

Alison M. Heru

Pink-Collar Medicine: Women and the Future of Medicine

The number of women in medicine is increasing. There is evidence that women practice in different ways than men; are interested in different aspects of medicine; work fewer hours; and receive less pay for equivalent hours than men. Women are also less likely to be represented in the higher echelons of power within academic medicine. Women's careers are adversely affected by pregnancy, childcare, family responsibilities, and gender role conflict although there is evidence that this does not need to be the case. This article reviews the current literature on gender differences in medicine and makes recommendations to ensure women have a voice to determine their place in medicine in the future. The positive changes that women bring to medicine are highlighted and the barriers for women in the profession are outlined.

Introduction

Women comprise 49 percent of applicants to U.S. medical schools (Association of American Medical Colleges, 2003). The American Medical Association predicts that by 2010, 30 percent of practicing physicians in the United States will be women (AMA Women in Medicine Data Source, 1997). What can women expect when they enter the profession of medicine? Are women changing the profession of medicine? What is meant by the feminization of medicine and "pink-collar medicine"?

This article reviews the current status of the medical profession from a woman's perspective. The positive changes that women bring to medicine are highlighted and the barriers for women in the profession are outlined. The medical profession needs to make changes based upon these findings and a list of priorities is presented.

Alison M. Heru is a clinical associate professor at Brown University. She received her medical degree from Glasgow University and her psychiatric training in Edinburgh, Scotland; Kingston, Jamaica; and Brown University in Providence, Rhode Island. She may be reached at aheru@butler.org.

How Female Physicians Practice

Society sees women in the physician role as a natural extension of their caring role (Myerson, 1997) and medical students, medical school faculty, and residency directors consider female physicians to be less egotistical and more humanistic, sensitive, and altruistic than male physicians (Day et al., 1989; Scadron et al., 1982).

Female physicians compared to male physicians, rate close friends, health, success, universalism and ideology as more important (Neittaanmaki et al., 1999) and value the psychosocial aspects of medical care more than the business aspects (Hojat, Gonnella, and Xu, 1995). On admission to medical schools, women, compared with men, expressed more interest in humanistic, psychosocial, and multidisciplinary aspects of medicine but on graduation only multidisciplinary aspects remain of more interest (Dufort and Maheux, 1995). However, gender differences in interests are re-established when graduates are in practice (Jones et al., 2000).

Training in medical school has been likened to boot camp; “if you don’t fit the mold, then you don’t belong.” Medicine is described as glorifying machismo, with the effect of turning both male and female medical students into macho doctors (Klass, 1987). To counteract this trend, the study of literature, art, and story-telling has been introduced into medical school curricula, with the intention of providing an opportunity for reflection and to improve the medical students understanding of the lives of their patients (Bolton, 2003).

Female physicians display specific behaviors that are linked to improved patient outcomes (Charon, Greene, and Adelman, 1994), such as conducting longer and more talkative visits with patients (Roter and Hall, 2004; Cypress, 1983), liking their patients more and getting more medical information from them (Meeuwesen, Schaap, and Staak, 1991) as well as speaking more positively, reflecting more of a partnership (Hall et al., 1994; Roter, Lipkin, and Korsgaard, 1991). This pattern of communication is considered patient-centered with more active partnership behaviors, positive talk, psychosocial counseling, psychosocial question asking, and emotionally focused talk (Roter and Hall, 2004). Limited studies exist outside of primary care, and gender-related practice patterns differ in some subspecialties such as obstetrics and gynecology with male physicians demonstrating higher levels of emotionally focused talk than their female colleagues (Roter and Hall, 2004).

Female physicians provide more preventive health services and maintain better patient relationships, reducing the likelihood of malpractice claims (Taragin et al., 1992). By sharing information more freely with patients, the status difference is reduced, leading to less complaints and increased satisfaction (Roter and Hall, 1992). Higher patient satisfaction with women physicians is not a universal finding however, and many of the studies described above did not take all patient-physician and

practice factors into account (Delgado, Lopez-Fernandez, and Luna, 1993). Patient preference for a male or female physician may play a large part in patient satisfaction (Ariouni and Rich, 2002).

Female physicians see different patient populations. In a sample of primary care physicians, female physicians compared with male physicians, have patients with more complicated psychosocial problems and patients described as frustrating with comparable numbers of medically complex patients and fewer elderly patients (McMurray et al., 2000). Female physicians see 17 percent more patients per office hour although the time spent in direct patient care activities is similar to that of their male counterparts (Wallace and Weeks, 2002).

In summary, women have skills and interests that improve patient outcome. Women see patients with more psychosocial problems and see more patients per office hour. Medical schools have implemented specific training to improve humanistic skills, although the benefits remain unproven.

Where Female Physicians Practice

Women are highly represented in pediatrics, family medicine, and psychiatry, less represented in surgery or surgical subspecialties (Hojat, Gonnella, and Xu, 1995), tend to practice in urban settings, to be on salary and to work part-time (McMurray et al., 2002).

Women are as likely as men to start their careers in surgery and internal medicine, but are less likely to complete specialist training (Gjerberg, 2002). Heavy workloads and "nights on call" make it difficult for women to combine childcare and work and encourage change to other specialties and postponement in having a first child. However, some women change from surgery to gynecology and obstetrics, a specialty that has a comparable workload as surgery, suggesting that other barriers may exist in surgery.

Worldwide, workforce planners anticipate decreases in physician full-time equivalencies because of the number of women in part-time practice, especially in rural areas. Steps taken include the development of a detailed database of work/family issues (Canada), flexible training schemes, and reentry training programs (United Kingdom) and improved training opportunities and work climate (Australia). In the United States, improved access to surgical fields, balancing work and family in training and practice, and recruitment and retention of women physicians in rural areas need to be addressed (McMurray et al., 2000).

In summary, women are more likely to be in specialties that already have a higher percentage of women although they may enter surgery and internal medicine in comparable numbers. It is thought that barriers to completion of these specialties

include the burdensome workload and nights on call. Workforce planners are aware of the anticipated change in physician practice patterns but need to step up their flexible training and work programs.

Career Satisfaction and Salary

Women physicians are generally satisfied with their careers although if they had to choose again, 31 percent might not choose medicine and 38 percent might change their specialty (Frank and Dingle, 1999). The most dissatisfaction is reported by women with least work control, most work stress, severe harassment, and who are younger-aged. Marriage and parenting hinders women's work commitment and earnings, while having the reverse effect on men (Uhlenberg and Cooney, 1990). Female physicians earn an average of \$22,347 less than their male colleagues (McMurray et al., 2000) and in primary care, report incomes of 60 percent and 85 percent less than their male colleagues (Wallace and Weeks, 2002). Women who have lower pay, status, and authority than men, but who describe more satisfaction than men in the same environment, fall into the "paradox of the contented worker" (Phelan, 1994). Possible explanations are that women may have lower pay expectations, are driven by subjective rewards rather than salary and are more likely to give a socially desirable response when asked about work (Davison, 2002).

In summary, women earn less than men but report job satisfaction. Those who are least satisfied report the least work control, most work stress or the most severe harassment. Satisfaction can be improved by promoting control in the work environment, diminishing work stress, and eliminating harassment.

Academic Life and Achievement

Women are under-represented in the higher ranks within the medical schools and academic departments and are less likely to be promoted than men (Bickel, Clark and Marshall, 1999). Eleven percent of women reach full professor compared with 30 percent of men. Women occupy only 10 percent of all department chairs (Association of American Medical Colleges, 2003). In academic emergency medicine, women are less likely to be board certified, hold major leadership positions, publish in peer-reviewed journals, and achieve senior academic rank (Cydulka et al., 2000). Female ob/gyn residents report a declining interest to pursue careers in academic medicine as they progress through their residency (Cain et al., 2001). Female cardiologists express more dissatisfaction with their ability to achieve professional goals and more gender discrimination (71 percent) compared to men (21 percent) (Limacher et al., 1998).

Funded enrichment programs to increase women's leadership are remarkably successful, with Johns Hopkins University School of Medicine reporting a 550 percent increase in the number of women at the associate professor rank over five years. Interim three-year follow-up shows a 183 percent increase in the proportion of women faculty expecting to be in academic medicine in ten years. Women faculty report improvements in timeliness of promotions, gender bias, access to information needed for faculty development, and salary equity (Fried et al., 1996).

Traditional gender roles and different socialization patterns are major obstacles for women in attaining leadership positions (Yedidia and Bickel, 2001). Women present themselves more modestly and are less likely to see themselves as qualified for top jobs, even when their credentials are equivalent or superior to male peers (Ragins and Cotton, 1993). The perception that women are "less than men" means that women have to be two-and-a-half times more productive in order to receive the same competent score (Wenneras and Wold, 1997). Non-nurturing women faculty is judged more harshly than non-nurturing male faculty (Sandler, Silverberg, and Hall, 1995).

Women have fewer publications than men, but the citation rate of their articles is higher (Levinson, Kaufman, and Bickel, 1993; Sonnert and Holton, 1996). Factors reducing women's productivity might be related to reduced networking for women with children and the fact that women's networks include fewer superiors and colleagues from previous institutions (Hitchcock et al., 1995).

Women perceive barriers to promotion, but do not necessarily report career dissatisfaction. In surgery, women perceive the promotion process as unfair and unrelated to academic rank and that discrimination hinders their career development (Dresler et al., 1996). A study of female Canadian surgeons found that although 50 percent thought that childbearing had slowed their careers, 88 percent stated that they were satisfied with their careers and family size (Mizgala et al., 1993).

In summary, funding can result in better representation of women at higher ranks, but otherwise women's options remain limited and constrained.

Sexual Harassment and Discrimination

Sexual harassment and discrimination are significant barriers to women's satisfaction in the workplace (Frank et al., 1999). Female physicians are two-and-a-half times more likely to perceive gender-based discrimination in the academic environment than male faculty, with rates of 47 percent for younger faculty and 70 percent for older faculty (Carr et al., 2000). In contrast, higher rates of sexual harassment are reported among younger women (Frank, Brogan, and Schiffman, 1998).

Fifty to 75 percent of medical students report sexual harassment or discrimination (Sheehan et al., 1990; Silver and Glicker, 1990; Komaromy et al., 1993). Surgery and obstetrics / gynecology have the highest rates and pediatrics, psychiatry, and family medicine, the lowest rates (Nora et al., 2002). Sexual harassment leads to diminished work ability and participation in the learning environment and serious psychiatric sequelae such as increased alcohol use and depression (Richman, et al., 1982). Experiences of gender discrimination and sexual harassment negatively impact medical student's choice of specialty thus perpetuating the gender divide between the specialties (Nora et al., 1996).

In summary, sexual harassment and discrimination continue to be prevalent in medical school, a significant source of dissatisfaction and a barrier to academic promotion. Women continue to make career choices based upon the acceptability of the work environment.

Pregnancy and Childbirth

Women are making decisions about having children during medical training. More than half of women physicians have their first child during residency (Seltzer, 1999), experiencing increased pregnancy complications, especially adverse late-pregnancy events (Klebanoff, Shiono, and Rhoads, 1990) and spontaneous and induced abortions (Klebanoff, Shiono, and Rhoads, 1991). Pregnant residents report increased stress due to the physical demands of residency and lack of support from fellow residents who may be angry and resentful because of the increased workload (Finch, 2003). However, in one surgical residency, all resident mothers reported they had been treated fairly and 94 percent of their male peers stated that the coworker's status had no effect or a positive effect on their own work life (Carty et al., 2002). During a surgical residency, 15 percent of women compared to 64 percent of men had children and most would consider a part-time surgical practice to allow for more parental involvement (Mayer, Ho, and Goodnight, Jr., 2001).

Overall, 25 percent of female physicians are childless compared to 9 percent of male physicians. These women are more likely to be in surgical specialties, less likely to be in primary care and are more likely to work full-time than their female colleagues with children (Slomski, 2000). Satisfaction with maternity leave has decreased although the length of leave has increased (Potee, Berber, and Ickovics, 1999). A flexible work environment without negative consequences for women with young children is rated as the highest need among academic female faculty (McGuire, Bergen and Polan, 2004).

In summary, women who have children during medical training would prefer longer leaves, greater training flexibility and more childcare opportunities. To at-

tract and retain the best candidates, improved policies on childcare services in the residency program and the workplace should be developed. Furthermore, an acceptable workweek for part-time, flexible practices and adequate leaves of absence for childbearing and child-care need to be established.

Part-Time Training, Work, and Academic Rank

Residents in part-time residencies scored significantly higher on clinical and humanistic skills compared to the full-time residents over a ten-year period (Carling et al., 1999). The advantages outweighed the disadvantages for residents who completed the flexible training program in pediatrics at the University of California in San Francisco (Kamei, Chen, and Loeser, 2004). The Board scores were no different for the flexible option residents compared to the full time residents.

Female physicians are less fully employed after graduation (84 percent vs. 99.4 percent) and work fewer hours (57 per week vs. 63 per week) (Hojat, Gonnella, and Xu, 1995). Female physicians are more likely to make career changes to accommodate their children, usually decreasing work hours (Warde, Allen, and Gelberg, 1996). Female physicians who worked their preferred number of hours reported better job role quality, better schedule fit, lower burnout, better marital role quality, and higher life satisfaction than those who worked full-time (Carr, Gareis, and Barnett, 2003). Reduced hour physicians are more likely to be in a generalist specialty, to spend more time in patient care and less time in research. Female physicians have higher retirement rates than male physicians, but due to their lower mortality rates, have work lives nearly as long as male physicians (Kletke, Marder, and Silberger, 1990).

Most medical schools do not have tenure for part-time faculty although many allow for promotion and a variety of benefits (Socolar et al., 2000). The majority of medical schools report that it is possible for part-time faculty to serve as clinical assistant, assistant, associate, and full professors and offer retirement benefits and health, dental, disability, and life insurance to part-time faculty; although part-time faculty may have to buy additional coverage to match that of full-time faculty. Part-time faculty is more likely to get tenure if the policy is written by the dean's office and in schools in the Midwest or West. Department Chairs are very or extremely satisfied with having part-time faculty (Socolar and Kelman, 2004). Overall, 85 percent of these departments employed part-time faculty—94 percent of pediatrics departments employed part-time faculty, 89 percent of medicine departments, 86 percent of family medicine departments, and 72 percent of surgery departments.

In summary, women work less hours and have more difficulty obtaining tenure. Those physicians who work the number of hours that they desire, experience the most job satisfaction. Less than full-time physicians tend to be generalists, do more

patient care and less research. Improving the availability of part-time tenure positions is desirable. Residents who participate in part-time training have improved clinical and humanistic skills, although the characteristics of the residents may be responsible.

Family Responsibilities and Career Satisfaction

Family responsibilities disproportionately affect the careers of female faculty. Among faculty with children, women are less ambitious than men but this is not the case for faculty without children, where sexes aspire equally to full professorships and department chairs. Women with children also report lower career satisfaction, greater obstacles to an academic career, less institutional support, less mentoring, slower self-perceived career progress and fewer publications (Carr et al., 1998).

American women physicians spend less time on childcare and substantially less time on housework than do other American women, spending little time on domestic activities that can be done for them by others. They spend on average half-hour per day cooking, half-hour per day on other housework and three minutes per week on gardening. They perform more domestic activities if they are married or widowed, have more children, lower personal incomes and more highly educated and higher-earning spouses, work fewer hours outside the home and on call less often. Women physicians with children under 17 years, spend a median of 24.4 hours per week on childcare. Career satisfaction and mental health is not adversely affected by time spent on domestic obligations, despite reported role conflicts for women physicians (Frank, Harvey, and Elon, 2000).

Female physicians perform most of the childcare and household responsibilities, compared with male physicians and sacrifice leisure time in order to work full-time and raise a family (Lorber, 1984; Shelton, 1992). Female pediatricians, compared to male pediatricians, perform 66 percent vs. 19 percent of the childcare and 63 percent vs. 26 percent of the household responsibilities (Fritz and Lantos, 1991).

In summary, the time spend on domestic activities does not interfere with female physicians' health or career satisfaction but women in academic life, who have a family, experience altered career expectancies and barriers to promotion.

Burnout

Women have a higher rate of burnout with the odds increasing by 12 percent to 15 percent per five hours worked per week over 40 hours (McMurray et al., 2000). Burnout is 40 percent less for women with young children when family or peer support is present. Although depression occurs at equal rates as in the general fe-

male population, female physicians who are at greater risk for depression are more likely to be single, without children, have more stress at home, a household gun, comorbid medical and psychiatric illnesses. They also report working too much, career dissatisfaction, less control at work, and high job stress (Frank and Dingle, 1999). The rates of successful suicide and divorce are much higher in female physicians compared with the general population (Robinson, 2003).

In summary, female physicians at increased risk for burnout and depression have poorer work environments but support from family and colleagues are mitigating factors.

Gender Role

Gender role stereotypes are still strongly held despite the changing roles of men and women. Women are considered to be more relational or communal in style, while men are considered to be more action-oriented and agentic. When agency is an important prerequisite for successful occupational role performance such as in medicine, women's careers suffer (Wood and Eagly, 2002). However, women in professions such as engineering, science, law and economics, do not show differences in agentic traits, from men (Diekmann and Eagly, 2000).

Gender differences in self-efficacy were not found during medical school training but in residency, female physicians experienced a decrease in self-efficacy, compared to the men (Abele and Nitzsche, 2002). Possible reasons are unfavorable organizational conditions and equivocal female gender-role expectations, especially the combination of occupation and family.

During medical school training, the trainee is socialized into their medical persona, learning to put the patient's needs first. Perri Klass (Klass, 1990), describes the dilemma that a pediatrician faces when she is mothering other children and her own children are at home without their mother. This struggle between competing loyalties to family and work becomes the source of much internal conflict (Myerson, 1997). Female physicians respond by separating their identities and developing a "double consciousness" (Wear and Castellan, 2002). In other words, these women experience themselves as mother and as physician separately and function psychologically in two separate realms.

In academic life, women may replicate traditional gender roles in the tasks that they are given (Yedidia and Bickel, 2001). These are often essential tasks such as being on committees and writing reports but which do not help with career advancement. A decision to have a child may be viewed as a sign of a lesser commitment to academic medicine. Applications for advancement may not be taken seriously and "aggressive" behavior denigrated as unwomanly. These attitudes force women to

confront traditional gender roles and make decisions about whether to conform to society's expectations or to push for career advancement and thus experience gender role conflict.

Society continues to have ambivalence about working mothers who are often seen as taking men's jobs. The medical profession is male-dominated and institutional practices that support the status quo are maintained (Sidanius and Pratto, 1999). In practice, this means that the provision of daycare facilities is not seriously considered and "mother's hours" generally mean part-time work with no health insurance. If organizations can shift towards a more democratic and participatory view, women will experience less prejudice and gain increased representation and acceptance in leadership roles in the future (Eagly and Karau, 2002).

Mothers are believed to have special knowledge or skills about children and fathers often defer decisions about children to mothers. As long as children are "mother-raised," and women perform the bulk of early childcare, the father will be seen as an outsider in the family (Dinnerstein, 1976). Fathers do have a more active and goal driven style compared to mothers (Levy-Shiff, 1999) and are spending more time with their children than in the past although working mothers' time with children is stable over time (Bianchi, 2000).

In summary, female physicians are subjected to increased role conflict between society's view of the good mother and the ideal of a good physician. Modern management scholars describe the benefits of a feminine style of leadership although patriarchal structures are difficult to change because of the desire of the dominant group to maintain the status quo. Part of this change must involve sharing of the childcare responsibilities in the home.

Conclusion

The increase in women in medicine has implications for patient care and for the health care delivery system. Women physicians establish more reciprocal relationships with patients and are more likely to listen to psychosocial problems than their male colleagues. Women cluster in certain specialties, in urban areas and in salaried practices. They work fewer hours, have lower incomes and are less likely to be in academic medicine. Therefore, women are significantly less likely to be in positions where they influence teaching, research, policies and academic interests. These differences have created a new hierarchical distinction within the medical profession. This separate new tier, below the power brokers is made up predominantly of women and is referred to as the "pink collar" tier (de Arellano, 1990).

Howard Brody a prominent family physician, sums it up best; "The dominant medical culture devalues women, primary medical care and attention to psychoso-

cial distress and instead focuses on objectively measurable biological variables and it has evolved a style of approaching illness that is so prohibitively expensive that our society can no longer afford it." He states that the most humane way of dealing with psychosocial distress is with a humane interview rather than a battery of diagnostic tests and polypharmacy. He cites studies of gender differences in interviewing which show a clear benefit for patients treated by women physicians and recommends that these skills be taught to all physicians in medical school (Brody, 1993).

Women want to determine the future of medicine and do not want to be relegated to a lower tier, the pink-collar tier, between nurses and male power brokers. There are several beneficial changes in the market place that will help female physicians; reduced physician hours for interns and residents and the formation of physician unions. Women are at the forefront of recent physician organizing where women's interests may be well served (Scherzer and Freedman, 2000). Thus, contentious issues about discrepancies in pay, sexual harassment and sexual discrimination suits, inequities in benefits for part-time workers and ensuring adequate pregnancy and maternity leave, can all go through the union's grievance procedure faster and more easily than through court proceedings. Further changes for women, however, will not occur unless active efforts are made to change the status quo.

The following is a summary of the key changes needed in medicine to allow women equal access and privileges compared with their male colleagues.

1. Practice what we preach. The importance of caring for one's own health and the health of one's family will necessitate changes in the training of physicians. Rather than devise a humanities course on sensitivity to the humanity of our patients, policies need to be put into place that allow physicians adequate leave and flexible schedules to care for dependents.
2. Promote equality in medicine. Eradicate salary inequities, sexual harassment, and discrimination in medical school, in the workplace and in academic departments and discriminatory practices that exclude women from positions of influence.
3. Plan for pregnancy. Pregnancy and maternity leave need to be accounted for, not seen as an inconvenience. Plan for residents' pregnancies, and have clear consistent maternity/parental leave policies. Part-time residencies or extended residencies should be available.
4. Part-time work. Allow physicians who work part-time to have a role in administration, teaching and academic medicine. Adequate healthcare and salary benefits should be offered.
5. Academic careers can proceed at a slower speed without compromising quality, for those who wish to combine family life and medicine, without creating a separate second tier parent track. Research can have long term productivity goals, so that number of papers published, for example, can be tied to hours worked rather than years at a particular rank although it would seem a better policy to reward quality rather than quantity.

References

- Abele, A.E., & Nitzsche, U. 2002. "A Scissors-Effect in Career Development of Female and Male Medical Doctors." *Dtsch Med Wochenschr* 4,127 (40): 2057–62.
- American Medical Association. 1997. AMA Women in Medicine Data Source. Chicago, IL. and Washington, D.C.: U.S. Department of Health and Human Services, National Center for Health Statistics.
- Ariouni, A.J., & Rich, E.C. 2002. "Physician Gender and Patient Care." *Journal of Gender Specific Medicine*, 6(1): 24–30.
- Association of American Medical Colleges. 2003. "Women in U.S. Academic Medicine Statistics, 1998–1999." Washington D.C.
- Bianchi, S.M. 2000. "Maternal Employment and Time with Children: Dramatic Change or Surprising Continuity?" *Demography*, 37(4): 401–14.
- Bickel, J., Clark, V., & Marshall, L.R. 1999. "Women in U.S. Academic Medicine Statistics, 1998–1999." Washington, D.C.: Association of American Medical Colleges.
- Bolton, G. 2003. "Medicine, the Arts and the Humanities." *The Lancet*, 362 (9378): 93–94.
- Brody, H. 1993. "Why Can't a Man be More Like a Woman?" *Journal American Board of Family Practice* 6(1): 82–83.
- Cain, J.M., Schulkin, J., Parisi, V., Power, M.L., Holzman G.B., & Williams, S. 2001. "Effects of Perceptions and Mentorship on Pursuing a Career in Academic Medicine in Obstetrics and Gynecology." *Academic Medicine* 76(6): 628–34.
- Carling, P.C., Hayward, K., Coakley, E.H., & Wolf, A.M. 1999. "Part-Time Residency Training in Internal Medicine: Analysis of a Ten-Year Experience." *Academic Medicine*, 74: 282–84.
- Carr, P.L., Ash, A., Friedman, R.H., Scaramucci, A., Barnett, R.C., Szalacha, L., Palepu, A., & Moskowitz, M.A. 1998. "Relation of Family Responsibilities and Gender to the Productivity and Career Satisfaction of Medical Faculty." *Annals of Internal Medicine*, 29(7): 532–38.
- Carr, P.L., Ash, A.S., Friedman, R.H., Szalacha, L., Barnett, R.C., Palepu, A., & Moskowitz, M.A. 2000. "Faculty Perceptions of Gender Discrimination and Sexual Harassment in Academic Medicine." *Annals of Internal Medicine*, 132(11): 889–96.
- Carr, P.L., Gareis, K.C., & Barnett, R.C. 2003. "Characteristics and Outcomes for Women Physicians Who Work Reduced Hours." *Journal of Women's Health*, 12(4): 399–405.
- Carty, S.E., Colson, Y.L., Garvey, L.S., Schuchert, V.D., Schwentker, A., Tzeng, E., Corcoran, N.A., Simmons, R.L., Webster, M.W., & Timothy R. Billiar. 2002. "Maternity Policy and Practice during Surgery Residency: How We Do It." *Surgery*, 132: 682–88.
- Charon, R., Greene, M., & Adelman, R. 1994. "Woman Readers, Women Doctors: A Feminist Read Response Theory for Medicine." In More, E.S., & Mulligan, M.A (eds) *The Empathic Practitioner: Empathy, Gender, and Medicine*. New Brunswick, NJ: University of Rutgers Press.
- Cydulka, R.K, D'Onofrio, G., Schneider, S., Emerman, C.L., Sullivan, L.M. & the SAEM Women and Minorities Task Force. 2000. "Women in Academic Emergency Medicine." *Academic Emergency Medicine*, 7(9): 999–1007.
- Cypress, B.K. 1983. "Patterns of Ambulatory Care in General and Family Practice: The National Ambulatory Medical Care Survey." Department of Health and Human Services Publication no. (PHS) 83–1734.
- Davison, H.K. 2002. "The Paradox of the Contented Female Worker: A Revision and Test of the Theories." *Dissertation-Abstracts-International: Section-B: The Sciences-and-Engineering*, 62(9-B): 42–58.
- Day, S.C., Norcini, J.J., Shea, J.A., & Benson, J.A. 1989. "Gender Differences in the Clinical Competence of Residents in Internal Medicine." *Journal of General Internal Medicine*, 4: 309–12.
- de Arellano, Ramirez. 1990. "Pink-Collar" Medicine: Implications of the Feminization of the Profession. *P R Health Sci J*, 9(1): 21–24.

- Delgado, A., Lopez-Fernandez, L.A., & Luna, J.D. 1993. "Influence of the Doctor's Gender in the Satisfaction of the Users." *Medical Care Research and Review*, 31: 795–800.
- Dinnerstein, D. 1976. *The Mermaid and the Minotaur: Sexual Arrangements and Human Malaise*. New York: HarperCollins.
- Dresler, C.M., Padgett, D.I., MacKinnon, S.E., & Patterson, A.G. 1996. "Experiences of Women in Cardiothoracic Surgender Comparison." *Archives of Surgery*, 131(11): 1128–34.
- Dufort, F., & Maheux, B. 1995. "When Female Medical Students Are the Majority: Do Numbers Really Make a Difference?" *Journal American Medical Women's Association*, 50(1): 4–6.
- Eagly, A.H., & Karau, S.J. 2002. "Role Congruity Theory of Prejudice toward Female Leaders." *Psychological Review*, 109: 573–98.
- Finch, S.J. 2003. "Pregnancy during Residency: A Literature Review." *Academic Medicine*, 78(4): 418–28.
- Frank, E., Brogan, D., & Schiffman, M. 1998. "Prevalence and Correlates of Harassment among Women Physicians." *Archives of Internal Medicine*, 23(158): 352–58.
- Frank, E., & Dingle, A.D. 1999. "Self-Reported Depression and Suicide Attempts among U.S. Women Physicians." *American Journal of Psychiatry*, 156(12): 1887–94.
- Frank, E., Harvey, L., & Elon, L. 2000. "Family Responsibilities and Domestic Activities of U.S. Women Physicians." *Arch Fam Med.*, 9: 134–40.
- Frank, E., McMurray, J.E., Linzer, M., & Elon, L. 1999. "Career Satisfaction of U.S. Women Physicians: Results from the Women Physicians' Health Study. Society of General Internal Medicine Career Satisfaction Study Group." *Arch Intern Med.* 12, 159 (13): 1417–26.
- Fried, L.P., Francomano, C.A., MacDonald, S.M., Wagner, E.M., E.J. Stokes, E.J. Carbone K.M., Bias, W.B., Newman, M.M. & Stobod, J.D. 1996. "Career Development for Women in Academic Medicine: Multiple Interventions in a Department of Medicine." *JAMA*, 276(1): 898–905.
- Fritz, N.E., & Lantos, J.D. 1991. "Pediatrician's Practice Choices: Differences between Full—and Part-Time Practice." *Pediatrics*, 88: 764–69
- Gjerberg, E. 2002. "Gender Similarities in Doctors' Preferences—and Gender Differences in Final Specialization." *Social Science and Medicine*, 54(4): 591–605.
- Hall, J.A., Irish, J.T., Roter, D.L., Ehrlich, C.M., & Miller, L.H. 1994. "Gender in Medical Encounter: An Analysis of Physician and Patient Communication in a Primary Care Setting." *Health Psychology*, 13(5): 384–92.
- Hitchcock, M.A., Bland, C.J., Hekelmanand, F.P., & Blumenthal, M.G. 1995. "Professional Networking: The Influence of Colleagues on the Academic Success of Faculty." *Academic Medicine* 70: 1108–16.
- Hojat, M., Gonnella, J.S., & Xu, G. 1995. "Gender Comparisons of Young Physicians' Perceptions of Their Medical Education, Professional Life, and Practice: A Follow-Up Study of Jefferson Medical College Graduates." *Academic Medicine*, 70(4): 305–12.
- Jones, B.J., Arnold, L., Xu, G. & Epstein, L.C. 2000. "Differences in the Preparation and Practice of Male and Female Physicians from Combined Baccalaureate-MD Degree Programs." *Journal American Medical Women's Association*, 55(1): 29–31.
- Kamei, R., Chen, C., & Helen Loeser. 2004. "Residency is Not a Race: Our Ten-Year Experience with Flexible Residency Training Option." *Academic Medicine*, 79: 447–52.
- Klass, Perri. 1990. *Other Women's Children*. Random House.
- Klebanoff, M.A., Shiono, P.H., & Rhoads, G.G. 1990. "Outcomes of Pregnancy in a National Sample of Women Physicians." *New England Journal of Medicine*, 323 (15): 1040–45.
- . 1991. "Spontaneous and Induced Abortions among Resident Physicians." *Journal of the American Medical Association*, 265: 2821–25.
- Kletke, P.R., Marder, W.D., and Silberger, A.B. 1990. "The Growing Proportion of Female Physicians: Implications for U.S. Physician Supply." *American Journal of Public Health* 80(3): 300–04

- Komaromy, M., Bindman, A.B., Haber, R.J., & Sande, M.A. 1993. "Sexual Harassment in Medical Education." *New England Journal of Medicine*, 328(5): 322–26.
- Levinson, W., Kaufman, K., & Bickel, J. 1993. "Part-Time Faculty in Academic Medicine: Present Status and Future Challenges." *Annals of Internal Medicine* 119: 220–25.
- Levy-Shiff, R. 1999. "Fathers Cognitive Appraisals, Coping Strategies and Support Resources as Correlates of Adjustment to Parenthood." *Journal of Family Psychology*, 13(4): 554–67.
- Limacher, M., Zaher, C.A., Walsh, M.N., Wolf, W.J., Douglas, P.S., Schwartz, J.B., Wright, J.S., & Bodycombe, D.P. 1998. "The ACC Professional Life Survey: Career Decisions of Women and Men in Cardiology." *Journal of American College of Cardiology*, 32: 827–35.
- Lorber, J. 1984. *Women Physicians: Career, Status, and Power*. New York, NY: Tavistock Publications.
- Mayer, K.L., Ho, H.S., & Goodnight Jr., J.E. 2001. "Childbearing and Child Care in Surgery." *Archives of Surgery*, 136(6): 649–55.
- McGuire, L.K., Bergen, M.R., & Polan, M.L. 2004. "Career Advancement for Women Faculty in a U.S. School of Medicine: Perceived Needs." *Academic Medicine*, 79: 319–25.
- McMurray, J.E., Angus, G., Cohen, M., Gavel, P., Harding, J., Horvath, J., Paice, E.J., Schmittiel, J., & Grumbach, K. 2002. "Women in Medicine: A Four-Nation Comparison." *Journal American Medical Women's Association*, 57(4): 185–90.
- McMurray, J.E., Linzer, M., Konrad, T.R., Douglas, J., Shugerman, R., & Nelson, K. 2000. "The Work Lives of Women Physicians." *Journal of General Internal Medicine*, 15: 372–80.
- Meeuwesen, L., Schaap, C., & Cees Van der Staak. 1991. "Verbal Analysis of Doctor-Patient Communication." *Social Science and Medicine*, 32: 1143–50.
- Mizgala, C.L., MacKinnon, S.E., Walters, B.C., Ferris, L.E., McNeill, I.Y., & Knighton, T. 1993. "Women Surgeons. Results of the Canadian Population Study." *Annals of Surgery*, 218(1): 37–46.
- Myerson, S. 1997. "Seven Women GP's Perception of Their Stresses and the Impact of These on Their Professional and Private Lives." *Journal of Management in Medicine*, 11(1): 8–14.
- Neittaanmaki, L., Gross, E.B., Virjo, I., Hyppola, H., & Kumpusalo, E. 1999. "Personal Values of Male and Female Doctors: Gender Aspects." *Social Science and Medicine*, 48(4): 559–68.
- Nora, L.M., McLaughlin, M.A., Fosson, S.E., Jacob, S.K., Schmidt, J.L., & Witzke, D.B. 1996. "Does Exposure to Gender Discrimination and Sexual Harassment Impact Medical Students' Specialty Choices and Residency Program Selections?" *Academic Medicine*, 71(10): S22–24.
- Nora, L.M., McLaughlin, M.A., Fosson, S.E., Stratton, T.D., Murphy-Spencer, A., Fincher, R.-M.E., German, D.C., Seiden, D., & Witzke, D.B. 2002. "Gender Discrimination and Sexual Harassment in Medical Education: Perspectives Gained by a 14-School Study." *Academic Medicine*, 7(12): 1226–34.
- Phelan, Jo. 1994. "The Paradox of the Contented Female Worker: An Assessment of Alternative Explanations." *Social Psychology Quarterly*, 57(2): 95–107.
- Potee, R.A., Berber, A.J., & Ickovics, J.R. 1999. "Medicine and Motherhood: Shifting Trends among Female Physicians from 1922 to 1999." *Academic Medicine* 74(8): 911–19
- Richman J.A., Flaherty, J., Rospenda, K.M., & Christensen, M.L. 1982. "Mental Health Consequences and Correlates of Reported Medical Student Abuse." *Journal of the American Medical Association*, 267: 629–94.
- Robinson, G.E. 2003. "Stresses on Women Physicians: Consequences and Coping Techniques." *Depress Anxiety*, 17(3): 180–89.
- Roter, D.L., & Hall, J.A. 1992. *Doctors Talking with Patients/Patients Talking with Doctors: Improving Communication in Medical Visits*. Westport: Auburn House.
- . 2004. "Physician Gender and Patient-Centered Communication: A Critical Review of Empirical Research." *Annual Rev Public Health*, 25: 497–519.

- Roter, D.L., Lipkin, M., & Korsgaard, A. 1991. "Gender Difference in Patients' and Physicians' Communication during Primary Care Medical Visits." *Medical Care*, 29: 1083-93.
- Sandler, B.R., Silverberg, L.A., & Hall, R. 1995. "The Chilly Classroom Climate: A Guide to Improve the Education of Women." Washington, D.C.: National Association of Women in Education.
- Scadron, A., Witte, M.H., Axelrod, E.A., Greenberg, C.A., & Meitz, J.E.G. 1982. "Attitudes towards Women Physicians in Medical Academia." *Journal of the American Medical Association*, 247: 2803-07.
- Scherzer, E., & Freedman, J. 2000. "Physician Unions: Organizing Women in the Year." *JAMWA* 55(1): 16-19.
- Seltzer, V.L. 1999. "Changes and Challenges for Women in Academic Obstetrics and Gynecology." *American Journal of Obstetrics and Gynecology*, 180: 837-48.
- Sheehan, K.H., Sheehan, D.V., White, K., Leibowitz, A., & Baldwin, D.C. 1990. "A Pilot Study of Medical Student 'Abuse.' Student Perceptions of Mistreatment and Misconduct in Medical School." *Journal of the American Medical Association*, 263(4): 533-37.
- Shelton, B.A. 1992. "Women, Men, and Time: Gender Differences in Paid Work, Housework and Leisure." New York, NY: Greenwood Press.
- Sidanius, J.H. & Pratto, F. 1999. "Social Dominance: An Intergroup Theory of Social Hierarchy and Oppression." New York: Cambridge University Press.
- Silver, H., & Glickman, A.D. 1990. "Medical Student Abuse; Incidence, Severity, and Significance." *Journal of the American Medical Association*, 263(4): 527-32.
- Slomski, A.J. 2000. "Parenting, the Hardest Happiest Job of All." *Medical Economics* 9: 83-100.
- Socolar, Rebecca R.S., & Kelman, L.S. 2004. "Part-Time Faculty in Academic Pediatrics, Family Medicine, and Surgery: The Views of the Chairs." *Ambulatory Pediatrics*, 2(5): 406-413.
- Socolar, R.R.S., Kelman, L.S., Lannon, C.M., & Lohr, J.A. 2000. "Institutional Policies of U.S. Medical Schools Regarding Tenure, Promotion, and Benefits for Part-Time Faculty." *Academic Med* 75(8): 846-9.
- Sonnert, G., & Holton, G. 1996. "Career Patterns of Women and Men in the Sciences." *American Scientist*, 84: 63-71.
- Taragin, M.I., Wilczek, A.P., Karns, E., Trout, R., & Carson, J.L. 1992. "Physician Demographics and the Risk of Medical Malpractice." *American Journal of Medicine*, 93: 537-42.
- Uhlenberg, P., & Cooney, T.M. 1990. "Male and Female Physicians: Family and Career Comparisons." *Social Science and Medicine*, 30(3): 373-78
- Wallace, A.E., & Weeks, W.B. 2002. "Differences in Income between Male and Female Primary Care Physicians." *Journal American Medical Women's Association*, 57(4): 180-84.
- Warde, C., Allen, W., & Gelberg, L. 1996. "Physician Role Conflict and Resulting Career Changes. Gender and Generational Differences." *Journal of General Internal Medicine*, 1(12): 729-35.
- Wear, D., & Castellon, B. 2002. "Motherhood & Medicine: The Experience of Double Consciousness." *Annals of Behavioral Science and Medical Education*, 8(2): 92-96.
- Wenneras, C.H., & Wold, A. 1997. "Nepotism and Sexism in Peer Review." *Science*, 341, 387.
- Wood, W., & Eagly, A.H. 2002. "A Cross-Cultural Analysis of the Behavior of Women and Men: Implications for the Origins of Sex Differences." *Psychological Bulletin* 128: 699-727.