
Attitudes Toward and Experience in Research Among Family Medicine Chairs

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Background. Productive research environments are important for the development of academic family medicine, yet many of the current family medicine chairs have had little research training or experience and have rated research skills as a low priority for themselves. The younger chairs, however, representing the next generation of academic leadership, may have more traditional academic values, including the promotion of research.

Methods. The 106 active and interim chairs of family medicine academic units were surveyed by mail to determine their characteristics and attitudes toward their work responsibilities. We compared chairs 50 years of age or younger with those over 50 years of age.

Results. Before attaining their positions, younger chairs, in general, were more likely than older chairs to have received formal training in management, patient care, and academic skills, but they shared similar work

experiences. Specifically, younger chairs were more likely to have had formal research training but did not have a great deal more research experience. Younger chairs were more likely to consider research skills to be essential in their present work activities and to identify faculty with formal training and extensive experience in research as potential chair replacements.

Conclusions. Younger chairs appear to have a greater appreciation for the importance of research, having received more formal training and valuing research skills in themselves and potential replacements. With the impending large turnover in family medicine leadership, there will be an opportunity to recruit chair replacements with similar viewpoints toward research, thus improving the outlook for research in academic family medicine.

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The establishment of academic units of family medicine in most medical schools has furthered the interests of the discipline. These departments play an important role in attracting medical students into family practice, providing primary care training for medical students and residents, and conducting primary care research.¹ The stability of these academic family medicine units, however, may be affected by a dramatic change in leadership in the near future. Over half of the chairs of these departments have indicated that they plan to leave their positions in the next 5 years.²

This leadership transition could provide an opportunity to further the academic mission of family medicine. Many of the current chairs have had little research

training and experience and have rated research skills as a low priority for themselves and their replacements.² It could be argued that replacing current chairs with persons who have more research experience could improve the academic environment and increase research productivity in these departments.^{3,4} It appears, however, that among the limited number of available replacements, few have extensive research experience.^{2,5}

In this study, we assessed the trends in research leadership in academic family medicine by comparing younger chairs with older chairs. Younger chairs are more likely to have been trained in family practice residency programs and therefore may differ from the older chairs in their attitudes toward research.⁶ While chairs as a whole may undervalue research, the younger chairs representing the next generation of academic leadership may have more invested in traditional academic values and the promotion of research. Our hypothesis was that these younger chairs would differ from older chairs in that they would have more training and experience in

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research and would more highly value research skills in persons in chair positions.

Methods

From the Association of Departments of Family Medicine, we identified 106 universities with an active or interim chair of a family medicine academic unit, including departments and divisions. Each chair was sent a survey, and after 1 month we contacted nonrespondents by telephone or in person at an annual meeting attended by the chairs. To ensure confidentiality, each chair's responses were entered by support staff other than the authors and were tracked only to determine whether the chair had responded to the survey.

We determined the characteristics of the chairs including their age and how long they had been in their present position. As an indicator of the emphasis on research within each chair's academic institution, we determined the amount of funding that the institution received from the National Institutes of Health (NIH) for the 1990 fiscal year.⁷ Based on the experience of two of the authors who are current heads of family medicine academic units, we identified a list of important work activities and job skills in management, patient care, and academic areas. We asked the chairs whether, before assuming their position, they had had any formal training or work experience or both (none, some, or extensive) in each of the skill areas. Based on the chairs' current positions, they were asked how they currently spent their time. We also asked the chairs how important it would be for their successor to have each of the identified job skills. The chairs were asked whether they had someone within their department who was qualified to assume a chair position and, if so, what training and experience that person had received.

We compared the characteristics and attitudes of chairs who were 50 years of age or younger with those who were older than 50 years. Data analyses consisted of descriptive methods with chi-square, and Mantel-Haenszel chi-squares used for comparison of categorical and ordinal data. Independent *t* tests were used for continuous variables. To simplify the presentation of the data, some of the ordinal response and no-response categories have been combined in the tables.

Results

Ninety-seven (92%) of the 106 chairs completed the survey. Forty-four were 50 years of age or younger and fifty were over 50 years of age; three did not report their

age and were excluded from the analysis. Four of the chairs in each age group were women. As might be expected, older chairs were significantly more likely than younger chairs to be in permanent rather than acting or temporary positions (94% and 80%, respectively; $P < .05$), and to have been in their position for 5 or more years (83% and 25%, respectively; $P < .001$). Of the older chairs, 95% were tenured compared with 85% of younger chairs ($P > .10$). The distributions of total compensation for the two groups were similar, with both groups having a median income of \$125,000 to \$150,000. The institutions in which the younger and older chairs headed the family medicine units did not appear to differ in the emphasis placed on research. The amounts of NIH research grant funding in 1990 were used as a gauge of the emphasis on research; the average NIH funding for institutions in which the family medicine unit was headed by a younger chair was \$23,541,251, compared with \$22,063,709 for institutions with departments headed by an older chair ($P > .10$).

We compared the amounts of formal training that the chairs received before assuming their positions (Table 1). Younger chairs were significantly more likely than older chairs to have received formal training in management, patient care, and academic skills. These skill areas include personnel decisions, supervising staff, clinical inpatient and outpatient care, practice management, supervising clinicians, teaching, conducting research, writing grant applications, committee work, and supervising faculty. Nonsignificant trends were seen for program planning, budget decisions, and fund raising. When we compared the prior experiences of the chairs in these same skills areas (Table 1), they differed significantly only in the amount of experience they had in supervising staff before attaining their position. Neither group had a great deal of research experience. In a few skill areas, however, as many as 27% of the chairs did not respond to the questions regarding their prior experience. Almost all of these nonrespondents had noted receiving formal training in the skill area, which suggested that they thought they did not need to answer the questions regarding prior experience.

The percentages of time that younger and older chairs spent in various job activities were similar (Table 2). The only significant difference found was that younger chairs spent significantly more time in clinical activities (21%) than older chairs (15.1% [$P < .05$]). No differences were seen in the time spent teaching students or residents, performing administrative tasks, and engaging in nondepartmental activities. Notably, there was no difference between younger and older chairs in time spent doing research (8% and 7.2%, respectively).

Table 1. Current Chairs' Skills Before Becoming Chair, and Desired Skills for Chair Replacements, by Age Group

Chair Skills	Current Chair Had Received Formal Training, %		Current Chair Had Extensive Prior Experience, %		Essential Skills for Chair Replacement, %	
	Age ≤50 y	Age >50 y	Age ≤50 y	Age >50 y	Age ≤50 y	Age >50 y
Management						
Program planning	30	14	45	60	66	68
Personnel decisions	25	8*	34	58	68	70
Budget decisions	18	6	36	42	75	80
Supervising staff	20	4*	48	72†	66	76
Fund raising	7	0	9	14	36	16†
Patient care						
Clinical inpatient	77	42*	61	72	61	70
Clinical outpatient	75	40*	73	78	84	80
Practice manager	20	0*	45	52	27	36
Supervising clinicians	34	4*	50	46	57	66
Academics						
Teaching	59	20*	61	60	84	82
Conducting research	45	8*	18	18	66	40†
Grant application writing	18	0*	32	30	59	56
Committee work	23	4*	66	80	59	72
Supervising faculty	23	2*	45	48	73	76

NOTE: 44 chairs were ≤50 years of age and 50 chairs were >50 years. For "prior experience" and "essential skills," no-response and ordinal response categories, "some" and "none" were combined to simplify the table. The Mantel-Haenszel chi-square test was used to compare original ordinal responses after excluding nonrespondents. Nonresponse rates were generally low, except for skills in which most chairs had received formal training.

* $P < .05$, chi-square.

† $P < .05$, Mantel-Haenszel chi-square.

When the chairs were asked to rate the importance of a potential successor having various skills, the two age groups tended to value the same skills (Table 1). The two groups differed significantly in the importance of only two skill areas. Fund raising was perceived to be an important skill by 36% of younger chairs, compared with only 16% of older chairs. More important, 66% of younger chairs considered research skills to be essential, compared with only 40% of older chairs ($P < .05$). For older chairs, research skills was the third least likely skill

category to be considered essential, ahead of only fund raising and practice management.

Of the 97 chairs, only 48 believed they had one or more qualified replacements in their department. The 48 chairs with a potential replacement were asked to describe their best replacement's formal training and experience. Younger chairs were generally more likely than older chairs to identify candidates with formal training in most of the skill areas, although because of the relatively small sample size, these differences achieved statistical

Table 2. Family Medicine Chairs' Percentages of Effort in Job Activities, by Age Group in 1990

Job Activity	Age of Chair ≤50 years	Age of Chair >50 years
	Mean % (Range)	Mean % (Range)
Administration of department	40.1 (10-75)	44.9 (10-85)
Clinical services*	21.0 (0-50)	15.1 (0-50)
Teaching residents, fellows	11.9 (0-25)	12.1 (0-30)
Obligations outside department	9.8 (0-27)	10.1 (0-40)
Teaching students	9.7 (0-30)	9.0 (0-35)
Research	8.0 (0-30)	7.2 (0-50)
Other	1.1 (0-15)	1.5 (0-25)

* $P < .05$

Table 3. Skills of Most Qualified Replacement for Chair Position, by Age Group of Chair Identifying the Candidate

Chair Skills	Replacement Has Received Formal Training, %		Replacement Has Extensive Prior Experience, %	
	Age ≤50 y	Age >50 y	Age ≤50 y	Age >50 y
Management				
Program planning	26	21	61	71
Personnel decisions	22	4	52	46
Budget decisions	22	8	39	50
Supervising staff	22	8	48	79+
Fund raising	9	4	13	17
Patient Care				
Clinical inpatient	78	54	48	67
Clinical outpatient	78	50*	61	75
Practice manager	22	13	48	54
Supervising clinicians	26	21	57	63
Academics				
Teaching	52	25	61	88+
Conducting research	22	17	48	13+
Grant application writing	13	8	43	42
Committee work	13	13	70	79
Supervising faculty	17	13	43	71+

NOTE: 23 chairs ≤50 years of age and 24 chairs >50 years old identified a potential replacement. For "prior experience," no-response and ordinal response categories, "some" and "none" were combined to simplify the table. Mantel-Haenszel chi-square test was used to compare original ordinal responses after excluding nonrespondents. Nonresponse rates were generally low, except for skills in which most potential replacements were thought to have received formal training.

* $P < .05$, chi-square.

† $P < .05$, Mantel-Haenszel chi-square.

significance only for clinical outpatient care (Table 3). In contrast, older chairs tended to identify replacements with extensive experience rather than formal training. Persons identified by older chairs had significantly greater experience in staff and faculty supervision and in teaching. The notable exception to this is that younger chairs were significantly more likely than older chairs to identify persons with extensive research experience (48% and 13%, respectively). As in Table 1, a few skill areas (specifically those in which most potential replacements were thought to have received formal training) shown in Table 3 had high nonresponse rates; this may conceal differences in prior experiences between the two groups.

Discussion

Results of a recent study² suggest that current family medicine chairs are more interested in teaching, service, and administration than in conducting research and that, with an impending dramatic change in leadership, future chairs may share this perspective.² By reanalyzing this same data set, stratified by the age of responding chairs, this study provides some hope for the future of research

in academic family medicine. We show that younger chairs are more likely than older chairs to value research skills and experience. Younger chairs are also more likely to have had formal training in research and to value research skills as contributing to their work responsibilities. Potential replacements identified by younger chairs are more likely to have had extensive research experience. Very few current chairs, however, have had extensive research experience. Potential replacements, while having more research experience, still have not had much formal research training. This may reflect the great leadership needs in family medicine and consequent rapid advancement of qualified individuals. Not unexpectedly, given the demands of the position, few chairs, regardless of age, spend substantial proportions of their time in research activities.

While this study shows that differences in age influence a chair's attitudes toward research, age likely represents other factors such as completion of a family practice residency program, previous research training, and duration in their position. These factors, given the unique state of leadership in family medicine, are so strongly correlated that it is not statistically possible in this study to distinguish their effects on the observed findings regarding the importance of research. Thus, given the ambiguous means by which training and experience was defined in this study, a more detailed study is needed to identify more specifically the factors influencing chairs' attitudes toward research.

How strongly should family medicine departments recruit individuals with research skills for chair positions? Recruiting chairs who are productive researchers may be at the expense of other more needed administrative skills. Given the nonresearch demands of the chair's position, promoting researchers could dramatically reduce their research productivity, productivity that is much needed in family medicine now. Having academic leaders with a strong research perspective, however, may promote the type of environment that can increase the research productivity of the entire department.³ It has been shown in industrial (nonmedical) research and development units that a unit's productivity is best predicted by its leader's professional expertise and experience as a scientist before assuming the managerial position.^{8,9} Academic family medicine's mission to create new knowledge in the discipline might best be served by placing its experienced researchers into leadership positions, thus "multiplying" their research productivity through their influence on others.

This brings us to perhaps the most important issue: whether increasing research productivity is really necessary for the discipline of family medicine. In some departments, there is a strong feeling that creating new

knowledge in our discipline is central to the mission of academic family medicine.¹⁰ Not all family medicine departments, however, share this perspective. Holloway et al¹¹ have shown that the emphasis family medicine departments place on research often differs from that of their academic center. Our results tend to support these findings; we did not find that the younger chairs with the stronger research perspective were necessarily in institutions with higher levels of NIH funding. Family medicine academic units often receive mixed messages from society and from their health science centers. They are asked to provide care to underserved populations as well as be academically productive.⁵ Family medicine chairs must develop and apply resources to both of these objectives in some balance that reflects the expectations of their local environment. If the establishment of a research enterprise is as important as some believe in improving family practice, then our future leaders must be those who value research as a means of strengthening the scholarly underpinning of the specialty and who are best able to provide a research-oriented environment.¹²

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