

Mentors and Role Models for Women in Academic Medicine

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Senior mentors and role models have a positive influence on the career advancement of junior professionals in law, business, and medicine. In medicine an increasing number of women are pursuing academic careers, but available senior mentors to provide career guidance are often lacking. We report on the results of a national survey of 558 full-time faculty women, aged 50 years and younger, in departments of medicine in the United States, regarding their experience with role models and mentors. Women with mentors report more publications and more time spent on research activity than those without mentors. Women with a role model reported higher overall career satisfaction. This report, with illustrative examples, may be helpful to other women pursuing academic careers and to physicians who serve as mentors or role models to others.

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The value of senior mentors to career advancement has been demonstrated in several professions including law, business, and medicine.¹⁻³ Both men and women professionals benefit from having senior mentors, but for women, senior mentors to provide them with career guidance are more frequently unavailable. Research about academic professionals shows that junior faculty with mentors publish more articles,⁴ feel more confident in their capabilities,^{5,6} and are more satisfied overall with their career than those without mentors.⁷

With the changing demographics of medicine, there are increasingly more women entering junior faculty positions in medical schools.⁸ At present, junior faculty women are more likely to leave the path leading to academic advancement than their male colleagues.⁹ What role do mentors currently play in encouraging and sustaining women's academic careers? A recent survey of full-time faculty women in departments of medicine in the United States indicated that 40% did not have a mentor during their training and 67% had no current relationship with a successful role model.⁷ In this article we examine further the importance of mentors and role models to women in academic medicine. While previous studies have explored some relationships between mentoring and career advancement, we examine the availability of mentors and role models to women in academic medicine and describe the diverse experiences of women currently in academic medicine. Illustrative examples ranging from helpful to suboptimal mentor relationships are included. We hope that describing the experiences of these women will be useful to other women physicians currently pursuing academic careers and to physicians who serve as mentors or role models to junior faculty and medical students. In addition, we hope this report will provide guidance to women medical students thinking of developing a career in academic medicine by informing them about the value and characteristics of a good mentor.

Methods

In January 1988, a 110-item survey was mailed to all women 50 years of age and younger in departments of medi-

cine (n = 862) listed in the September 1987 faculty roster of the American Association of Medical Colleges (AAMC). The faculty roster is based on information provided to the AAMC by the office of the dean of each medical school and is updated monthly. The roster includes all full-time faculty who are willing to be listed. Our survey instrument requested demographic information, specific details about child rearing and childbearing, and attitudes toward both personal and professional issues. We specifically requested information about mentors and role models. More than 83% of those surveyed returned their questionnaires (n = 558). The mean age of the respondents was 38 years. Most (64%) were assistant professors, but 25% held more senior academic ranks (5% professor and 20% associate). The responses of selected survey items related to childbearing and child rearing were recently reported.⁷ This article expands on the previous report by describing details from the questionnaire pertaining to mentors and role models.

All respondents were asked whether they had a mentor during their medical training and the sex of that mentor. Respondents were also asked whether they currently had a relationship with a role model who they perceived as successful in balancing career and personal life. We defined a mentor as an advisor whose guidance focuses on professional issues. In contrast, a role model may provide an example in a broader context that includes both professional and personal aspects of life. A role model may be emulated by a student. Respondents were encouraged to describe their personal experiences with mentors and role models.

Coders classified written comments and found that they clustered into seven major themes. Table 1 displays the seven categories and provides several representative examples of each. The first 100 questionnaires were scored by two separate coders to ensure accuracy in the coding; high interrater reliability was found ($r = .85$). The other 458 questionnaires were then coded by one person only.

Associations were analyzed by comparing tabulated data from the mentoring section with demographic information (rank and race) and with career demographics (time spent on research, number of publications, and overall career satisfac-

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tion). Career satisfaction scores were based on responses to three questions with a Likert scale format. We used *t* tests to examine the association between having a mentor during training or a current role model and personal or career demographics.

As previously reported, overall, 61% of respondents acknowledged having had helpful relationships with a mentor of either sex during their training, and 39% recounted no such relationship.⁷ In addition, 31% of respondents said they had an ongoing relationship with role models perceived as successful in balancing career and personal life, whereas 67% had no such relationship.⁷

Results

Of the 558 women who returned surveys, 236 (42%) volunteered at least one comment about mentors or role models. Those responses were grouped into seven major themes (Table 1). Major themes included difficulty finding a mentor, either male or female; the lack of available senior women to serve as role models; having a relationship with a role model who provided professional but not personal guidance; peers serving as role models to one another; the respondent herself acting as a mentor or role model to others; experience with a good mentor or role model; experience with a poor mentor or role model.

Approximately 50 women commented on the lack of available senior women faculty to serve as role models. For example, one woman said, "I'm the only woman in the De-

partment of Medicine." Another reported, "I have *never* had contact with a female tenured academic physician." In addition, 45 focused on the discrepancy between a role model in the professional versus the personal domains. Mentors might provide guidance or examples of successful teachers or researchers but not discuss the personal aspects of combining career and family. One respondent wrote, "There was never anyone who looked at me and my career plans in the context of my life outside of medicine—just mentors for life within medicine." In particular, respondents with children remarked that their academic mentors often did not have children or family responsibilities and did not serve as role models in combining career and family. One respondent said, "The few other women faculty with whom I work are unmarried or have elected not to have children in order to pursue a career. Most of my other female physician friends that married and had children are working in settings with fixed hours outside of academic medicine."

Those respondents who had good mentors and role models highly valued those relationships. Those "good" mentors helped respondents with research efforts, in obtaining salary benefits and protected research time, and provided encouragement and emotional support. Often these mentors were men, consistent with the greater availability of senior faculty men than senior women.

A significant association was found between having a mentor of either sex during training and the respondent's race, number of publications, time spent on research, and

TABLE 1.—Responses to Survey of Women in Academic Medicine Regarding Mentors and Role Models

Category	Responses, No.	Example
Difficulty in finding a mentor of either sex	22	This has been a major problem for me. Even in departments that welcome women, few males are willing to become their research mentors—and there aren't any women No such person was available during my training. Most mentors appear to be very busy and usually not helpful in dealing with issues in this study I feel this is a major lack, not so much a role model to balance personal life, but the lack of a mentor in both training and as junior faculty
Lack of available senior women to be mentors or role models	48	I have come across no female role models at the professor level in academic medicine in the institutions where I have worked No female mentors were accessible
Relationship with role model or mentor who provides professional but not personal guidance	44	Most women physicians I admire as professionals I could not model myself upon as people—they are not married, no kids, no other pressing outside interests, but they had integrity, hardworkingness (beyond the men), and a commitment to their patients as people upon which I modeled my professional life Yes, but more or less restricted to development of intellectual skills (excellent role models for developing reading habits, improving patient care skills, etc)—very little opportunities to discuss other issues (how to combine careers and personal life, etc)
Getting support from peers rather than role models	28	Mostly peers—male more than female with whom I discuss these issues—perhaps we complain, lament more than actually discuss, but it's helpful
Respondent now serving as a role model or mentor.	14	At the time I trained there were very few women in medicine. I became a role model for others I've become one, which is sobering!
Experience with a good mentor or model	36	My mentor during nephrology fellowship was male and completely understanding [vis-à-vis] stresses of both job and home. His household was a two career household with children and he definitely carried equal responsibility She was definitely committed to family and career and gave me a great deal of emotional support as a resident A female academic general internist, 5 to 6 years my senior, single and without a family. Doggedly determined to succeed in academics and usually prepared to understand the complexities of my life. Encouraged me to enter academics anyway
Experience with a poor mentor or role model.	9	One female attending assigned as my preceptor was more harmful than helpful—she was not supportive—she was too "superwoman" I had a destructive relationship with a male mentor who was intimidated by me and was only two years older than me (not the best for a mentor)

overall career satisfaction. White respondents were significantly more likely than nonwhite respondents to report having a mentor during training (63% versus 49%, $P < .05$). Those who had a mentor during training averaged 13.1 publications compared with 10.3 articles for respondents without a mentor ($P < .05$). Respondents who had a mentor also spent more time on research activities. Women with a mentor estimated they spend an average of 26% of their time on research activities, and those without a mentor spend 21% of their time doing research ($P < .01$). The sex of the mentor was not a significant influence on either the number of publications or the percent of time spent on research. As reported previously, those who had a mentor during their training also reported greater career satisfaction than those who had not had a mentor.⁷ Present rank was not correlated with having a mentor during training.

A minority of women (31%) reported having a current successful role model. Women in lower ranks were more likely to have a role model than women of associate and professor rank ($P = .05$). Unlike with mentorship, the race of the respondent was not correlated with having a role model. Having a relationship with a role model has different career implications than does a relationship with a mentor. Overall, career satisfaction was strongly associated with having a current role model ($P < .0001$), but a current relationship with a role model was not associated with either the percentage of time spent on research or the number of publications. Role models appear to provide more guidance about personal issues, such as combining career and family, than do mentors.

In addition, 36 respondents commented on the value of peers as role models. "Peers in similar situations to commiserate and compare notes with" serve as an important source of support and academic encouragement, particularly when senior mentors are not available.

Discussion

The value of a good senior mentor to the career advancement of a junior faculty member is unequivocal. The present study shows that women with mentors have more publications in peer-review journals, spend more time on research, and have greater career satisfaction than women without mentors. This is consistent with other studies of professional women both in medicine and other academic areas.⁴⁻⁷ Because women physicians tend to have slower academic promotion rates and leave the academic path more frequently than men,⁹ they likely have a greater need for mentors to encourage and sustain their careers. One physician summed up the importance of this need: "I believe that the absence of the successful mentor relationship in my career was a major impediment to its progress."

Finding a good senior mentor, however, particularly a female mentor, is not an easy task. What if a female mentor is not available? Does the sex of a mentor influence the efficacy of the relationship? Some sociologic studies suggested that mentors of the same gender as the student are more effective than one of the opposite sex.^{10,11} This present study did not demonstrate a difference in research activities or number of publications dependent on the sex of the mentor during training. It is likely that mentors of either sex are equally effective in counseling women about career advancement. One respondent noted that "My immediate boss, and mentor [a man], has helped me to get salary increases, protected my research time, and supports lab efforts." On the other hand,

personal guidance and support may be more effectively provided by same-sex mentors or role models. In this study, comments suggested that women role models could be most helpful in providing guidance about balancing personal and professional lives. One respondent said, "The chief of my division (a man) was extremely helpful and sensitive, but clearly the scope of his advice was limited." That male and female mentors for junior women faculty have different roles has been pointed out in a study by Ochberg and co-workers.¹² It shows that high-ranking male mentors who are effective career sponsors were less likely than female mentors to provide personal advice. Given this information, we would suggest that young women faculty not try to find "everything" in one senior mentor. Perhaps the most effective strategy is for junior faculty to seek a mentor of either sex to provide guidance in career issues and then to find a role model of their sex to provide advice and encouragement in issues related to combining career and family and personal development.

This study suggests another strategy for compensating for the lack of senior women role models. Using a network of peers can be a viable method to obtain social and career enhancement. Peers, in fact, offer the advantage of providing support at successive career stages, and sociologic studies have shown their effectiveness in both career and personal domains.¹³ In response to the issue of the availability of role models successful at balancing career and personal life, one woman commented, "I don't consider them role models; I have colleagues/friends who do it in a variety of ways. We support each other."

Furthermore, this study shows an important relationship of race and mentoring. White faculty are more likely than nonwhite faculty to have a mentor during training. While the number of nonwhite faculty was small ($n = 57$), we think this is an accurate reflection of the experience of nonwhite academic physicians. This result is consistent with studies of African-American students in graduate and professional education.^{14,15} Minority students and junior faculty are at greater risk for leaving the academic pathway than their white peers.¹⁶ Perhaps this is in part because they do not have the support and encouragement of senior mentors who can guide their career development.

This study has several limitations and raises further questions. First, the study included only full-time women faculty. Those women who work part-time or who have left academia may have different experiences related to mentors and role models. In fact, we speculate that some women who have left full-time academic positions may have done so because of a lack of guidance by senior mentors. Second, the experience of women currently entering academic medicine may be different from that of the group surveyed. For example, some universities provide support groups for women faculty or hold special retreats to address the needs of women faculty.¹⁷ In addition, the study does not include a matched cohort of men physicians to allow comparisons between the sexes.

With the increasing number of women entering medical schools, pursuing residency training, and joining academic faculties, there is an increased need for senior mentors of both sexes to encourage these young faculty in their academic careers. It is in the best interest of academic institutions to foster the careers of these women so they may realize their full scientific potential. As one respondent clearly articulated, "Having a relationship with a mentor is one of the most difficult areas for women seeking academic careers, espe-

cially given it is so critical to their success." Both institutions and individual faculty members can play a role in correcting the present problem of a lack of available mentors. Institutions should implement formal mentorship programs and reward senior faculty for their mentor role. The American College of Physicians in a recent position paper on promotion and tenure for women and minorities encourages medical schools to establish formal career counseling programs for junior faculty. The college suggests that such programs should designate skilled senior counselors for junior faculty members.¹⁸ In addition, individual senior faculty members should recognize the vital importance of their advice to junior faculty and place a high priority on dedicating time to these relationships.

While it is the responsibility of the institution to develop counseling systems, we encourage junior faculty women to actively seek mentors of either gender who can provide them with guidance in career development and nurture their research and teaching potential. Even in a nurturing environment, junior faculty need to assume the initiative in securing senior mentors. Junior faculty should give careful thought to identifying mentors to match their needs and academic interests. Senior faculty members of either sex can provide key research and academic guidance. While effective in many areas, some mentors may not be attuned to the challenges of combining career and family. Hence, junior women may need to develop other relationships, often with peers, to meet these needs.

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