

Factors Associated with Choosing Family Medicine as a Career Specialty: What Can We Use?

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Abstract

There are many factors associated with choosing family medicine as a career. Many medical students have an interest in primary or non-primary care prior to entering medical school, while other students decide on a residency choice during their third and fourth year of medical school. There are a number of well-documented reasons why medical students choose family medicine as a career. These are categorized into Admission, Medical School Curriculum, and Structural Factors. This paper looks at those factors influencing the choice of family medicine as a career. In reviewing the literature, there is little new information since 2003. Limited effort has gone into effecting productive changes.

Key Points

There are a number of reasons why medical students choose a career specialty. Many students decide on career choices before entering medical school. There are a number of factors that influence medical students' choices of careers. The number of students choosing family medicine as a career has declined significantly.

Introduction

There is a projected shortage of primary care physicians in the upcoming years.¹ The number of medical students selecting primary care as a career choice has declined since 1997, with those students selecting family medicine having declined the most.² The recruitment of medical students into family medicine and then retention and distribution of family physicians remains one of the most difficult issues in medicine today.³

The majority of medical students enter medical school with primary care or non-primary care in mind.⁴ Career intention before medical school has a positive effect on choosing family medicine as a career.⁵ Some medical students make career choices during the second year,⁶ but most decide about their residency choice during the third and fourth years.^{4,7} Some 43.5% of students choosing family medicine did so during their third year, while 37% did so during the fourth year.⁸ As a whole, 75% of medical students interested in primary care before medical school select primary care residencies.⁴

Our faculty research interest coincides with a major dilemma for medical education nationwide in that fewer medical students have been selecting family medicine as a career, which has significant implications for the medically underserved, such as rural America,⁹ the urban inner city, the Hispanic population, and the elderly.^{10,11} Over the last decade, the number of medical students choosing family medicine has continually decreased until 2008, leaving a current deficit of 40,000 family physicians in the United States.^{10,11,12} The first task in this process was to review the literature concerning factors associated with selecting family medicine as a career. This task anticipates developing a questionnaire to observe the degree to which these factors correlate with family medicine residency choices and, subsequently, planning and testing interventions that address these correlates. The purpose of this study was to examine the literature for factors associated with medical students' choice of family medicine as a career.

Methods

A current PubMed literature review identified factors associated with family medicine career choice with the purpose of organizing these conceptually into admission factors, curriculum

factors, and structural factors, as categorized by Wheat et al.¹³ Search topics were “family medicine” and “career choice.” The categories were chosen according to the type of medical school intervention that might be used to address each factor. No effort was made to validate the strength of empirical data supporting the inclusion of a factor; thus, these factors are considered theoretical for this review. However, they will form the basis for developing a questionnaire to determine why medical students changed their career choice from family medicine.

Findings

We discovered 57 papers in the English literature relating to the topics “family medicine” and “career choice.” Thirty-two peer-reviewed papers from the United States, Canada, and Australia were identified and utilized in this review. In addition, two state statutes,^{14,15} known to the authors for supporting rural family medicine in Alabama, were added to reflect state-level incentive programs for rural practice.

Our principle finding was the 2003 article by Senf, Campos-Outcalt and Kutob,⁵ summarizing factors shown to be related to choice of Family Medicine as of 2001. That review provided a substantial list of factors, a list that we supplemented by other articles we found. There resulted a number of theoretical factors that influence medical students’ choice of career that can be placed in categories according to how a medical school might utilize them to plan interventions to produce more family physicians. Table 1 shows these categories and subcategories of factors. They are described in more detail below:

Category 1: Admission Factors

There are many factors which occur before medical school entry, which can be detected during the admissions process. These factors which influence career choice include demographics, childhood and premed experiences, humanitarian outlook, perception of family medicine, premedical performance characteristics, Myers-Briggs Personality Types, and scholarship program.

Demographics

Demographic factors positively influencing choice of family medicine as a career include non-medical parents, older students, lower socioeconomic class, parental income less than \$100,000/year, Hispanic background, rural background, and marriage.⁵ State-supported medical schools produce more students choosing family medicine as a career than private institutions.^{10,12,16} Graduates of medical schools in states that have better educational opportunities and emphasis on family medicine are more likely to choose family medicine.⁸

Childhood and premedical experiences

Childhood experiences with a family physician influence choice of family medicine as a career.⁸ Role models significantly

impact primary care versus non-primary care and subspecialty care choices.⁴ There is a need to provide these types of opportunities to medical students who otherwise would not have had these experiences before medical school. An adequate pipeline of future family physicians and primary care providers is essential to achieving the primary care needs for this country.^{10,12} Pipeline Programs, such as Rural Health Scholars, Rural Medical Scholars, and Minority Pipeline Programs, are all premedical programs at the University of Alabama School of Medicine,¹⁶ which have been successful in providing family physicians for rural Alabama. Career preferences at medical school entry is a significant predictor of eventual career choice of family medicine.¹⁷ Medical schools that have increased the number of students with a stated interest in family medicine at matriculation have increased the number of graduating students selecting family medicine as a career.²

Table 1: Factors Associated with Choosing Family Medicine as a Career Specialty

CATEGORY 1: ADMISSION FACTORS
A. Demographics
B. Childhood and Premedical Experiences
C. Humanitarian Outlook
D. Perception of Family Medicine & Family Practice
E. Premedical Performance Characteristics
F. Myers-Briggs Personality Types
G. Scholarship Programs for Rural Primary Care
CATEGORY 2: MEDICAL SCHOOL CURRICULUM FACTORS
A. Special Family Medicine Focus
B. Clinical Family Medicine Emphasis
C. Curriculum Content
CATEGORY 3: STRUCTURAL FACTORS
A. Favorable Policy Environment
B. Family Medicine Department
C. Family Medicine Faculty
D. Family Medicine Residency
E. Recruitment Programs

From Wheat et al.: Physicians for Rural America: The Role of Institutional Commitment within Academic Medical Centers. *J Rural Health*.¹³

Humanitarian outlook

The characteristic humanitarian outlook of family medicine affords an opportunity for family physicians to make a difference in patients' lives.¹⁸ Most students choosing family medicine as a career not only have an interest in helping people,¹⁸ but specifically are not interested in research or an academic career.⁵ As a general rule these students are less concerned about income⁵ and lifestyle^{4,8} and see the importance of practicing family medicine in a rural and underserved area.⁵ Students choosing family medicine were more likely to demonstrate a societal concern.¹⁷ Patient relationships and the family medicine approach to care have been cited as important factors in the selection of family medicine as a career.¹⁹

Perception of family medicine

Many factors influence medical students' perception of family medicine, including the family medicine approach to care,⁶ intellectual content of family medicine,^{6,18} and challenging diagnostic dilemmas.¹⁸ Family medicine offers diversity in diagnoses and treatment,¹⁸ flexibility of practice,⁴ a manageable caseload,²⁰ and breadth of employment opportunities.⁴ Family physicians find that the specialty is consistent with their personality.^{18,20} Community-based primary care experiences also positively influence interest in family medicine.¹

Premedical performance characteristics

These characteristics, including the Medical College Admission Test (MCAT) scores and Grade Point Averages (GPA), influence the choice of family medicine as a career. Lower MCAT scores positively correlate with family medicine residency choice at the University of Alabama School of Medicine Rural Medical Scholars Program. High MCAT scores on the chemistry test are not associated with selection of family medicine as a career.²¹

Myers-Briggs personality types

Medical students who choose family medicine as a career are more likely to be "feeling" in the Myers-Briggs Personality Classification as well as "less authoritarian and more humanistic."²¹

Scholarship programs for rural primary care

There are programs that attract students matriculating in medical school to family medicine in underserved rural areas. The Alabama Board of Medical Scholarship Awards grants financial assistance to medical students, contracting with them for primary care in an underserved area of Alabama, which is repaid incrementally by practicing for a specified period of time.¹⁴

Category 2: Medical school curriculum factors

Medical education curriculum factors including a special family medicine focus, clinical family medicine emphasis, and cur-

riculum content positively influence choice of family medicine as a career.

Special family medicine focus

A special family medicine focus throughout medical school is essential for attracting medical students into family medicine. There is a direct relationship between the amount of exposure to family medicine and the likelihood of choosing family medicine as a career. Required time in family medicine,^{5,20} a required family medicine clerkship,^{5,8,9,22} involvement of family physicians in the medical school curriculum,^{10,23} and family medicine mentors throughout all four years of medical school,^{4,5,8} all support the choice of family medicine. Exposure to ambulatory family medicine⁷ and rural family medicine rotations^{20,23,24} also play a part in the student selection process. In one study by Bethune et al. the greatest decline in interest in family medicine was in the second year of medical school, when the entire curriculum was taught by specialists without exposure to family medicine.²⁵ Recent research by Campos-Outcalt et al. has shown that not only having a family medicine clerkship is important but spending time at more than one site enhances interest in selecting family medicine as a career.²

Clinical family medicine emphasis

Actual clinical family medicine exposure is essential to attracting medical students to family medicine. Students respond positively to direct family medicine patient care during the pre-clinical years.⁶ Medical school curricula need clinical rotations in family medicine to "exemplify the personal rewards and health care benefits of the family practice approach to care."⁸ Medical students need the opportunity to interact with patients and family medicine attendings including medical school faculty and community-based physicians.⁸ Students need exposure to the wide diversity of patients, problems, and activities that family physicians deal with each day.^{4,8}

Curriculum content

The content of the medical school curriculum plays an integral role in attracting medical students. Family medicine historically emphasizes care of the entire patient or "holism."⁴ Curricula need to demonstrate enduring relationships with patients, continuity of care, and preventive medicine, which positively influence choosing family medicine.⁴ Community-based primary care experience, rural preceptor exposure,²⁴ and international electives are associated with the choice of family medicine.¹¹ A positive clinical experience in family medicine has a significant effect on choosing family medicine as a career.²⁶

Category 3: Structural factors

Structural factors are those which the institution can provide as a function of its strategy to produce family physicians. These factors include the policy environment toward family medicine, family medicine department, family medicine faculty, residency program, and recruitment programs.

Favorable policy environment

The importance of primary care in the medical school setting cannot be overstated.^{4,5,6,10} The unofficial medical school culture has a significant effect on choosing family medicine as a career. Despite a rural, primary care mission by a medical school, negative and demeaning comments about family medicine, primary care providers, and choosing family medicine as a career tend to have negative influence in medical student interest in family medicine.⁵ Most medical students relate having heard negative comments about family medicine and family medicine physicians, called the “hidden curriculum.”²⁷ Other comments heard were that family physicians were not as smart as other physicians and that family medicine was very difficult to master the broad content area.²⁷ Many perceive family medicine as not equal to other specialties.²⁷ Negative comments influence medical students’ opinion of family medicine, and those comments appear to be increasing.^{28,29} One study has shown that the “ability to attract students to family medicine during medical school is positively related to the family medicine output of the medical school.”²⁵

Family medicine department

The presence of a family medicine department increases the likelihood of medical students choosing family medicine as a residency and career.⁵ “The American Academy of Family Practice (AAFP) supports . . . the presence of a strong department of family medicine on campus” since it correlated with increased numbers of family medicine matriculates.¹⁰ Medical schools that have family medicine departments are more likely to graduate students who choose a family medicine residency than schools that do not.¹⁰ A strong family medicine department is the basis for many positive factors influencing the choice of family medicine as a career.

Family medicine faculty

Positive family medicine role models and mentors are essential to attract medical students into family medicine.^{4,5,8,10,19} Having more family medicine role models early in medical school might encourage more students to select family medicine as a career.¹⁷ It is important that there be family medicine faculty exposure through all four years of medical school.⁸ Medical schools need positive role models to promote the discipline of family medicine to medical students.⁸ Having more family medicine faculty who are positive role models and mentors early in medical school encourage more students to select family medicine as a career.⁸ Enthusiastic family medicine faculty gives students role models, which ensure “ongoing validation and support for a career choice in Family Medicine and might encourage more students to choose Family Medicine.”²⁸ Recent studies have shown that the perceived competence of the family medicine faculty plays a significant role in attracting medical students to family medicine.^{2,22} When the physician that medical students emulate and wish to be like more than anyone else is a family physician, the likelihood of choosing family medicine is increased.²

Family medicine residency

Medical schools wishing to increase the number of graduates selecting family medicine need to provide exposure to family medicine residents. Family medicine residents serve as student role models, since a significant amount of teaching is performed by resident physicians. Satisfied, content residents have a positive effect on medical students interested in family medicine.²⁰ One study has shown that medical students are influenced by their impression of resident quality and an enthusiastic program director.²⁰ Family medicine residencies are potentially attractive because they are relatively short, allowing the physician to begin paying off medical school debts.

Recruitment programs

Strong recruitment programs at every level are necessary to attract students who want to practice family medicine. Pipeline programs similar to the one at the University of Alabama School of Medicine Tuscaloosa programs have been shown to increase the interest in health care professions in high school and college students.^{5,16} Many residency programs actively market to medical student populations for prospective residents. The shorter length of residency and lifestyle often attracts medical students to family medicine residency programs.³⁰ Likewise, many subspecialty fellowship programs market postgraduate training programs, such as Sports Medicine, Obstetrics, Maternal and Child Care, Psychiatry, Hospital Medicine, Rural Health Care, and Geriatrics, to attract prospective residents. The American Academy of Family Practice is committed to providing a well-trained family physician to everyone who wants one.¹¹

Discussion

While not addressing the strengths of supporting evidence, this literature survey seeks to establish a theoretical range of factors associated with students choosing family medicine as a career. The factors influencing medical student specialty choice are varied and complex. It would appear that many of these factors can be influenced to enhance student interest in family medicine. It should be acknowledged that employment of these factors will not necessarily come without expense. One paper from the Association of Departments of Family Medicine entitled “Difficult Choices in Medical Student Education” discusses the fiscal problems associated with having a family medicine clerkship.²³ It notes escalation of those costs with an increase in number of medical students. While expensive, can we afford to lose any family medicine clerkships? The real question is: “*Can we afford not to have a family medicine clerkship?*” Family medicine is central to medical education strategies that produce primary care physicians who meet the needs of underserved populations.^{31,32} With a view toward achieving this goal, factors associated with selecting family medicine as a specialty were researched in this paper with the intent to develop a questionnaire to delineate the degree to which these factors correlate with residency choices among our students.

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Potential Financial Conflicts of Interest: By AJCM® policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article that might create any potential conflict of interest.

Financial support was obtained from a \$2,000 Grant from the Research Council of the College of Community Health Sciences of the University of Alabama. Institutional Review Board Approval: University of Alabama IRB # 09-OR-042.

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