Analysis IN BRIEF

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The Impact of Research Centers on Faculty Work Life

Research centers are a common mechanism for facilitating scientific work in medical schools, but little is known about how faculty operate in these milieux. Given that centers and institutes span the boundaries of traditional departments, center-affiliated faculty members can find themselves with two ties to the medical school—one through their academic department and one through the research center. Some commentators have asserted that this fluidity of faculty roles and allegiances produces positive benefits while others have argued the opposite.

This *Analysis in Brief* examines the impact of organized research centers on faculty productivity and work life. We administered the questionnaire to a random stratified sample of full-time faculty in basic science and internal medicine departments at the top 40 research-intensive U.S. medical schools. Findings indicate that faculty from different departments and with different ranks and backgrounds interact with centers and institutes in quite different ways.

Table 1.
Effort of Medical School Faculty Survey Respondents Devoted to Various Activities, by Rank, Appointment Type, Degree, and Center Affiliation, 2005

Faculty activity	No center affiliation	Center affiliation	*p* value*	No center affiliation	Center affiliation	*p* value
	Junior basic science faculty (weighted n = 82)			Junior internal medicine MD faculty (weighted n = 143)		
Teaching (total)	19.7	25.5	ns	20.1	14.6	<.05
Teaching medical students/residents	6.1	6.3	ns	16.3	9.9	<.01
Teaching graduate students	11.1	15.3	ns	2.6	2.9	ns
Teaching other	2.5	3.9	ns	1.3	1.7	ns
Research/scholarship	66.0	60.1	ns	19.7	44.4	<.001
Patient care	7.6	5.5	ns	47.3	35.1	<.05
Administration	3.2	8.0	<.01	8.8	3.8	<.05
	Senior basic science faculty (weighted n = 202)			Senior internal medicine MD faculty (weighted n = 190)		
Teaching (total)	29.1	23.9	ns	19.7	16.1	ns
Teaching medical students/residents	13.6	6.1	<.001	15.3	11.8	ns
Teaching graduate students	9.4	15.4	<.01	2.4	2.9	ns
Teaching other	6.1	2.5	<.01	2.0	1.5	ns
Research/scholarship	45.0	53.7	<.05	24.0	34.7	< .01
Patient care	9.5	4.9	ns	40.0	29.9	<.01
Administration	12.5	13.6	ns	11.7	14.8	ns

* ns = not significant.

Faculty Involvement with Centers

Just over half of the faculty respondents (51.1 percent) reported an affiliation with at least one center or institute at their medical school. The primary mission of centers with which faculty affiliated was predominantly research (82.9 percent), followed by patient care (8.7 percent), education (2.2 percent), service or outreach (0.6 percent), or other (5.6 percent).

Many faculty respondents recently recruited into their institutions (since 2000) who were affiliated with centers received some type of recruitment support from a center, including salary support (56 percent), lab space (52 percent), start-up funds (30.7 percent), or some other recruitment package contribution (39.1 percent). Centers also provided continued resources to some faculty; 36.8 percent reported ongoing salary support from centers.

Faculty Effort and Productivity

Our research found that faculty with center affiliations differ from their non-center-affiliated peers in allocation of professional effort. Controlling for rank, basic science faculty reported spending comparable effort in teaching activities, regardless of whether they had a center affiliation or not (Table 1). For associate and full professors, however, the focus of teaching differed. Center-affiliated faculty spent less effort teaching medical students than non-center-affiliated faculty (6.1 percent vs. 13.6 percent) but more effort teaching graduate students (15.4 percent vs. 9.4 percent). Senior basic science faculty with center affiliations also spent more effort on research than their non-center-affiliated colleagues (53.7 percent vs. 45 percent). Across rank, basic science faculty with center affiliations spent more total hours on their activities than faculty without center affiliations (59.2 vs. 56.1 hours per week).

Table 2.
Satisfaction of Medical School Faculty Survey Respondents with Various Job Aspects, by Appointment Type and Degree, 2005

Aspect of Job	No center affiliation (% satisfied, weighted n = 355)	Center affiliation (% satisfied, weighted n = 372)	*p* value
Basic science faculty			
Workload	84.6	72.7	<.05
Overall mix of activities	81.8	66.0	<.01
Autonomy	86.3	95.1	<.05
Internal medicine MD faculty			
Faculty promotion	60.6	73.3	<.05
Opportunities for research	63.6	84.1	<.001
Pace of professional advancement	64.4	75.2	<.05

Internal medicine faculty also differed by center affiliation. Center-affiliated junior MD faculty devoted less total effort to teaching than did their non-center-affiliated peers (14.6 percent vs. 20.1 percent). We found differences between center-affiliated and non-center-affiliated junior MDs in effort allocated to patient care (35.1 percent vs. 47.3 percent) and research (44.4 percent vs. 19.7 percent). Senior MD faculty with center affiliations also reported less effort in patient care (29.9 percent vs. 40 percent) and more effort in research (34.7 percent vs. 24 percent) than did their non-center-affiliated counterparts.

In our study, senior-level faculty with center affiliations had more articles, books, chapters, and refereed presentations over the last three years than their non-center-affiliated peers (basic science center affiliates: 17.9 vs. non-affiliates: 14.2; internal medicine MD affiliates: 25.8 vs. non-affiliates: 17.5).* Center-affiliated basic science and internal medicine MD faculty were also more likely than their non-center-affiliated peers to be principal investigator on externally funded grants (90.9 percent vs. 59.8 percent for basic scientists; 74.3 percent vs. 57.7 percent for internal medicine MDs).

Faculty Satisfaction

As a whole, about three-quarters of all faculty respondents reported being satisfied with their jobs overall. The specific aspects of job satisfaction differed among faculty groups (Table 2). Fewer basic science center-affiliated faculty were satisfied with their workload or their required mix of teaching, research, patient care, administration, and service than non-center-affiliated faculty. Internal medicine MD center-affiliated faculty were more satisfied with the promotion system, opportunities for research, and the pace of professional advancement.

Conclusion

For basic science faculty, center involvement appears to be in addition to, not a substitute for, their usual departmental obligations. Basic science faculty with center affiliations produced more research publications and grants while devoting comparable effort to teaching as their non-center-affiliated peers. Senior basic science center-affiliated faculty also spent more effort on research. Their center activities are associated with longer hours; even if the outcome of that extra work is positive (e.g., more publications and funding opportunities), these additional activities may lead to greater dissatisfaction in certain aspects of their job, including their workload and in the mix of their activities.

For internal medicine MD faculty, center-affiliated faculty were more productive in research activities and spent less effort in patient care and more effort in research than their non-center-affiliated peers. These faculty were more satisfied with promotion, opportunities for research, and the pace of their professional advancement, which is consistent with the prevailing academic promotion structure that most frequently rewards research productivity. For internal medicine MD faculty, center involvement appears to serve as an opportunity for protected effort in research away from the demands of clinical practice.

This Analysis in Brief is drawn from: The Impact of Centers and Institutes on Faculty Life: Findings from a Study of Basic Science and Internal Medicine Faculty at Research-Intensive Medical Schools. Acad Med. 2006;83: 734-743.

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* With these data, we do not assert causality, only association. It is not clear from these data whether centers attract already productive faculty or whether centers facilitate increased faculty productivity.

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