Issues in the Mentor–Mentee Relationship in Academic Medicine: A Qualitative Study

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Abstract

Purpose
To explore the phenomenon of the mentor–mentee relationship and to characterize this relationship among people who have obtained early career support from a government funding agency, in order to facilitate the development of future mentorship programs.

Method
A qualitative study was completed involving clinician scientists who were awarded early career support from a provincial funding agency (Alberta Heritage Foundation for Medical Research, Edmonton, Alberta, Canada) and their mentors. Individual, semistructured interviews were completed, and transcripts of interviews were analyzed using a grounded theory approach.

Results
Interviews with 21 population health or clinician investigators (mentees) and seven mentors were completed from October to December 2006. Several themes were identified including the experience with mentorship, experience of being assigned a mentor versus self-identification, roles of a mentor, characteristics of good mentoring, barriers to mentorship, and possible mentorship strategies. Participants believed mentorship to be important, but several experienced significant difficulty with finding mentors and establishing productive relationships.

Conclusions
Challenges exist within academic medicine around ensuring that clinician scientists receive appropriate mentorship. Strategies to enhance the mentorship process were identified, including the development of formal mentorship initiatives, the creation of workshops organized by funding agencies in partnership with universities, and the development and evaluation of a mentorship training initiative for mentors and mentees. These findings can be applied to any academic health sciences institution.

Acad Med. 2009; 84:135–139.

Mentorship has been recognized as a catalyst for career success, and mentoring relationships have been cited as important in career selection, advancement, and productivity.[1–3] Indeed, a systematic review found that mentorship is an important factor in choosing a career in academic medicine.[4] However, mentor–mentee relationships are challenged by increased clinical, research, and administrative demands.[1–3,5] Moreover, mentorship is often undervalued by leaders at academic institutions, who may fail to consider the work of a mentor in promotion and tenure decisions.[3,5,6]

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To enhance the development of mentorship within academic institutions and to prevent further erosion of these vital mentor–mentee relationships, it is important to understand the effect of mentorship on the mentees (and mentors), the variables associated with mentoring success, and the impact of mentoring interventions on career satisfaction and productivity. A systematic review identified that mentorship has an important influence on personal development, career guidance, career choice, and research productivity, including publication and grant success.[3] The architecture of the studies identified in the review does not allow conclusions to be made on the effect size of mentoring on any aspect of academic and professional development.

To make relevant practical recommendations on mentoring in medicine, studies using rigorous methodology and addressing contextual issues are needed to answer some key questions about the value of mentoring, including the experiences of the mentor and mentee. In an attempt to meet this challenge, we designed this study to explore the phenomenon of the mentor–mentee relationship and to characterize this relationship through the experiences of those people who have obtained early and midcareer support. We hope the results of our study are useful in facilitating the development of future mentorship programs.

Method

For consent to participate in this qualitative research study, we approached population health and clinician investigators with MD degrees who obtained academic career support funding between 1996 and 2006 from the Alberta Heritage Foundation for Medical Research (AHFMR), a provincial government funding agency. This peer-reviewed funding is available for researchers committed to spending 75% of their time on research. We used stratified purposive sampling to ensure inclusion of participants from both faculties of medicine within Alberta, Canada (the University of Calgary and the University of Alberta), and from both genders. Between October and December 2006, we conducted 21 interviews with population health (n = 10) or clinician investigators (n = 11) who were funded

Table 1

Demographic Information of Participants in a Qualitative Study of Mentees and Mentors on the Mentorship Relationship, Alberta, Canada, 2006

Variable	No. (%) Mentors (N = 21)	No. (%) Mentors (N = 7)
Male	17 (81)	7 (100)
University of Calgary	10 (48)	4 (57)
University of Alberta	11 (52)	3 (43)
Basic science researcher	12 (57)	N/A

by AHFMR (Table 1). We interviewed seven senior mentors, all men, who were identified by the population health and clinician investigator mentees on their AHFMR grant applications or during interviews. None of the mentees identified female mentors.

After we obtained informed consent, an experienced interviewer conducted semistructured telephone interviews with the participants. We developed domains of inquiry based on the results of the systematic review[3] and in consultations amongst our team. Interview questions included items about experience with mentorship and elements of a successful mentoring relationship (List 1). As the data were analyzed, questions were added to address identified themes (List 1).

We approached a sample of the mentors whom the mentees identified in their AHFMR grant applications or during their interviews, and we invited them to participate in this study. We used purposive sampling to ensure representation from both the University of Calgary and the University of Alberta. Domains of inquiry were derived from the results of the interviews with mentees and included consideration of the mentees' experience of mentorship and their perceptions of elements of a successful mentoring relationship (List 2).

Interviews were audiotaped, and the tapes were transcribed verbatim. Each tape was assigned a unique identifier. Content analysis of the transcripts began after the first completed interview and drew on grounded theory using a process of open, axial, and selective coding.[7,8] The goal of these interviews and of the analysis of their contents was to develop a synopsis of the understanding and use of mentorship by these individuals. In open coding, two investigators independently read each transcript and identified themes using a constant comparative approach. These themes were used to develop codes, and analysis continued with each transcript. We grouped codes into categories and used axial coding to look at the interrelationship of categories, including context, intervening conditions, and consequences. Sampling continued until no new themes were identified. We used written memos to provide a record of the analytic process. The memos captured the decisions and results of the analysis, helped to develop propositions, and were compared by the two investigators. We deliberately tried to discount or disprove a conclusion drawn from the data. Reliability of the categories was determined by the frequency or consistency with which they were indicated by participants in their interview. We invited interview participants to provide feedback on the results. Ethical approval was received from the University of Calgary Ethics Review Board.

Results

We identified several themes in the transcripts: the overall experience with mentorship, experience of being assigned a mentor versus self-identification of a mentor, roles of a mentor, characteristics of a good mentoring relationship, barriers to mentorship, and possible mentorship strategies.

Experience with mentorship

All participants believed good mentorship to be vital to career success. The majority of participants experienced good mentoring. Nine mentee participants described difficulties with mentorship, including lack of mentorship, having research stolen by their mentor, or perceived competition with their mentor. They believed that these difficulties impacted their career progress and productivity. One mentee stated, "I don't know if I would perceive much mentoring during the time I have been on faculty." Similarly, another mentee "felt that I could have had more help than actually received." A third mentee mentioned, "I had a mentor who really didn't discuss things with me, was not interested in spending time on actually discussing issues, and was far too different from me to actually approach them with problems." In particular, female mentees expressed the challenge of finding mentors who could help provide them with guidance around work and life balance, and timing of maternity leave. "There was no guidance for women going through maternity leave and trying to come back," stated a mentee. Concern about mentors competing with mentees

List 1

Questions Asked of 21 Mentees About the Mentorship Relationship, Alberta, Canada, 2006

Original questions

1. What is the experience of mentorship that you have received?
2. How and when did you identify your mentor(s)?
3. Were there any barriers or facilitators to identifying a mentor?
4. How often do you meet with your mentor?
5. What do you receive from your mentor? What do you discuss with your mentor? What is the function of your mentor?
6. What do you perceive as the elements of a successful mentoring relationship? Of a failed mentoring relationship?
7. Do you mentor anyone?
8. Does gender play a role in the mentor—mentee relationship? Should the mentor and mentee be the same gender?
9. Can you identify any relevant materials from your organization on formal mentorship programs?
10. What was your mentor's role in preparing your application for funding from the Alberta Heritage Foundation for Medical Research? Wh at was your experience of mentorship in this process?

Questions added to address identified themes

1. What mentorship strategies would you recommend be implemented (if any) at your organization? At funding agencies?
2. Were there any barriers to receiving mentorship?
3. If any barriers were identified, what could be done to overcome these barriers?
4. Should mentors be matched on gender, culture, or other factors?

List 2

Questions Asked of Seven Mentors About the Mentorship Relationship, Alberta, Canada, 2006

1. What is the experience of mentorship that you have received?
2. How would you characterize their relationship with your mentee?
3. What do you perceive as the elements of a successful mentoring relationship? Of a failed mentoring relationship?
4. In your role as mentor, what do you aim to do?
5. Does gender play a role in the mentor—mentee relationship?
6. Can you identify any relevant materials from your organization on formal mentorship programs?
7. What was your role in your mentee's application for Alberta Heritage Foundation for Medical Research funding?

was also raised. As one mentee stated, "I didn't seek out their mentorship because I didn't want to share all my ideas with that person because they were in the same area of research as me."

Self-identification of a mentor versus being assigned a mentor

Some mentees (9/21) were assigned mentors by their university department chair. The University of Alberta has a formal mentorship program that has been established for clinician scientists. Clinician scientists are physicians who commit 75% of their time to research. In this program, academic mentors are assigned to provide guidance about career development, including milestones, and a separate research or science mentor provides input on the scientific program.

Although three mentees found assigned mentorship to be useful, all mentees expressed concern that assigned mentorship could have a negative impact on the mentor–mentee relationship. One mentee observed that "the relationships that were most productive were those that were spontaneous and not due to a requirement." Mentorship felt "forced" to some mentees when they were assigned a mentor, and they felt that a "forced relationship could lead to failure." Mentor participants also felt that assigned mentorship could lead to "an artificial or superficial relationship."

Participants provided recommendations for finding mentors. They suggested that the department chair provide a list of potential mentors to the mentees. The mentees would be advised to meet with potential mentors and to speak with mentors' other mentees. One mentee mentioned that if a postdoctoral fellow becomes faculty, the fellow's supervisor should not become his or her mentor. Another mentee stated that the mentor should not be someone with whom the mentee shares resources or is dependent on for resources.

Responses were mixed about whether there is a need for gender matching between the mentor and mentee. Two mentors expressed the concern that a male mentor might not be able to provide guidance on the needs of a female mentee, especially around issues of parental leave and its impact on the career. One mentee raised the issue that mentors and mentees could be matched on several factors, including religion, culture, or presence of a disability.

Roles of a mentor

Several roles for a mentor were identified by participants. All participants—mentees and mentors—felt that the mentor had a key role in grant application review before submission. Grant application review was the most common (and, in many cases, the only) function of mentors in the AHFMR grant process. Mentors were important in establishing connections with potential research collaborators, preparing manuscripts and presentations, providing networking opportunities, advising on career progress (including achievement of appropriate career milestones and time management), and providing guidance on "navigating university bureaucracy" and dealing with difficult situations. Participants also observed that the role of a mentor was to role model good mentorship so mentees could learn how to be good mentors. Although most participants advocated mentors providing guidance in decision making, three mentees felt that the role of the mentor was more to facilitate decision making—making a distinction between telling the mentee what to do and helping the mentee to make a decision. One mentee stated that the role of the mentor was "to help me to do my job, push me to do my job. I don't need somebody to say, 'You are wonderful,' I need somebody to kick my ass once in awhile."

Characteristics of a good mentorship relationship

When asked what characteristics of a mentor would facilitate a good mentorship experience, mentors and mentees identified many qualities, including having seniority and being approachable, accessible, altruistic, understanding, patient, and honest. Two mentees mentioned the need for mentors to ensure that the mentee clearly benefits from the mentoring relationship and to "ensure that the research is appropriate for the mentee and not just what the mentor believes is necessary to enhance the bigger research agenda."

Mutual respect and open communication between the mentor and mentee were perceived to be important. Confidentiality must also be maintained. Clear expectations of the mentor and mentee should be outlined. In particular, it was suggested that clarity around what intellectual property belongs to the mentee is required. One mentee mentioned, "It was a disaster when there was blurring around academic work and the mentor tried to take my work." Participants also discussed the need for good "chemistry" between the mentor and mentee, with a mentee stating, "If you wouldn't do something with [your mentor] after work, then you probably are not going to be doing something with them at work either."

Both mentors and mentees felt that the mentee needed a passion to succeed in his or her career for the mentor–mentee relationship to work. Moreover, commitment from the mentee to the success of the mentoring relationship was believed to be important. Mentees highlighted that the mentee needed to be in "the driver's seat" to facilitate a successful relationship.

Participants believed that regular contact between the mentor and mentee should be maintained. Whereas some participants felt that written progress reports were useful to hold both the mentor and mentee accountable and to outline progress on goals, others had different views. One mentee felt that if the mentor was the only mentor available in a particular institution, the mentee might not feel comfortable being open

and critical about the relationship, resulting in inaccurate and meaningless progress reports.

Barriers to mentorship

Time required from both the mentor and mentee was perceived to be the single most important barrier to mentorship. Lack of academic recognition for mentors was also considered to be a barrier. Participants perceived that mentorship is not recognized in annual activity reviews or in promotion criteria. One mentee stated,

> One of the major barriers to this process is that people are mentors basically as a hobby. They do not consider it part of the job that they do and that influences the time available to do it. . . . Under our current system, I don't know that anybody views mentoring as a priority.

Eighteen mentees stated that the lack of financial incentive to mentorship was a barrier. None of the senior mentors felt that lack of financial incentive was a barrier to mentorship.

Barriers to mentorship exist if the mentor does not have the appropriate skills to mentor. For example, a mentor's inability to understand and appreciate the mentee's job description or requirements for success and promotion was seen as a barrier. Mentees also felt that an "authoritative boss–employee relationship" was a barrier to mentorship. Participants also felt that mentees might be reluctant to establish a relationship with a mentor because of actual or perceived barriers. One mentee stated,

> A lot of people are much more interested in lifestyle than they used to be and I think they are scared of getting a mentor and they know in their heart of hearts that they are underachieving and they don't want somebody to keep rubbing it in.

Lack of available mentors was recognized as an issue, with some mentees having trouble identifying a local mentor with whom they could establish a comfortable and productive relationship. Both mentors and mentees described this difficulty, especially if mentees were new to an institution. Several mentees mentioned that their university or department did not have a formal mechanism to facilitate finding a mentor. Mentees also felt that there was "not a whole lot of selection" available in their institutions, and in some cases there may have only been one person available locally to act as a suitable mentor.

Potential mentorship strategies

Several strategies were suggested to facilitate and support mentorship. Because of a perceived lack of local mentorship, participants suggested that potential mentors be identified at other institutions and funding be provided to allow mentees to visit their mentors regularly. Several mentees recognized the usefulness of having a separate academic mentor (to provide guidance on promotion, career milestones, local politics, and work and life balance) and scientific mentor (to provide guidance on research). And, participants felt that although the academic mentor perhaps needed to be local, the scientific mentor could be available at a distant site. This observation and the recognition of different mentorship roles raise the issue of the possibility of team mentorship.

Mentors and mentees recognized the importance of training, with one mentor stating, "It is like a lot of things in academic medicine. Nobody teaches you how to do it, you are just expected to do it." Only one mentee suggested that no mentorship training or support for mentorship was needed, believing that mentorship cannot be taught. All participants were concerned that any training initiative should consider the lack of extra time available to mentors and mentees to participate in such activities. One mentor stated, "It's a wonderful idea to have training. The challenge is that people don't have the time to mentor, never mind to learn how to do it." Most participants believed that training sessions should include mentors and mentees. Several participants suggested that funding be provided to mentors as an incentive to participate in training sessions.

Various formats for training were discussed. Participants most commonly suggested a workshop that would involve discussion on what constitutes a good mentor, how to mentor in particular situations, the roles and responsibilities of a mentor/mentee, career benchmarks, and communication strategies. Respondents felt that the mentor and mentee should be accountable for what happens after the workshop and should provide progress reports outlining achievement toward expressed goals. A brief, online course was also suggested for mentors and mentees. Some participants suggested that a written guideline be created for mentors and mentees with no in-person training. Finally, a coaching strategy was suggested in which mentors attend training sessions to learn by doing and receive feedback from others. This strategy would also allow for an opportunity to discuss strategies around difficult situations.

Discussion

Mentorship is vital to career success, and participants in this study believed that failed mentorship can lead to loss of productivity and inability to achieve career benchmarks. However, we found that several threats exist to the establishment of productive mentoring relationships in academic medicine. First, participants identified difficulty in finding a mentor. This result is consistent with the results of the systematic review which found that in some fields fewer than 20% of faculty members had a mentor and that women perceived that they had more difficulty finding mentors than their male colleagues.[3] Lack of time by both mentors and mentees was also perceived to be a barrier to a productive relationship. Insufficient academic recognition for mentorship was another barrier. Finally, mentorship-enhancing training opportunities for mentors and mentees are not adequate. These challenges are consistent with the domains in research mentorship that were outlined in a recent commentary by Keyser and colleagues.[9] They suggested that, to provide effective mentorship strategies, academic medical institutions should shape five domains: criteria for selecting mentors, incentives for motivating faculty to serve effectively as mentors, factors that facilitate the mentor–mentee relationship, factors that strengthen a mentee's ability to conduct research responsibly, and factors that contribute to the professional development of both mentors and mentees.[9]

The results of our study shed light on some areas that we found to be understudied in the literature. In the systematic review of mentorship, only five studies provided details on how the mentorship relationship was formed.[10–14] Most participants in our study believed

that mentors should be self-identified and not formally assigned. Although they wanted some guidance in finding a mentor, they were concerned that assigning mentors could lead to superficial or inadequate mentorship relationships.

A previous study identified the perception that mentors used their mentees' work to advance their own careers,[15] but there is generally little mention in the literature about potential adverse outcomes associated with mentoring. Our study identified some additional failures in mentoring including the disastrous situation of blurred lines between the intellectual property of the mentor and mentee.

David Sackett[16] suggests that mentors should focus on helping their mentees obtain resources, providing opportunities, protecting, and advising. Participants in this study identified the importance of nearly all of these actions, but they did not mention the role of the mentor as a protector or advocate. This omission raises the possibility that protection and advocacy are not being role modeled by the mentors, are not recognized by the mentees, or are not necessary. Given the challenges outlined by some of the participants, the first explanation seems likely.

There are limitations to this study. The generalizability of our findings may be limited because of the overall small sample size and the fact that these participants came from just two universities. However, ours is a substantial sample for a qualitative study. Moreover, we continued sampling until saturation of themes occurred. We propose to undertake a similar study in other academic centers to determine whether significant differences exist, and we are also undertaking a study of mentorship for clinician educators.

We discussed the results of this study at a mentorship retreat involving relevant stakeholders, including researchers, funders, and university administrators from Canada and the United States.[17] On the basis of the outcomes of this meeting, we suggested a multicomponent strategy for enhancing mentorship built around a yearly workshop for mentors and mentees, a yearly meeting for mentees to facilitate peer mentoring, and an online toolkit. We anticipate that the impact of this intervention on career success and satisfaction will be evaluated in a clinical trial across multiple sites.

Considering the effect of mentorship on personal and career development, administrators, program directors, department chairs, and funders should encourage mentorship initiatives.[9] Moreover, these initiatives should be evaluated to determine their effects on important outcomes. These studies could be performed at a single site, but they would be more powerful if conducted across multiple sites. Such a study model would require collaboration under the leadership of deans of medicine and other university leaders who are interested in preserving academic medicine. Given the responsibility of academic institutions to advance clinical care, research, and education, these organizations should feel compelled to stimulate interest in mentorship and to evaluate such efforts rigorously.

Acknowledgments

The authors thank Amy Wong, Pam Valentine, Richard Thornley, Dr. Jayna Holroyd-Leduc, and Dr. David Sackett for comments on earlier drafts of this manuscript. They also thank the amazing clinician scientists who participated in this study for their time and thoughtful comments.

Dr. Straus is funded by a Tier 2 Canada Research Chair and by a Health Scholar Award from the Alberta Heritage Medical Research Foundation. No funding was received from the Alberta Heritage Foundation for Medical Research (AHFMR) for completion of this study, and she did not receive the AHFMR Career Award until several months after this study was initiated. However, AHFMR funded the mentorship-knowledge exchange retreat which was held to discuss the results of this study. Mr. Taylor was an employee of AHFMR at the time this study was completed.

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