicago, Il.) (*).

(*) Data were evaluated using SPSS for Windows version 6.0 (Chicago, Il.). Statistics were performed using Student's t-test, one-way analysis of variance (one-way ANOVA), and x2 test where appropriate.

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Table 1. — *Management by level of training or gender*

	Number of abdominal hysterectomies		Number of vaginal hysterectomies	
	Complete/operative (average)	Surgical assistant (average)	Complete/operative (average)	Surgical assistant (average)
Male resident	33	2	14	9
Female resident	24	2	9	5
First year resident	13	3	1	4
Second year resident	32	1	12	6
Third year resident	26	2	12	7
Fourth year resident	37	2	19	8

Table 2. — *Univariate analysis of management by class*

	Abdominal Hysterectomies with complete/operative management (%)	P value	Vaginal hysterectomies with complete/operative management (%)	P value
First year resident	82.6%	0.02	7.7%	0.0001
Second year resident	96.0%		67.3%	
Third year resident	92.8%		64.9%	
Fourth year resident	94.9%		71.3%	

Table 3. — *Level of management allowed vs. attending gender*

Gender of Attending	Gender of Resident	Complete/Operative Management (Percentage of TAH's)	P value	Complete/Operative Management (Percentage of TVH's)	P value
Female					
	Female	84.1%	0.44	62.9%	0.37
	Male	89.6%		52.5%	
Male					
	Female	94.5%	0.43	67.9%	0.87
	Male	96.7%		69.4%	

Results

Five hundred and forty-nine total hysterectomies, which fit the criteria, were performed in the nine-month period studied. Three hundred and forty-seven of these were abdominal hysterectomies (63.2%) and 202 were vaginal hysterectomies (36.8%). Three hundred and eighty-two hysterectomies (69.6%) were performed on patients of male attending staff and 167 cases (30.4%) on patients of female attending staff.

Complete/operative management was carried out by the resident in 82.5% of cases while in 17.5%, the resident acted as a surgical assistant. Male residents were responsible for complete/operative management in 81.6% of cases and female residents in 83.2% ($p=0.33$). The average number of abdominal and vaginal hysterectomies performed by each resident is described in Table 1. Upper level residents (second, third, and fourth year) were significantly more likely to perform complete/operative management than first years residents (Table 2).

Male attending physicians were more likely to allow residents (male or female) to participate as the primary surgeon in abdominal (95.3%) and vaginal hysterectomies (68.5%) than female attending physicians (abdominal, 87.0% and vaginal, 57.3%) ($p<0.001$ and $p=0.006$, respectively). However, the gender of the resident did not appear to be important in whether they were allowed to perform complete/operative management (Table 3).

Discussion

Hayward *et al.* demonstrated that in the Medical College of Pennsylvania surgery residency gender discrimination did not exist, but over half of female surgeons in Canada, when polled, reported being discriminated against because of gender during their residencies [5, 6]. In addition, van Ineveld *et al.* illustrated that gender discrimination is prevalent in internal medicine residencies throughout Canada [7]. At McMaster University in Canada, gender discrimination was reported by both males and females although more commonly by females [8]. In the current study, no obvious gender discrimination was found. Obviously, opinions about the existence of gender bias in specific programs are varied.

Many papers evaluating gender bias have been performed utilizing questionaires which lend themselves to recall bias [2, 3, 6, 7]. Other studies, i.e., Hayward *et al.*, have analyzed evaluations of residents by the attending physicians [5]. The current study approached the question from a different perspective by evaluating whether individual residents were discriminated against because of gender by not allowing them to perform complete/operative management of surgical patients on a benign gynecology service. Residents recorded their data without knowledge that it would be reviewed for a study on gender bias; therefore, recall bias could be excluded. Bias, however, could have entered the study if individual

residents were not honest in the way in which they coded their level of participation. In this study, the question as to whether gender discrimination by attending physicians existed in a residency in regard to residents' opportunities to perform complete/operative management of hysterectomies was studied. A discrepancy did exist in that male attending physicians were more likely to let residents (regardless of gender) perform complete/operative management of both abdominal hysterectomies ($p<0.001$) and vaginal hysterectomies ($p=0.006$). However, no discrimination by attending physicians with regards to residents' gender ($p=0.33$) was found.

References

[1] Nora L. M.: "Sexual harassment in medical education: a review of the literature with comments from the law". *Acad. Med.*, 1996, *71*, 5113.

[2] Baldwin D. C. Jr., Daugherty S. R., Rowley B. D.: "Residents' and medical students' reports of sexual harassment and discrimination". *Acad. Med*, 1996, *71*, S25.

[3] Nora L. M., McLaughlin M. A., Fosson S. E., Jacob S. K., Schmidt J. L., Witzke D.: "Does exposure to gender discrimination and sexual harassment impact medical students' specialty choices and residency program selections". *Acad. Med.*, 1996, *71*, S22.

[4] Ciesielski-Carlucci C., Hern H. G. Jr., Kushner T. K.: "Avoid discriminatory medical school admission and residency interviewing (letter)". *Acad. Med.*, 1993, *68*, 975.

[5] Hayward C. Z., Sachdeva A., Clarke J. R.: "Is there gender bias in the evaluation of surgical residents?". *Surgery*, 1987, *102*, 297.

[6] Ferris L. E., Mackinnon S. E., Mizgala C. L., McNeill I.: "Do Canadian female surgeons feel discriminated against as women?" *Can. Med. Assoc. J.*, 1996, *154,* 21.

[7] van Ineveld C. H., Cook D. J., Kane S. L., King D.: "Discrimination and abuse in internal medicine residency. The internal medicine program directors of Canada". *J. Gen. Intern. Med.*, 1996, *11*, 401.

[8] Cook D. J., Liutkus J. F., Risdon C. L., Griffith L. E., Guyatt G. H., Walter S. D.: "Residents' experiences of abuse, discrimination and sexual harassment during residency training". McMaster University training programs. *Can. Med. Assoc. J.*, 1996, *154*, 1657.

Address reprint requests to:
JOHN P. GEISLER, M.D.
Department of Obstetrics and Gynecology
St. Vincent Hospital and Health Services
8424 Naab Road, Suite 2M
Indianapolis, IN 46260 (U.S.A.)