9-2010

Does Gender Still Matter?: Women Physicians' Self-Reported Medical Education Experiences

Katherine M. Butler
Grand Valley State University

Julia Mason
Grand Valley State University

Does Gender Still Matter?: Women Physicians' Self-Reported Medical Education Experiences

Katherine M. Butler

Objective: This study aims to provide a rich analysis of particular women's medical education experiences.

Design: One-on-one interviews and self-administered questionnaires

Participants: 25 practicing women physicians who graduated from U.S. medical schools.

Results: The author identified the following themes: 1) societal gender role assumptions significantly impact women physicians' experiences as medical students, in practice, and as primary care givers. 2) Marginalities in women's health education exist in all levels of medical training. Curriculum specific to reproductive and psychiatric women's health impacts physicians' preparedness for treating female patients. 3) Physicians reported the existence of medical hierarchy during training and in practice. Central to this issue is the prevalence of sexual harassment which eight physicians reported having experienced or witnessed during their medical training. 4) Finally, twenty-one of the physicians identified mentorship programs in medical school and residency programs. However, random assignment of mentors and students detracted from the meaningfulness of such programs.

Conclusions: Gender inequality remains entrenched in all levels of medical education and practice. Findings highlight the necessity for additional institutional programs that provide support for women in medicine and curriculum reform to address the fragmentation of women's health.

Key Words: women in medicine, gender bias, women's health

INTRODUCTION

The Women's Health Movement, which grew out of the Second Wave feminist movements of the 1960s and 70s, worked to call attention to gender bias and discrimination in medical training in the United States.[i] Two interrelated problems were identified. First, women were under-represented both as students and faculty in medical schools. Second, the curriculum was overwhelmingly centered on the male body.[ii] In order to address these issues many medical schools developed programs to recruit women, which has led to a substantial increase in the number of women attending U.S. medical schools.[iii] However, simply increasing women's participation has not eliminated gender bias in either the curriculum or the treatment of women

medical students, as a 2007 study found that "sexual harassment and gender bias remain stubbornly entrenched in medical training." [iii]

Building on previous research, this study was designed to contribute to feminist understanding of women's medical education experiences through an in-depth analysis of self-reported experiences of women physicians. In addition to questions about blatant acts of harassment and discrimination, the interview also included questions about overall experiences, course content, curriculum and mentorship programs, and preparedness for interaction with female patients. The goal of this research was to provide a rich analysis of particular women's medical education experiences.

METHODS

Questionnaire

The interview protocol included seven categories developed from a review of the literature on women physicians' medical education experiences and women's health instruction. Open-ended and closed-ended questions were utilized. The Grand Valley State University Institutional Review Board approved the study.

Categories
Career Specialty
Medical School Curriculum
Women's Health Education
Preparedness for Interaction with Female Patients
Sexual Harassment and Gender Bias
Mentorship Program
Overall Experiences

Recruitment and Procedures

Physicians were recruited via email invitation, fax, personal contacts, and women's medical associations. Snowball sampling, a process where participants suggest potential candidates, was also utilized. Before the interview began, participants received a copy of the research protocol and an information form which provided a full description of the study. One-on-one semi-structured interviews took place at a location of the physician's choosing or over the phone. Interviews were approximately 60 minutes in duration and notes were taken by hand. Self-administered questionnaires were either faxed or mailed back to the investigator. Directly following the interview, the investigator typed the hand-written notes for ease of analysis. Data were collected between June and September of 2010.

Data Analysis

The primary researcher developed initial coding categories for a subset of the data (five transcripts). Those categories were validated and revised in a joint meeting between the primary researcher and the faculty mentor. All of the transcripts were coded using the new coding scheme.

RESULTS

The 25 women doctors in the final sample had graduated from medical schools in the United States. Nine of the participants had completed medical school in the 1980s, ten in the 1990s, and six within the time period of 2001 to 2009. The participants practiced in a range of medical specialties and subspecialties including family medicine, obstetrics and gynecology, pediatrics, infectious disease, radiology, and internal medicine (**TABLE 1**). Four of the participants belonged to an ethnic or racial minority. A 2005 report from the Association of American Medical Colleges on the status of minorities in medical education demonstrates that this sample parallels current levels of diversity in U.S. medical schools.[iv] Two participants did not provide racial/ethnic information.

Table 1. Study Participants by Specialty	**n=25**
Obstetrics and gynecology	6
Family Medicine	6
Internal Medicine	3
Internal Medicine and Adolescent Medicine	2
Pediatrics	1
Child Abuse Pediatrics	2
Pediatric Pulmonology	1
Pediatric Endocrinology	1
Pediatric Infectious Disease	1
Infectious Disease	1
Radiology	1

Gender Role Assumptions

Family roles and establishing a work/life balance was a common theme expressed by the participants. Of the 25 women who participated in the study, fourteen had become pregnant or served as primary caregivers during medical school or residency. Twelve physicians had experienced negative comments from faculty or other members of the medical program. Additionally, nine physicians reported negative comments from peers.

I found the young female faculty the most discouraging when I was pregnant. They would come by and sit beside me and tell me how hard it was to be in academic medicine and a mom. Why not to do primary care as a mom, and all the hassles they were having. Something about being pregnant and showing just opened the doors for them to share. Must have been that they were unhappy and unsupported. (Internal Medicine and Adolescent Medicine, 1988)[1]

As a physician there's no good time to have a baby. I have friends who waited till they finished [their medical training] and now they can't have children. (Family Medicine, 1982)

Residency is not the appropriate time to have a baby. It's a tough spot. . . . You never miss a call and are always picking up other people's problems. (Pediatrics, 2005)

In relationship-to-career decisions, seven women reported that wanting to start a family had influenced their medical specialty choice. Obstetrics and gynecology, family medicine, and pediatrics were reported as family-friendly residency programs.

It is a lifestyle. It is more than a career. You can lose yourself . . . You can feel guilty as a woman. You can't be every woman. (Internal Medicine and Adolescent Medicine, 1997)

Marginalities of Women's Health

The physicians reported a number of women's health topics discussed during their medical education (**Table 3**). Seventeen physicians said that they had learned the most women's health topics while completing the obstetrics and gynecology rotation during the third year of medical school. Four women responded that they had obtained the most women's health education during their psychiatry rotation.

We need to clearly define [women's health] as interdisciplinary: obstetrics and gynecology, internal, psychiatry. I don't think anybody should own women's health (Pediatrics, 1983)

Men are taken more seriously when they complain or when they have symptoms. Men are stoic, women are complaining. (Child Abuse Pediatrics, 1992)

A physician who cares for a male patient or male disorder for a very short period of time often gets paid more than the physician who cares for a woman for nine months during pregnancy and then eighteen years after the baby is born. (Obstetrics and Gynecology, 1992)

In response to the question, "What are your thoughts on enacting a women's health specialty?," most physicians responded either in favor of the specialty or questioned the need with the existing specialties of obstetrics and gynecology and family medicine. Many of the physicians expressed the concern of medicine becoming too sub-specialized and the frustration of patients forced to see physicians in multiple specialties for a full diagnosis. An idea discussed by many of the physicians who were unsure of enacting a separate specialty was the restructuring of the women's health fellowship.

[1] (Participant's Medical Specialty, Year of Medical School Graduation)

Table 3. Women's Health Topics Discussed During Medical Training

Reproductive / Sexual Health	pregnancy, pregnancy associated appendicitis, pregnancy associated chronic illnesses, menopause, breast cancer, birth control, premenstrual syndrome, endometriosis, gynecological cancers (uterine, ovarian, cervical) pelvic inflammatory disease, human papillomavirus, dysfunctional bleeding, period regulation, lactation, sexually transmitted infections, hormones and hormone replacement, ectopic pregnancy, puberty, abnormal pap smear, polycystic ovarian syndrome, fibroid tumors, preeclampsia, abnormal uterine bleeding, fertility
Mental Health	anxiety, depression, psychosocial aspects, eating disorders, post-partum depression
Other	fibromyalgia, adolescent medicine, cardiovascular disease, stroke autoimmune, migraine, headaches, diabetes, high cholesterol, hypertension, inflammation, infectious diseases osteoporosis, asthma, cystic fibrosis, migraines, irritable bowel syndrome, gall bladder disease, multiple sclerosis , rheumatoid diseases intra-abdominal infections, epstein barr

Medical Hierarchy

Many physicians reported on the continual presence of a medical hierarchy in training and in practice. Eight physicians reported having experienced or witnessed sexual harassment during their medical education. Several physicians identified the surgical specialty as an arena of persistent gender inequality, sexual harassment, and racist, sexist and homophobic comments.

> *There's this whole god-complex of surgery. Surgeons are allowed to do all sorts of things; throw scalpels, shout at OR staff . . . Surgeons have lounges it's kind of a breeding ground for inappropriate comments and narcissism.* (Child Abuse Pediatrics, 2005)

> *There's far less support for you when you finish. Professional women's organizations are important. . . The physicians' day is a golf outing. It's still an old-boys-club when you get out there.* (Pediatric Infectious Disease, 1997)

A small of number of racially and ethnically diverse women participated in the study. These participants expressed the additional barriers faced by women physicians due to racial and class discrimination.

> *I felt like I always had to prove myself. At the time, there was a perception that African Americans, Hispanics, and Native Americans got accepted to medical school because you were of*

those ethnic or racial backgrounds and were not at a level of quality of other students. (Family Medicine, 1988)

Table 4. Women's Specific Health Concerns Not Covered in Participants' Medical Training

Violence Against Women		**Mental Health**	
Domestic Violence	4	Psychiatric Health	3
Sexual Abuse	3	Eating Disorders	1
Rape	2	Comprehensive Mental Health	1
Intimate Partner Violence	2	Anxiety	1
		Stress	1
		Personal Loss	1
Adolescent Health		**Sexual Health**	
Teenage Pregnancy	1	Comprehensive Sexual Health	2
Adolescent Girls	1	Contraception	2
Premenstrual Health	1	Sexual dysfunction	1
Reproductive Health		**Other**	
Menopause	2	Single Parenting	2
Comprehensive Reproductive Health	1	Poverty	1
Post-menopause	1	Patients with little formal education	1
Polycystic Ovarian Syndrome	1	Heart Disease	1
Menorrhagia	1	Coronary Artery Disease	1
Fitness during Pregnancy	1	Diet	1
Infertility	1	Cholesterol	1
Breast Feeding	1	Hormones	1
Pap Smears	1	Osteoporosis	1
		Weight Issues	1
		Women's Health Resources	1
		Geriatrics	1
		Gender Specific Medicine	1

Mentorship

Twenty-one of the physicians identified mentorship programs in medical school and residency programs. However, nine participants reported that random assignment of mentors and students detracted from the meaningfulness of such programs.

> *[Finding a mentor] was always my problem. Then I needed someone to write me nice letters. I did not even think about it. . . . I wanted [a mentor] but there was no one in similar shoes.* (Obstetrics and Gynecology, 2001)

DISCUSSION

In 2008, women represented 48% of accepted applicants and 45% of residents in U.S. medical schools and teaching hospitals.[v] Despite the increasing representation of women in U.S. medical training, the field of medicine continues to construct and perceive gender in ways that not only impact the experiences of women physicians, but also overall health care.[vi] Results from this study suggest that gender bias remains entrenched in many levels of medical training and practice impacting not only classroom and residency instruction, but also curriculum, family decisions, and specialty choice.

Concerns raised by many of the participants called attention to traditional gender roles and the significant impact they have on women physicians' inclusion and advancement in the field of medicine. Fifteen of the participants discussed balancing family and work in practice and training. Studies show that many women physicians continue to serve as primary care givers taking responsibility of the majority of child-care and house work.[vii] These findings suggest that despite the addition of programs and organizations that aim to improve the medical environment for women, medical institutions do not provide adequate support for physicians serving dual roles as physicians and caregivers.

Additionally, when observing medical specialty choices of U.S. physicians, women remain overrepresented in the fields of family medicine, obstetrics and gynecology, pediatrics, psychiatry, and internal medicine, but severely underrepresented in surgical specialties with the exception of obstetrics and gynecology.[viii] Several participants practicing in these specialties reported having chosen these medical fields on the basis of increased pregnancy and family support during residency and in practice. According to the American Medical Women's Association, over 50 percent of women physicians have their first baby or serve as primary care givers during medical training.[ix] Increasing pregnancy and family support resources, sufficient maternity leave, and fostering a medical training environment that supports women physicians filling dual career and family responsibilities will ensure that women can choose their medical specialty on the basis of academic interest.

Findings from this research identify marginalities in undergraduate and graduate medical training in women's health. Gender bias continues to prevail in preclinical coursework and clerkships further influencing gender inequalities in health care delivery.[x,xi] Women's health topics discussed during participants' medical training were primarily isolated into obstetrics and gynecology and psychiatric training with limited gender-based medicine beyond these specialties. The absence of interdisciplinary instruction on gender-specific health concerns reflects in participants' identification of several women's health concerns not discussed during medical training (**Table 4**). Furthermore, a significant number of participants' reported minimal or no instruction on violence against women. These results imply that although curricula on violence against women does exist, the issue is not integrated throughout medical training

resulting in little education for medical students and residents on domestic violence, sexual abuse, rape, and intimate partner violence.[xii]

Further analysis of participants' discussion of women's health highlights the need for increased medical instruction on transitional phases such as menopause and adolescence, anxiety disorders, depression, communication, and the interconnectedness of gender and culture.[x] The integration of sex and gender-specific differences into existing medical curriculum and training yields numerous challenges. The physicians participating in this study identified curricular changes they deemed as necessary for improving undergraduate and graduate women's health instruction (**Table 5**). Immediate solutions may include the inclusion of female subject research in course materials and the use of medical texts that include gender-specific information. Another possible solution would be the creation of a women's health specialty or strengthening existing women's health fellowships. Women utilize health services more often than men receiving an increasing amount of medical attention including physician contact, hospitalizations, and prescriptions throughout their lifetime. [xiii, xiv] Therefore, addressing the fragmentation of current women's health care through the adoption of a biopsychosocial model throughout all levels of medical training will strengthen physicians' ability to provide comprehensive and preventative care to women patients.

Gender discrimination remains entrenched in the medical education environment. In 2004, 15% of female U.S. medical school graduates reported having experienced some form of mistreatment during undergraduate medical training.[xv] Furthermore, racial and ethnic bias continues to permeate the medical field resulting in additional levels of oppression among racial and ethnic minority women.[xvi] Despite efforts made to eradicate sexual harassment in the medical hierarchy, this study reveals that women medical students still experience and witness sexual, racist, and homophobic harassment. Several physicians identified the surgical specialty as an arena of a hierarchical mentality in training and in practice. These findings are similar to earlier studies on harassment and gender stereotyping in surgery and its subspecialties. [xvii, xviii] In order to address this situation, medical institutions need to reevaluate existing reporting structures and establish new programs emphasizing that such discriminatory behavior will not be tolerated.

Available evidence shows that mentorship has important influence on medical career choice, career guidance, and scholarly activity.[xix,xx, xxi] Physician comments from this study highlight the inefficiency of current mentorship programs for many women pursuing medical careers. Medical schools and residency programs can improve the effectiveness of existing programs by pairing faculty and medical students based on personality and career interest. Central to this issue is the representation of women in medical school and teaching hospital faculties. In 2009, the Association of American Medical Colleges reported that women represent 35 percent of the 125,070 U.S. medical school faculty members.[v] Academic and non-academic medical institutions need to increase the number of women in leadership positions and implement strong mentorship programs that foster women's advancement in medicine.

Providing pregnancy and family support resources that assist women through the additional challenges of serving as primary care givers and medical students, residents, and instructors will also strengthen mentorship efforts within and outside the medical training environment.

Table 5. Proposed Changes to Women's Health Education

Lifestyle	nutrition, obesity, diabetes, heart disease, exercise, fitness, counseling
Adolescent Medicine	young mothers, pregnancy prevention among adolescents, adolescent girls' health
Reproductive Health	solidified treatment for menopause, STI's, HPV, increased primary care training in obstetrics and gynecology rotation and residency programs
Sociocultural	socioeconomic status, access to reproductive health care, poverty, women as primary caregivers, domestic violence
Doctor-Patient Interaction	communication styles, treating women as consumers and valued as much as men, eliminate condescending attitudes toward women patients, respecting women's self-reported health concerns as valuable means of diagnoses and not complaints
Other	gender-specific training, leadership skills for women physicians, sexual orientation

This study is limited by a relatively small sample. Thus, the results are not generalizable and do not account for the experiences of all women physicians. Increasing the diversity of the participants to include more women of color, multi-ethnic, lesbian, bisexual, and transgender physicians will strengthen this research by exploring the additional barriers faced by women physicians through the intersections of racial, class, gendered, and sexist systems of oppression. Additionally, the participants in this study represented women who had successfully completed U.S. medical training. Areas of further research include the investigation of women who discontinued undergraduate or graduate medical education. A longitudinal qualitative analysis of

women in medicine throughout their medical training would also support findings from this study.

CONCLUSION

Among the physicians interviewed, the results demonstrate that the construction of gender impacts multiple levels of medical culture including undergraduate and graduate curricula, delivery of health care, and women's overall advancement in the field. Despite these findings, the majority of the women physicians participating in this study spoke very highly of their medical training and recognized that progress has been made. Greater support from medical institutions and education programs to establish gender equitable environments will ensure diverse opportunities for women in the field as well as comprehensive women's medical care.

ACKNOWLEDGEMENTS

The author would like to thank Dr. Julia Mason and the physicians who participated in the study. Funding for this project was provided by the Student Summer Scholars Program at Grand Valley State University.

REFERENCES

[i] Shari Munch. The women's health movement making policy, 1970-1995. *Soc Work Health Care*. 2006;43:17-32.

[ii] Morgen S. *Into our Own Hands.* New Brunswick, N.J: Rutgers University Press; 2002.

[iii] Shrier L, Rich M, Shrier D, Mercurio A, Zucker A, Landry L. Generation to generation: discrimination and harassment experiences of physician mothers and their physician daughters. *J Womens Health (Larchmt).* 2007;16:883-894.

[iv] Association of American Medical Colleges. Minorities in medical education: facts and figures 2005. Washington, DC: AAMC, 2005. Available at: https://services.aamc.org/publications/showfile.cfm?file=version53.pdf&prd_id=133&prv_id=154&pdf_id=53. Accessed October 30, 2010.

[v] Leadley J. Women in U.S. academic medicine: statistics and benchmarking, 2008-2009. AAMC. 2009. Available at: https://services.aamc.org/publications/showfile.cfm?file=version158.pdf&prd_id=295&prv_id=366&pdf_id=158. Accessed August 26, 2010.

[vi] Hølge-Hazelton B, Malterud K. Gender in medicine — does it matter? *Scand J Public Health*. 2009;37:139-145.

[vii] Ehrhart JK, Sandler BR. Rx for success: improving the climate for women in medical schools and teaching hospitals. Project on the Status and Education of Women, Association of American Colleges. 1990. Available from: Education Resources Information Center. Fulltext. Accessed May 19, 2010.

[viii] Verlander G. Female physicians: balancing career and family. *Acad Psychiatry*. 2004;28:331-336.

[ix] Pulatie K. Bias against pregnant medical residents. *Virtual Mentor.* 2008; 10: 453-456.

[x] Weiss LB, Levison SP, Lee S. Barriers and solutions to implementing a new curriculum: lessons from the women's health education program at MCP hahnemann school of medicine. *J Womens Health Gend Based Med*. 2000;9:153-160.

[xi] Dijkstra, AF, P. Verdonk, and ALM Lagro-Janssen. "Gender Bias in Medical Textbooks: Examples from Coronary Heart Disease, Depression, Alcohol Abuse and Pharmacology." *Med Educ.* 2008; 42: 1021-1028.

[xii] Jordan CE. Advancing the study of violence against women: Evolving research agendas into science. *Violence Against Women*. 2009;15:393-419.

[xiii] Cherry DK, Hing E, Woodwell DA, Rechtsteiner EA. National Ambulatory Medical Care Survey: 2006 summary. National health statistics reports; no 3. Hyattsville, MD: National Center for Health Statistics. 2008. Available at: http://www.cdc.gov/nchs/data/nhsr/nhsr003.pdf. Accessed June 20, 2010.

[xiv] Zimmerman M.K and S.A. Hill. Health care as a gendered system. In: Chaftez JS, ed. *Handbook of the Sociology of Gender.* New York: Kluwer Academic/Plenum Publishers; 1999: 483-518.

[xv] Yamagata H, Haviland MG, Werner LS, Sabharwal RK. Recent trends in the reporting of medical student mistreatment. AAMC Analysis in Brief. July 2006;6. Available at: https://www.aamc.org/download/102340/data/aibvol6no4.pdf. Accessed May 15, 2010.

[xvi] Zimmerman M. Women's health and gender bias in medical education. *Res Sociol Health Care.* 2000; 17: 121-138.

[xvii] Jones VA. Why aren't there more women surgeons? *JAMA*. 2000; 283: 670.

[xviii] Bickel J. Gender equity in undergraduate medical education: a status report." *J Womens Health Gend Based Med.* 2001; 10: 261-270.

[xix] Sambunjak D, Straus SE, Marušić A. Mentoring in academic medicine: a systemic review. *JAMA.* 2006; 296: 1103-15.

[xx] Goldstein R, Carr P, Ash A, Friedman R. Compensation and advancement of women in academic medicine: Is there equity? *Am J Ophthalmol*. 2004;138:903-904.

[xxi] Carr PL, Szalacha L, Barnett R, Caswell C, Inui T. A "ton of feathers": gender discrimination in academic medical careers and how to manage it. *J Womens Health (Larchmt).* 2000; 12: 1009-18.