

Selection criteria for applicants in primary care osteopathic graduate medical education

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Program directors of American Osteopathic Association (AOA)-approved primary care graduate training programs were surveyed concerning the relative importance of 12 academic and 10 nonacademic performance-based variables related to trainee selection. Programs holding both AOA and Accreditation Council for Graduate Medical Education approval were also compared to programs holding only AOA approval. Results were compared to a previous osteopathic survey and to similar surveys among allopathic programs. Nonacademic variables remain among those most highly valued by directors, though a possible trend toward the academic variables was perceived. Implications for colleges of osteopathic medicine, program directors, and students are discussed.

(Key words: medical education, graduate medical education, selection criteria)

During the past several decades, the osteopathic medical community has had unprecedented growth both in number of schools and the number of physicians with the DO degree. This increased population naturally leads to an increased demand for graduate medical education programs and a subsequent increase in the competition for slots in these programs. As a result, information pertaining to selection criteria for these positions is valued and sought.

Program directors and directors of medical education are using a variety of criteria and processes to select trainees for their institutions. Directors might be well served by comparing the selection criteria they use with those used by others competing for the same pool of applicants. Likewise, students seeking selection to enter programs of their choice might be served by an analysis of the traits and criteria valued by program directors. Such criteria might also be of use to predoctoral training institutions and osteopathic medical school admissions offices.

A literature search reveals many studies performed by the allopathic medical community. Most of these report on criteria pertaining to highly competitive specialty residencies,

such as surgery. Studies considering graduates of foreign medical schools are also abundant. Yet only one study¹ deals specifically with osteopathic medical graduates. That study found that the osteopathic program directors regarded the interview as the most highly valued aspect of the selection process. Academic factors (eg, grades, test scores) were important in the selection process; however, factors arbitrarily designated as nonacademic, such as interpersonal skills and clinical performance-based factors, were the more highly rated criteria overall.

In 1999, Wagoner and Suriano² conducted a study addressing selection criteria among allopathic medical programs. Surveys were conducted of 794 specialty programs, including 105 family practice residencies and 96 internal medicine programs. Results of that study were fairly consistent with those of Bates et al¹ in that, contrary to the anecdotal perception of many students, grades in preclinical courses were among the less-important criteria. Wagner and Suriano² speculate that as fill rates for residency programs increase, greater emphasis will be placed on academic criteria, particularly in university-based programs. This may be due to the common assumption that quantified numbers such as grades are more objective and reliable.

Villanueva et al³ support the previously mentioned studies in finding the interview to be a key element in selection. Communication skills were cited as crucial components, and the interview process was viewed by program directors as a reliable way of assessing this skill. However, despite this finding and those of George et al⁴ and Baker et al,⁵ Villanueva et al³ speculate that use of academic criteria seems to be on the rise. Interestingly, it appears that these academic criteria are not predictive of clinical performance.^{4,5} Similarly, the findings of Bates et al¹ suggested that academic criteria were less important than selected performance-based nonacademic criteria. However, this study may reflect the attitude present before Villanueva et al³ and Wagoner and Suriano² asserted that use of academic criteria was on the rise. Findings of Bates et al¹ may also reflect a philosophical difference on the part of program directors of allopathic vs. osteopathic medical programs.

Given the marked lack of information concerning osteopathic graduate applicants and selection criteria, a new study was needed. The osteopathic medical profession has historically targeted primary care as central to its mission, and a significant percentage of osteopathic graduates enter primary

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Table 1
Overall Rankings of Selection Criteria (N=123)

Rank	Criterion	Average	SD
1	Work habits	4.62	0.54
2	Ability to work with others	4.60	0.53
3	Maturity	4.40	0.63
4	Problem-solving ability	4.28	0.64
5	Performance in program specialty	4.28	0.79
6	Clinical judgment	4.13	0.70
7	Overall clerkship performance	3.96	0.30
8	Clerkship medical knowledge	3.80	0.66
9	Clerkship technical skills	3.50	0.93
10	Clerkship performance in other specialties	3.48	0.80
11	COMLEX–USA level 2 scores	3.19	0.88
12	Other letters of recommendation	3.19	0.94
13	COMLEX–USA level 1 scores	3.16	0.93
14	Grade point average	3.07	0.71
15	Interview	3.06	0.72
16	Preclinical classroom grades	3.04	0.83
17	Class rank	2.96	0.87
18	Dean's letter	2.78	0.91
19	Geographic preference	2.55	1.44
20	USMLE step I scores	2.54	1.05
21	USMLE step II scores	2.53	1.06
22	Medical school attended	2.14	0.95
23	Scholarly publications	2.12	0.90

COMLEX–USA indicates Comprehensive Osteopathic Medical Licensing Examination; USMLE, United States Medical Licensing Examination.

care. Therefore, the present survey concentrates on internal medicine and family practice and attempts to fill both the temporal and professional gaps in the literature.

Methods

Since the survey by Bates et al,¹ there have been changes in the number and distribution of American Osteopathic Association (AOA)–approved programs. Further, some American Council on Graduate Medical Education (ACGME) programs have sought AOA approval for the first year of postdoctoral education or for their entire program. No formal approval processes exist for an entity to be known as a dual or parallel-approved program. In reality, such programs receive approval separately from the appropriate profession and thus hold approval distinctions from each. In some parts of the United States, where economic and practice pressures have precluded

the continuation or establishment of independent osteopathic programs, the parallel-approval process has played a significant role in the availability of AOA-approved training for some graduates of osteopathic medical schools. For the purposes of this study, these programs shall be referred to as “dual programs.” The current study, therefore, also sought to determine if this subset of dual training programs viewed selection criteria differently from other osteopathic programs or from the allopathic programs reported in other literature.

The survey was conducted during the summer and fall of 1999. Based on the *1998–1999 Directory of Osteopathic Postdoctoral Education Programs*, survey forms were mailed to directors of medical education of all programs (282) indicating that the institution offered internships and residencies in family practice and internal medicine. A total of 189 forms were sent to AOA-approved programs, 88 to dual-approved programs.

Table 2
Osteopathic Program Rankings of Selection Criteria (N=87)

Rank	Criterion	Average	SD
1	Work habits	4.66	0.51
2	Ability to work with others	4.63	0.51
3	Maturity	4.41	0.64
4	Performance in program specialty	4.29	0.81
5	Problem-solving ability	4.23	0.67
6	Clinical judgment	4.16	0.71
7	Overall clerkship performance	3.97	0.40
8	Clerkship medical knowledge	3.81	0.68
9	Clerkship technical skills	3.50	0.96
10	Clerkship performance in other specialties	3.44	0.79
11	Interview	3.31	0.69
12	COMLEX–USA level 1 scores	3.24	0.96
13	COMLEX–USA level 2 scores	3.22	0.91
14	Other letters of recommendation	3.22	0.93
15	Grade point average	3.12	0.71
16	Preclinical classroom grades	3.05	0.81
17	Class rank	2.99	0.86
18	Dean's letter	2.84	0.89
19	USMLE step I scores	2.60	1.07
20	USMLE step II scores	2.57	1.08
21	Geographic preference	2.49	1.34
22	Medical school attended	2.23	0.96
23	Scholarly publications	2.15	0.90

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Directors were asked to rate the importance of each of 22 criteria that could be used in the selection of postgraduate trainees. For consistency, the criteria were taken from Bates et al,¹ with the exception of the addition of United States Medical Licensing Examination step I and II scores. These criteria are consistent throughout the other literature surveyed. Respondents were asked to rate these criteria on a scale of 1 (unimportant) to 5 (critical). Based on these reports, the average of the reported scores was used to create a rank order of the criteria from most to least valued. Respondents were also given the opportunity to list one additional characteristic that they considered important.

Results

Of the 189 surveys sent to AOA-approved programs, 87 were returned, for a return rate of 46%. The dually accredited pro-

grams had a return rate of 41%, with 36 of the 88 surveys returned. Overall return rate was 43.6%. This is comparable to the 45.6% return rate obtained in the Bates¹ study. Twenty-two percent of the respondents described their programs as university-based, 73% indicated their programs were community-based, and 6% believed their programs to be both university-based and community-based. Hospital beds were used as an indicator of institution size and as a proxy for program size. Programs represented institutions varying from 66 beds to more than 1000 beds. Twenty-five percent of the institutions had fewer than 150 beds, 14% had between 151 and 200 beds, 24% had between 201 and 300 beds, 16% had between 301 and 400 beds, and 20% of the respondents described the base institution as having more than 400 beds.

Overall survey results are summarized in *Table 1*. The results for programs holding traditional AOA approval are

Table 3
Rank Order of Selection Criteria in Parallel Approved Programs (N=36)

Rank	Criterion	Average	SD
1	Work habits	4.78	0.42
2	Ability to work with others	4.72	0.45
3	Maturity	4.44	0.69
4	Performance in program specialty	4.33	0.86
5	Clinical judgment	4.25	0.73
6	Problem-solving ability	4.08	0.77
7	Interview	4.06	0.58
8	Overall clerkship performance	4.00	0.68
9	Clerkship medical knowledge	3.86	0.69
10	Clerkship technical skills	3.49	1.04
11	COMLEX–USA level 1	3.47	1.03
12	Clerkship performance/other specialties	3.33	0.76
13	Other letters of recommendation	3.33	0.89
14	COMLEX–USA level 2	3.32	1.01
15	Grade point average	3.25	0.69
16	Class rank	3.08	0.81
17	Preclinical classroom grades	3.06	0.75
18	Dean's letter	3.03	0.84
19	USMLE step 1	2.81	1.14
20	USMLE step 2	2.71	1.16
21	Medical school attended	2.50	0.97
22	Geographic preference	2.33	1.07
23	Scholarly publications	2.25	0.91

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summarized in *Table 2*. *Table 3* summarizes the results from dual-approved programs. *Table 4* compares the rankings for dual programs and traditional osteopathic programs to the combined rankings overall.

Universally, the same three criteria ranked highest in the opinions of the respondents: work habits, ability to work with others, and maturity. Compared with the survey by Bates et al,¹ there was a greater mix of academic-based and performance-based criteria similar to the studies done by Wagoner and Suriano² and Villaneuva et al.³ Whereas previous studies had shown a sharper demarcation between academic and nonacademic variables, this distinction was not as pronounced. This would seem to lend some credence to the thought that academic variables may be becoming more valued. For example, of the top ten criteria, five could be classified as performance-

based nonacademic and five as traditionally academic (as defined in the previously cited literature). In the dual programs, six of the top ten criteria would show that same distinction. There is virtually no difference in the top ten rankings when comparing the dual and traditional osteopathic programs to the overall, with the possible exception of the interview. While ranked 15th overall, the interview was ranked 7th in importance by the dual programs and 11th by the traditional osteopathic programs.

Respondents were also given the opportunity to list one additional characteristic that they considered important. Those listed included grooming, appearance, written communication skills, altruism, demonstration of commitment to urban areas, initiative, leadership ability, relation to current staff members, personal experience with illness, interaction with nonclinical

Table 4
Comparison Ranking of Selection Criteria

Criterion	Overall	Osteopathic programs	"Dual" programs
Work habits	1	1	1
Ability to work with others	2	2	2
Maturity	3	3	3
Problem-solving ability	4	5	6
Performance in program specialty	5	4	4
Clinical judgment	6	6	5
Overall clerkship performance	7	7	8
Clerkship medical knowledge	8	8	9
Clerkship technical skills	9	9	10
Clerkship performance in other specialties	10	10	12
COMLEX–USA level 2 scores	11	13	14
Other letters of recommendation	12	14	13
COMLEX–USA level 1 scores	13	12	11
Grade point average	14	15	15
Interview	15	11	7
Preclinical classroom grades	16	16	17
Class rank	17	17	16
Dean's letter	18	18	18
Geographic preference	19	21	22
USMLE step I scores	20	19	19
USMLE step II scores	21	20	20
Medical school attended	22	22	21
Scholarly publications	23	23	23

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staff, and personality. The common thread that appears throughout these additions would seem to stress the importance of personal character in the selection process.

Discussion

The selection criteria that program directors believe are paramount may not be considered equally important by students, who tend to focus on short-term priorities such as gaining admission or passing the next required course test. In the preclinical years, students and many faculty stress the acquisition of cognitive knowledge to “get good grades and pass the boards.” Students tend to carry that learned behavior

into clerkships. As the United States Medical Licensing Examination and the Comprehensive Osteopathic Medical Licensing Examination incorporate skills-based portions to their examinations and as schools incorporate more of the art of medicine in their clinical curriculums, such behaviors may become counterproductive. Academic success alone does not necessarily foster good clinical judgment, independent learning skills, or problem-solving skills. Given the changes occurring in the practice and regulation of medicine, human relations remain an important part of the learning environment.

Results of this study support the idea that the best intern or resident will bring a combination of academic and nonaca-

demographic variables to the program. These results would seem to indicate a slight shift toward the academic variables. However, there is still a clear preference for evaluation of the performance-based and nonacademic variables. The survey results once again demonstrate that academic grades (eg, board scores, class rank, preclinical classroom grades) were important, but less so than performance and personal character. Many faculty and students place great importance on those grades, especially in the early phases of education. This may be contrary to the teamwork, problem-solving, and collegial attributes that program directors seem to favor.

This study, as well as those cited, bear implications for at least three arenas of influence: (1) the program director's selection processes; (2) the student's role in preparing for the selection process; and (3) the college's role in fostering those traits and skills valued by the programs.

In its advisory of July 23, 2002, the American Association of Medical Colleges (AAMC) recognized a need for a change in the Dean's letter and renamed it the Medical Student Performance Evaluation. The AAMC recommended that the letter emphasize comparative evaluation of medical student performance in at least three areas: preclinical curriculum, clerkship clinical curriculum, and professional attributes. By doing so, the AAMC contends that the letter will be a more informative and useful tool for evaluation of individual accomplishment as compared with peers.⁶

As program directors have identified those criteria they value, they should be sure that they develop methods by which they can measure and judge those characteristics. Students will need to come to more fully appreciate the value of both academic-based and performance-based variables. Therefore, they will need to develop attitudes and abilities in the medical arts and the didactic skills of medicine simultane-

ously. It will be necessary for students to practice and display these skills equally. Despite the values expressed in this study, many colleges of osteopathic medicine continue to rely almost exclusively on grades and standardized tests for selecting and advancing students. Likewise, osteopathic colleges must always demand a solid academic performance while continuing to foster the valued performance-based skills and personal characteristics identified in this report. This should be incorporated in all phases of medical education, beginning in the preadmission process and continuing through matriculation to graduation.

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