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# Where Are Articles by Candidates for Academic Promotion Published?

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**Background.** Publication is an important factor in academic promotion. The purpose of this study was to describe the journals in which articles by a sample of tenure-track family practice faculty members in university-based programs were published.

**Methods.** Publication information about family practice candidates for academic promotion during the 1988–89 academic year was solicited from program chairmen; an 80% response rate was achieved.

**Results.** The candidates for faculty promotion had 393 articles published in 131 journals. *The Journal of Family Practice* published 93 articles, 24% of the total; nearly half of all the candidates had articles published in this journal. Five family practice journals published 35% of the articles. The 36 physician faculty members had 274 articles published in 77 journals. Five major family practice journals accounted for 46% of these articles. *The Journal of Family Practice* published the greatest

number of the articles (32%). The eight nominees with PhD or EdD degrees had 104 articles published in 58 journals. *Academic Medicine* published the greatest number of these articles (12%). Only 8% of the articles were published in the five major family practice journals. Although PhD and EdD faculty had more articles published, more of the journals were nonrefereed and nonmedical journals; very few were family practice journals.

**Conclusions.** Overall, the works of family practice faculty are published in a wide range of journals. With an increasing number of journals, the decision of where to submit manuscripts will become even more complex. Furthermore, the greater the number of journals, the greater the need for family practice faculty to produce quality research.

**Key words.** Publishing; academic medical centers; faculty; literature. *J Fam Pract* 1992; 34:449-453.

When faculty members of academic medical centers are being considered for promotion, their publication records are critically analyzed as indicators of their intellectual activity and development as researchers.<sup>1</sup> Collectively, the publication records of academic faculty members serve as indicators of the academic development of a discipline<sup>2</sup>; in fact, a discipline may be defined by its literature.<sup>3</sup>

The growth of family practice journals has been slow. The first 3-year family practice residency programs were started in the early 1970s. *The Journal of Family Practice*, first published in 1974, has remained the primary family practice journal and was, for years, the only family practice journal cited in *Index Medicus*. The *Family Practice Research Journal*, a quarterly journal, was started in 1981. *Family Medicine* became a peer-reviewed journal

in 1984. The newest journal, *Journal of the American Board of Family Practice*, was first published in 1988 as a quarterly. Although *American Family Physician* has been published since 1970, until recently it consisted primarily of continuing education articles written by physicians in other specialties. Although all five are family practice journals, each has a distinct editorial policy and its own publication priorities.

Rabinowitz<sup>4</sup> commented on the inadequate journal space available to family practice faculty; he noted that in 1985 there were only four family practice journals, and that this number represented relatively few publishing opportunities for the nearly 2000 family practice faculty members holding ranks of associate professor or full professor. This ratio of 500 senior (tenured) faculty members to 1 family practice journal contrasted with an average ratio of 25 faculty members to 1 journal in other medical disciplines. He claimed that the small number of journals available reflected the youth of the specialty on one hand, and the broad nature of family medicine on the other, which would probably lead to articles by family

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Submitted, revised, February 7, 1992.

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practice faculty members being published in many diverse journals. John Geyman, former editor of *The Journal of Family Practice*, responded that there was adequate journal capacity for family practice.<sup>5</sup>

Frey and Frey<sup>3</sup> reported that from 1977 through 1979, the content of articles published in *The Journal of Family Practice* was 53% clinical, 27% educational, and 18% other.<sup>3</sup> The authors speculated that the large percentage of educationally related articles reflected "the time of enormous growth in programs for training residents and students in medical education." In fact, during the 1970s, many developing family practice programs hired persons with PhD or EdD degrees as "educationists" to administer teaching and research programs and as "behaviorists" to instruct residents in counseling. Publication opportunity for educational research has long been a concern, especially for these nonphysician faculty members. At times, journals have changed their priorities and established limits on the amount of nonclinical articles they will include. Geyman's 1989 data<sup>5</sup> showed that educational articles, which once comprised 27% of *The Journal of Family Practice*, had decreased to 5%. In the early 1970s, publication of medical education research was effectively limited to the *Journal of Medical Education* (now *Academic Medicine*), although that journal still restricts the number of publications by an author within any 6-month period.

In a study of the publications of family practice faculty members who were nominated for academic promotion during the 1980–81 academic year, 353 articles were analyzed.<sup>6</sup> Seventy-four percent of the articles were published in academic (peer reviewed) journals, 11% were in state medical journals, and 13% were in "informative" medical journals such as *Patient Care*. Forty percent of the articles were authored by only one faculty member. Authorship patterns by nonphysicians and physicians were not separately analyzed.

The authors asserted that some members of medical school promotion committees did not accord high prestige to the two journals in which the most family practice articles were published, *The Journal of Family Practice* and *The Journal of Medical Education*. The authors concluded by saying that "as the discipline develops academically, promotion characteristics of faculty may be expected to change accordingly."

Later, Weiss<sup>1</sup> found that the research articles of a small but important minority of family practice faculty members were submitted to and published in other medical journals because of a concern that the five family medicine journals (which he identified as *The Journal of Family Practice*, *Family Medicine*, *Family Practice Research Journal*, *Journal of the American Board of Family Practice*, and *American Family Physician*) were undervalued by

promotion and tenure committees. Other family practice faculty members who had declined to submit their work to a family practice journal claimed that they were seeking a wider readership.

The purpose of this study was to describe the journals in which a sample of tenure-track family practice faculty members in university-based programs had their articles published. The faculty sample consisted of faculty members nominated for academic promotion in 1988. Journals were described in terms of their manuscript review process (refereed or nonrefereed), subject matter (medical science or not), and discipline (family practice or other).

## Methods

A survey instrument was developed to study family practice faculty members nominated for academic promotion during the 1988–89 academic year. Specific information requested included academic rank sought (assistant professor, associate professor, or full professor), type of degree held (MD, PhD or EdD, or other), and the names of journals in which the candidate had articles published.

The survey was mailed to the chairmen of 122 academic departments and divisions of family practice in the United States in late 1989. Follow-up letters were sent and telephone calls were made to nonrespondents during the next several months. The chairmen were asked to provide information about each tenure-track faculty member who had been nominated for promotion. Each journal in which an article by a faculty member had been published was later classified as a family practice journal or other journal according to the Weiss definition.<sup>1</sup> Each journal was also classified as medical or nonmedical and refereed or not refereed, based on *Ulrich's International Periodicals Directory*.<sup>7</sup> Descriptive statistics were calculated for number of journals listed and number of faculty members with articles published in each journal. One publication analysis was made of articles by all nominees, one of articles by physician faculty, and one of articles by candidates with PhD or EdD degrees.

## Results

Ninety-seven of the 122 chairmen returned the surveys (an 80% response rate). Twenty-nine of the institutions had candidates for promotion. The chairmen provided useful information on 46 faculty members who were candidates for promotion and on the 393 articles by them that had been published (Table 1).

Table 1. Publication Rate by Journal Classification of 46 Family Practice Faculty Candidates for Academic Promotion (N = 393 articles)

Degree Type	Medical Science, Refereed Articles % of Total (Mean No.*)	Medical Science, Not Refereed Articles % of Total (Mean No.*)	Nonmedical, Refereed Articles % of Total (Mean No.*)	Nonmedical, Not Refereed Articles % of Total (Mean No.*)	All Articles N (Mean No.*)
MD degree (n = 36)	78 (5.6)	12 (0.9)	7 (0.5)	3 (0.2)	274 (7.6)
PhD or EdD degree (n = 8)	30 (3.8)	13 (1.6)	30 (3.8)	26 (3.3)	104 (13.0)
Other degree (n = 2)	40 (3.0)	40 (3.0)	20 (1.5)	0 (0.0)	15 (7.5)
All degrees (n = 46)	64 (5.2)	13 (1.1)	14 (1.1)	9 (0.7)	393 (8.5)

\*Mean indicates the average number of articles per faculty member.

NOTE: The All Articles column includes 18 articles that could not be classified. Row percents may not add to 100% because of rounding.

### All Nominees

The 36 physicians produced 274 articles, the eight candidates with PhD or EdD degrees wrote 104 articles, and the two candidates with other degrees wrote 15 journal articles, for a total of 393 articles. The two candidates with other degrees were included in combined tables, but were not analyzed separately. Eighteen additional articles cited by the faculty members could not be located.

For all articles by the 46 faculty members, 78% (64% medical and 14% nonmedical) were published in refereed journals and 22% in nonrefereed journals (Table 1). Eighty-five percent of the articles written by physicians and 60% of those written by faculty members with a PhD, EdD, or other nonmedical degree were published in refereed journals. Seventy-seven percent of the articles were published in medical science journals, and the other 23% were published in nonmedical journals. Whereas 90% of the articles written by physicians were published in medical journals, faculty with PhD or EdD degrees published most of their research (57%) in nonmedical journals. Overall, nominees with PhD or EdD degrees had an average of 13.0 articles published, physician nominees had an average of 7.6 articles published, and candidates with other degrees had an average of 7.5 articles published.

The journals in which the articles by these nominees were published are listed in Table 2. The 46 nominees had 393 articles published in 131 journals. Eleven journals published 50% of the articles. Another 40 citations (10% of the total) represented 20 candidates, each of whom had written two articles that were published in 1 of 20 additional journals. Seventy-six additional journals had published one article by each of 76 nominees, accounting for another 19% of the total articles published.

*The Journal of Family Practice* published 93 articles (24% of the total); 22 different faculty members (almost half of all nominees) were represented. Collectively, the five family practice journals published 138 articles (35%).

Table 2. Journals in Which Articles (N = 393) by 46 Family Practice Faculty Candidates for Promotion Were Published

Journal Title*	No. of Faculty Members	No. of Articles
<i>The Journal of Family Practice</i> †	22	93
<i>Academic Medicine</i>	12	26
<i>Family Medicine</i> †	11	18
<i>Family Practice Research Journal</i> †	6	13
<i>Postgraduate Medicine</i>	5	12
<i>Journal of the American Board of Family Practice</i> †	7	8
<i>Journal of the American Medical Association</i>	7	7
<i>American Family Physician</i> †	4	6
<i>Medical Care</i>	2	6
<i>Continuing Education for the Family Physician</i>	2	4
<i>National Medical Association Journal</i>	2	4
<i>Journal of Cell Biology</i>	1	4
<i>Journal of Negro Education</i>	1	4
<i>Family Systems Medicine</i>	3	3
<i>American Journal of Public Health</i>	2	3
<i>Obstetrics and Gynecology</i>	2	3
<i>Western Journal of Medicine</i>	2	3
<i>American Industrial Hygiene Association Journal</i>	1	3
<i>Investigations in Science Education</i>	1	3
<i>Journal of Clinical Endocrinology and Metabolism</i>	1	3
<i>Journal of Consulting and Clinical Psychology</i>	1	3
<i>Violence and Victims</i>	1	3
<i>Wisconsin Medical Journal</i>	1	3
<i>American Educational Research Journal</i>	2	2
<i>American Journal of Epidemiology</i>	2	2
<i>American Journal of Obstetrics and Gynecology</i>	2	2
<i>American Journal of Medicine</i>	2	2
<i>Journal of Community Health</i>	2	2
<i>Journal of Nervous and Mental Disease</i>	2	2
<i>New England Journal of Medicine</i>	2	2
<i>North Carolina Medical Journal</i>	2	2
<i>Pediatrics</i>	2	2
<i>Primary Care</i>	2	2
<i>Southern Medical Journal</i>	2	2
<i>Texas Medicine</i>	2	2
20 additional journals with 2 articles in each by 1 author		40
76 additional journals with 1 article in each by 1 author		76
18 additional journals not retrievable with 1 article in each		18

\*Total number of journals identified = 131.

†Indicates family practice journal.

NOTE: *The Journal of the American Board of Family Practice* had only a short publication history when these data were collected.

Table 3. Journals Most Frequently Published in by 36 Family Physician Candidates for Promotion

Journal Title*	No. of Faculty Members	No. of Articles
<i>The Journal of Family Practice</i> †	18	89
<i>Family Medicine</i> †	10	17
<i>Academic Medicine</i>	6	12
<i>Postgraduate Medicine</i>	5	12
<i>Family Practice Research Journal</i> †	4	10
<i>Journal of the American Board of Family Practice</i> †	6	7
<i>Journal of the American Medical Association</i>	6	6
<i>Medical Care</i>	2	6
<i>American Family Physician</i> †	3	4
<i>Continuing Education for the Family Physician</i>	2	4
<i>Journal of Cell Biology</i>	1	4
<i>Family Systems Medicine</i>	3	3
<i>Western Journal of Medicine</i>	2	3
<i>Obstetrics and Gynecology</i>	2	3
<i>American Journal of Public Health</i>	2	3
<i>Journal of Clinical Endocrinology and Metabolism</i>	1	3
4 journals with two articles in each by two authors		8
10 journals with two articles in each by one author		20
47 journals with one article in each by one author		47
13 journals not retrievable		13

\*Total number of journals identified = 77.

†Indicates family practice journal.

NOTE: *The Journal of the American Board of Family Practice had only a short publication history when these data were collected.*

### Physician Faculty Members

The journals in which family physician faculty members had their research published are shown in Table 3. The 36 physicians had 274 articles published in 77 journals. The five family practice journals published 46% of the articles; all five journals were represented. The 16 journals listed in the table published 186 (68%) of the articles. *The Journal of Family Practice* published the greatest number of the articles (32%).

### Faculty Members with PhD or EdD Degrees

The journals in which candidates with PhD or EdD degrees had their research published are shown in Table 4. These eight faculty members had 104 articles published in 58 journals. *Academic Medicine* published the greatest number of the articles, but this represented only 12%. The eleven journals listed by name accounted for 41% of the articles published by candidates with PhD or EdD degrees. Collectively, the five family practice journals accounted for 8% of the articles.

### Nominees by Rank Sought

The 27 candidates for associate professor published 205 articles in 89 journals. The five major family practice

Table 4. Journals in Which Articles (N = 104) By Eight Family Practice Faculty With PhD or EdD Degrees Nominated for Promotion Were Published

Journal Title*	No. of Candidates	No. of Articles
<i>Academic Medicine</i>	5	12
<i>The Journal of Family Practice</i> †	4	4
<i>Journal of Negro Education</i>	1	4
<i>Family Practice Research Journal</i> †	2	3
<i>National Medical Association Journal</i>	1	3
<i>Wisconsin Medical Journal</i>	1	3
<i>American Industrial Hygiene Association Journal</i>	1	3
<i>Journal of Consulting and Clinical Psychology</i>	1	3
<i>Violence and Victims</i>	1	3
<i>Investigations in Science Education</i>	1	3
<i>American Educational Research Journal</i>	2	2
9 journals with 2 articles in each by 1 author		18
38 journals with 1 article by 1 author		38
5 journals not retrievable		5

\*Total number of journals identified = 58.

†Indicates family practice journal.

journals published 34% of these articles. *The Journal of Family Practice* published the greatest number (19%) of the articles written by these junior faculty. The 11 nominees for full professor had 147 articles published in 48 journals. *The Journal of Family Practice* published 33% of the articles written by these senior faculty. Three of the five major family practice journals published 41% of the articles; none of the articles were published in the *American Family Physician* or *Journal of the American Board of Family Practice*.

### Discussion

Family practice faculty members had their research published in a wide variety of journals. The diversity of publication sources appears to be increasing; these 46 candidates had articles published in 131 journals, while the 74 candidates in the 1980–81 study had articles published in only 118 journals.

Opportunities to have articles published in family practice journals have increased. Of the five family practice journals published in 1988, only two existed in 1980 and, as noted, *American Family Physician* was not soliciting articles from family practice authors at that time. In 1981, fewer than 10% of all articles by candidates were published by family practice journals. By 1989 this had increased to 35% of all articles and 47% of all refereed articles. Clearly, the increase in the number of family practice journals has resulted in more of the manuscripts written by family practice faculty members being published in family practice journals and may have encouraged more manuscript preparation in general.

Physician faculty members showed some inclination toward having their articles published in family practice journals; *The Journal of Family Practice* continued as their preferred journal. Faculty members with PhD or EdD degrees, on the other hand, had a different publication profile; they had more articles published, wrote more articles for nonmedical journals, and published very few of their articles in family practice journals. *Academic Medicine* continued to be the top-ranked source for publication of their articles. Their journal list (Table 4) did not reflect much input from faculty members with degrees in counseling and behavioral science; one would have expected more articles in counseling, psychology, and family journals.

One limitation of this study is that an article that was co-authored by two or more of the candidates could appear to be several separate articles. This might inflate the number of publications in some journals. A second consideration is that *The Journal of the American Board of Family Practice (JABFP)* was a relatively new journal at the time of the survey, so it should not be expected to have published many articles by these candidates. Although *JABFP* ranked below the other family practice journals, it ranked sixth overall in number of articles published, far above a long list of other journals. A third concern, even with an 80% response rate, is that some programs might not have responded because of the work associated with providing information about candidates. Also, some institutions contacted may not offer tenure.

The large number of journals that publish articles by family practice faculty supports Rabinowitz's claim<sup>4</sup> that the broad nature of family practice intrinsically leads to its literature being published in a diversity of journals. Although five journals are sponsored by family practice organizations, they indisputably have serious competition from other journals. The readership of the family practice literature would need to review a large number of these 131 journals to familiarize themselves with all of the material relevant to the discipline. Access to bibliographic reference services will therefore be necessary for

family practice faculty members to locate those articles in the professional literature that contribute most to their research and clinical practice.

This diversity of publication sources presents a conflict and a challenge for family practice authors. They must decide what audience they wish to reach, determine which journals are held in high esteem by promotion and tenure committees, assess the editorial policies of the various journals, and consider how their choice of journal affects the development of a research base in family medicine. Nonphysicians seem inclined to publish in journals in the disciplines from which they received their academic training.

With the increasing number of family practice journals, there are perhaps sufficient journals for the current level of research productivity in the discipline. The challenge now is for family medicine faculty to submit more and better research papers to these journals.

#### Acknowledgment

Data analyses were performed by Paul McLaughlin and Manuel Artega. Dedra Diehl assisted with journal analysis.

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