

Factors Influencing Subspecialty Choice Among Radiology Residents: A Case Study of Pediatric Radiology

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Purpose: Persistent workforce shortages exist in some radiology subspecialties. Residents' motivations for selecting particular fellowships, as well as their perceptions of the subspecialty fields, heavily influence the supply of new radiologists to these areas. The authors investigated the factors residents consider most important in subspecialty choice, fellowship choice patterns between 1999 and 2008, and changes that might attract residents to one particular shortage field: pediatric radiology.

Materials and Methods: An online questionnaire was developed and sent to 1,000 radiology trainees in the United States using contact information from the ACR's national resident database. Anonymized responses were evaluated using analysis of variance and logistic regression models.

Results: Leading factors for fellowship selection were "area of strong personal interest," "advanced/multimodality imaging," and "intellectual challenge." Compensation ranked low, 13th among 20 factors. Large shifts in subspecialty preference were seen between 1999 and 2008. Those with a pediatric radiology preference ranked "physician-physician interaction," "physician-patient contact," and "altruism" higher than respondents selecting other subspecialties. Respondents believed that pediatric radiologists make less money than other subspecialists (\$325,000 vs \$385,000 per year). There was no association between choosing pediatric radiology and gender, age, research plans, or parental status.

Conclusions: Multiple factors account for subspecialty selection among residents, and it is useful to understand these factors when attempting to recruit residents to specific subspecialties. To ease the workforce shortage in pediatric radiology, advanced and varied imaging modalities, numerous job opportunities, and well-paid private practice positions should be emphasized to residents.

Key Words: Education, fellowships, workforce, pediatric radiology

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Subscription to the online survey tool SurveyMonkey.com was funded by the Society for Pediatric Radiology (Reston, Va).

INTRODUCTION

Radiology residents' perceptions of the various fellowship choices are an important factor affecting the workforce supply in subspecialty fields. If residents judge a subspecialty to be uninteresting, unmarketable, or otherwise undesirable, its fellowships will remain unfilled, and subsequent workforce shortages may occur. In turn, the market can self-correct through improved job offers and a greater variety of available positions in shortage areas.

Pediatric radiology is one of several subspecialty fields experiencing an ongoing workforce shortage. In 2005, two leaders in pediatric radiology published an editorial "SOS," describing an ongoing shortfall of pediatric radiologists and calling for more recruits and fresh ideas to avert a potential workforce crisis [1]. Four years later, the shortage has not abated. In the 2007-2008 update on the radiology employment market, pediatric radiology was named the third most difficult subspecialty in which to

fill vacancies in academic centers, behind breast imaging and interventional radiology. The favorable pediatric radiology job market has persisted despite the recent downturn in job availability in other subspecialties [2]. Over the past 10 years, an average of only 57 pediatric radiology fellows have been trained per year, not all of whom stay in the United States (J. Boylan, Society for Pediatric Radiology [SPR] membership and workforce reports from 1998 to 2007, personal communication, April 2008). With roughly 100 positions currently being advertised in the field [3], and with many unadvertised openings available, the pediatric radiology shortage may continue for several years to come.

Several theories have been advanced as to why pediatric radiology in particular has experienced an ongoing workforce shortage. Foremost among these hypotheses revolves around salary and relative value unit disadvantages purported to be experienced by pediatric radiologists. Additionally, some trainees hold a belief that pediatric radiology positions are limited to major academic centers in large metropolitan areas. Others cite undesirable call situations and the use of older imaging modalities [1,4].

The SPR formed a workforce task force in 2006 to assist in the recruitment and retention of qualified pediatric radiologists. Of special interest to the task force are the perceptions of the subspecialty among residents and modifiable changes that would make pediatric radiology more attractive. A large-scale resident questionnaire was therefore undertaken.

MATERIALS AND METHODS

Presurvey Process

Several steps were taken to prepare for an online resident survey: 1) available literature regarding factors influencing fellowship choice among radiology residents was reviewed; 2) the researchers discussed with radiology residents, through online forums and one-on-one interactions, key issues related to residents' choices of fellowships; and 3) the SPR's workforce task force developed several hypotheses to explain the relative lack of interest in pediatric radiology as a fellowship choice. A questionnaire was then formulated and tested on a pilot group of residents to ensure that all guidelines were clear and the time required to complete the survey was appropriate.

The survey was approved by the institutional review board at the lead author's institution and subsequently submitted to the Resident and Fellow Section of the ACR for review. Upon approval from the ACR, a total of 1,000 e-mail addresses of trainees randomly selected from the ACR's resident and fellow database were provided. E-mail lists were handled exclusively by the SPR

executive secretary, and researchers were blinded to the e-mail addresses.

Online Survey

An online survey tool, SurveyMonkey.com (Portland, Oregon), was used for the study. The questionnaire was loaded and posted on the survey agent's Web site. An e-mail containing an introduction to the survey was issued to each trainee. A Web link triggering the online survey was provided in the e-mail. The first e-mail was sent out in late January 2008. Three follow-up e-mails were sent to the same trainees at 10-day intervals until the survey was closed in March 2008.

A total of 24 questions were designed for the study (Appendix). The questionnaire was distributed in 5 sections. The first 2 sections focused on fellowship and career plans. In the third section (question 6), 20 possible factors that might affect participants' choices of fellowship were listed. A 5-point, Likert-type scale was used to measure the participants' views of the importance of each factor. The fourth section focused on trainees' personal perceptions that might also affect their fellowship and career decisions. If residents stated that they were not interested in pediatric radiology, a question asked for circumstances that might lead them to reconsider this choice. The final section requested nonidentifiable personal information, including demographics.

Once the survey was completed, all data were secured online and password protected. Only the first author and the statistician (one of the coauthors) were allowed to access and download the data from the online survey tool.

Data-Analysis Methods

Data from the survey are summarized as mean \pm SE for numerical data and as frequencies (percentages) for categorical data. Analysis of variance was used to assess associations of numerical variables to the factors of interest, such as subspecialty preferences. Post hoc comparisons of means between categorical groups, such as pediatric radiology vs other subspecialties, were performed under the analysis-of-variance model framework and adjusted using Bonferroni's multiple-comparison methods. For dichotomous and categorical variables, associations to the factors of interest were assessed using logistic and general logistic regression models, respectively. Post hoc comparisons of odds or percentages between categorical groups were performed under the logistic and general logistic regression framework and adjusted using Bonferroni's methods. All analyses were performed using SAS version 9.1 (SAS Institute Inc, Cary, North Carolina). *P* values $< .05$ were considered statistically significant.

RESULTS

Of the 1,000 trainees surveyed, a total of 337 responses (33.7%) were received. All respondents who indicated fellowship preferences were included in analyses; 5 respondents reported no fellowship preferences and were thereby excluded. Hence, the effective number of participants for the study was 332. On questions regarding future plans for research and practice settings, “not sure” responses are excluded from the data tables but are addressed independently in the body of this article.

Table 1 summarizes the demographic and training status of the participants. The mean age was 31.7 ± 0.2 years. Sixty-six percent of the participants were male. Approximately one-third of the participants had children. More than 70% of respondents were in the third or fourth year of residency, and three-quarters were training at academic or university settings.

When asked if they planned to pursue radiology fellowships after residency, 81% of respondents indicated “definitely” and 12% “probably.” Sixty-nine percent of respondents developed fellowship preferences during their second or third year of radiology residency. About 20% had subspecialty preferences before starting their residencies. A minority had definite plans to pursue research after training (19% of all respondents, or 28% after excluding “not sure” responses), and even fewer planned to practice at academic institutions (16% of all respondents, or 20% after excluding “not sure” responses).

Body imaging (16%), neuroradiology (15%), interventional radiology (14%), and musculoskeletal imaging (13%) were the 4 most popular subspecialties (Figure 1).

Seven percent ($n = 24$) indicated pediatric radiology as their first choice; however, this percentage was inflated because of response bias (refer to the “Study Limitations” section below). There were no statistical correlations between a pediatric radiology preference and any of the following factors: gender, age, parental status, desire to pursue research, timing of subspecialty decision, and desired practice setting (Table 1). Higher ratings of pediatric radiology rotations correlated with choosing a pediatric radiology fellowship.

Factors Influencing Fellowship Choice

Leading factors in fellowship choice among all respondents, in order of descending importance, were “area of strong personal interest,” “advanced image modalities/multimodality imaging,” “intellectual challenge,” “area of strong personal knowledge,” “marketability of the subspecialty,” and “enjoyable resident rotations.” “Favorable financial compensation” was a relatively unimportant factor when selecting a subspecialty, ranking 13th among

20 factors overall. Other comparatively inconsequential factors included “desire to join a specific group” and “research opportunities” (Table 2).

Factors influencing fellowship choice among several subspecialties were analyzed (Table 2). The following factors ranked significantly higher for those interested in pediatric radiology than for other respondents: “degree of patient contact,” “degree of personal interaction with other doctors—being part of the clinical team,” “health and physical status of patients encountered in the subspecialty,” and “altruism—making the biggest impact in the lives of patients” (P values $< .01$). There was also some evidence that “enjoyable resident rotations” was considered more important, and “favorable financial compensation” less important, among participants who planned to pursue a pediatric radiology fellowship (P values $< .10$).

Notable differences in factors influencing fellowship choice were seen among residents interested in the various radiology subspecialties. For instance, respondents interested in interventional radiology ranked “area of strong personal interest,” “patient contact,” and “favorable financial compensation” higher than other respondents. Those interested in women’s imaging expressed more interest in “favorable work hours” and “little or no call responsibilities” and less interest in “advanced/multimodality imaging.” Interest in musculoskeletal imaging was correlated with a desire to “strengthen an area of weakness.” See Table 2 for additional comparisons among subspecialties.

Those preferring practice in academic settings were more likely to assign higher importance to choosing fellowships in areas of “strong personal interest.” Participants with children ranked “favorable financial compensation” lower than those without children.

Residents’ Perceptions of Pediatric Radiology

When asked to estimate pediatric and nonpediatric radiology yearly income 5 years after completing fellowship, participants believed that salaries in nonpediatric radiology subspecialties are higher than those in pediatric radiology (\$385,000 vs \$325,000, $P < .01$). Thus, there was a perceived salary penalty of \$60,000 per year for choosing pediatric radiology. About half of the respondents ranked pediatric radiology as “fairly marketable” relative to other subspecialties. Respondents believed that pediatric radiology graduates are more likely to work at academic centers than graduates from other fellowship programs ($P < .01$).

For trainees who did not plan to pursue pediatric radiology, we assessed under what conditions they would have considered choosing the subspecialty. More flexible job opportunities, better compensation, and a stronger

Table 1. Summary of demographics, radiology training status, and career and fellowship plans

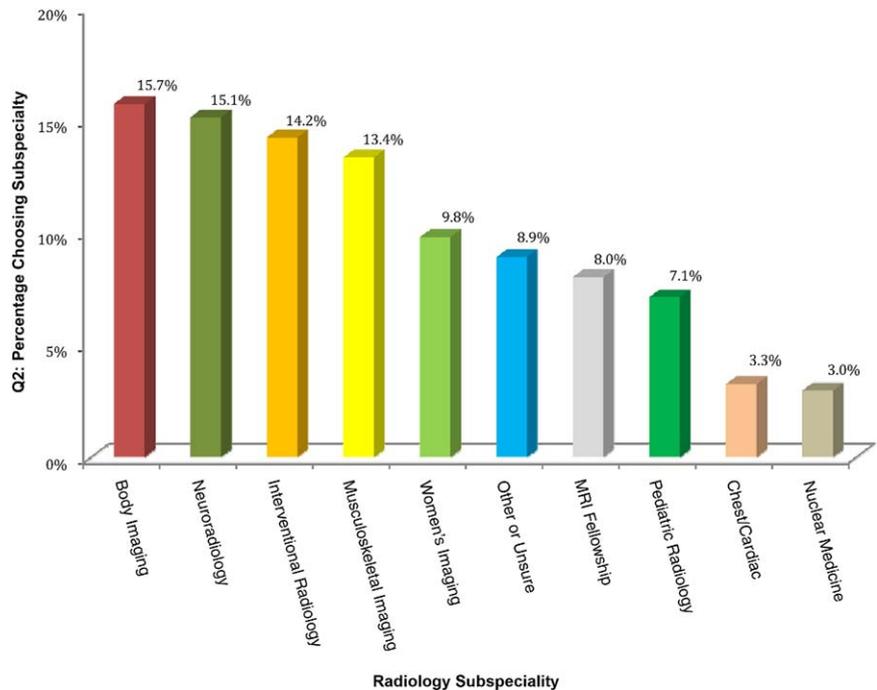
Variable (Question)*	Category	All (n = 332)	Pediatric Radiology (n = 24)	Other Radiology Subspecialties (n = 308)
Demographics				
Age (Q22)		31.66 ± 0.18	31.42 ± 0.66	31.68 ± 0.19
Age ≥35 y	Yes	15.14%	12.50%	15.17%
Male (Q23)	Yes	65.84%	70.83%	65.42%
Having children (Q24)	Yes	33.13%	37.50%	32.77%
Radiology training program				
Training program setting (Q20)	Academic/university setting	74.84%	60.87%	76.01%
	Community program	25.16%	39.13%	23.99%
Region of training program (Q21)	NE	42.24%	37.50%	42.71%
	S	18.63%	25.00%	18.31%
	MW	25.78%	25.00%	25.42%
	W	13.35%	12.50%	13.56%
Career and fellowship plans				
Timing of subspecialty decision (Q3)	Before residency	19.93%	29.17%	18.82%
	1st-year resident	7.77%	8.33%	7.75%
	2nd-year resident	30.74%	41.67%	29.89%
	3rd-year resident	37.84%	16.67%	39.85%
	4th-year resident	3.72%	4.17%	3.69%
Desired practice setting (Q4)†	Academic	19.70%	27.78%	19.09%
	Private practice	31.44%	11.11%	32.37%
	Mixed	48.86%	61.11%	48.55%
Pursuing research after fellowship (Q5)†	Yes	28.00%	30.77%	27.88%

Note: Data are expressed as mean ± SE for numerical data and as frequency (%) for categorical data. When comparing pediatric radiology and other groups, none of these factors was statistically significant.

*See Appendix for variables as they appeared on the original questionnaire.

†Excludes “not sure” responses.

Fig 1. Subspecialty preferences among residents. Q = question.



desire to work with children were the top 3 prerequisites for considering pediatric radiology as a career. Residents with an interest in musculoskeletal imaging and neuroradiology also indicated that a greater demand for pediatric radiologists would make the field more desirable.

Interestingly, those who wanted better compensation to consider a career in pediatric radiology also believed that the salary gap between pediatric radiology and other subspecialties was very large. These respondents estimated the salary of pediatric radiologists to be \$290,000 per year, compared with \$401,000 in other subspecialties. Among those respondents who did not indicate that they would require better compensation to consider pediatric radiology, the salary estimates were not as widely spread (\$338,000 in pediatric radiology vs \$376,000 in other subspecialties, $P < .01$; Figure 2).

DISCUSSION

The strongest motive behind subspecialty choice among radiology residents in this survey was “area of strong personal interest—what I love doing.” Amid concerns of generational differences, and the perception that many members of Generation X (born between 1964 and 1980) and Generation Y (born after 1981) select careers primarily on the basis of lifestyle and compensation [5], it is notable to find that fellowship choice is motivated by intellectual curiosity and passion. The lifestyle factors of “favorable work hours,” “favorable daily workload,” and “favorable financial compensation” ranked 10th, 11th, and 13th, respectively, on the list of 20 factors affecting

fellowship choice, all lower than the humanitarian factors of “altruism” and “physician-physician interaction.”

Five of the top 6 factors affecting fellowship choice (strong personal interest, imaging modalities used, intellectual challenge, strong personal knowledge, and enjoyable resident rotations) were subjective and/or emotionally driven. Factor 5 was the first to address a “practical” concern: marketability. Factor 7, “job security,” was the second pragmatic item on the list. These findings underscore the importance of advertising existing workforce shortages to residents.

A resident survey conducted in 1999 documented fellowship choices among 657 junior and senior residents in programs across the country [6]. Results from that survey were compared with fellowship preferences among third-year and fourth-year residents in our study. Decreases between 1999 and 2008 were seen in the number of residents choosing body and interventional fellowships (Figure 3). Musculoskeletal, women’s imaging, and magnetic resonance imaging fellowships enjoyed increased interest. Meaningful comparison regarding preference for pediatric radiology is not possible because of selection bias in our questionnaire.

“Favorable financial compensation” ranked lower than most factors influencing subspecialty choice. However, a substantial number of respondents (27%) indicated that they would require better compensation before considering a career in pediatric radiology, indicating that the perception of a salary disadvantage may be an important deterrent affecting this subspecialty. A study of outgoing radiology graduates of the class of 1997

Table 2. Factors influencing fellowship choice among radiology residents

Factors Affecting Fellowship Choice*	Category	All Subspecialties (n = 332)	Pediatric Radiology (n = 24)	Body Imaging (n = 53)	Interventional Radiology (n = 48)	Musculoskeletal Imaging (n = 45)	MRI (n = 27)	Neuroradiology (n = 51)	Women's Imaging (n = 33)
Q6-b	Area of strong personal interest	4.60 ± 0.04	4.58 ± 0.13	4.29 ± 0.09 ^L	4.90 ± 0.09 ^H	4.60 ± 0.10	4.33 ± 0.12 ^L	4.65 ± 0.09	4.67 ± 0.11
Q6-j	Advanced imaging/multimodality imaging	3.87 ± 0.05	3.83 ± 0.20	4.08 ± 0.14	3.58 ± 0.14 ^L	3.95 ± 0.15	3.81 ± 0.19	4.20 ± 0.14 ^H	3.55 ± 0.17 ^L
Q6-o	Intellectual challenge	3.81 ± 0.05	3.67 ± 0.19	3.64 ± 0.13	3.92 ± 0.13	4.02 ± 0.14	3.70 ± 0.18	4.06 ± 0.13 ^H	3.38 ± 0.16 ^L
Q6-c	Area of strong personal knowledge	3.75 ± 0.06	3.83 ± 0.21	3.63 ± 0.14	3.77 ± 0.15	3.93 ± 0.15	3.37 ± 0.20 ^L	3.90 ± 0.14	3.61 ± 0.18
Q6-a	Marketability	3.75 ± 0.05	3.50 ± 0.19	3.69 ± 0.13	3.71 ± 0.14	4.00 ± 0.15	3.78 ± 0.18	3.80 ± 0.13	3.91 ± 0.17
Q6-i	Enjoyable rotation	3.69 ± 0.06	4.04 ± 0.20	3.49 ± 0.14	4.04 ± 0.14 ^H	3.47 ± 0.15	3.37 ± 0.19	3.73 ± 0.14	3.79 ± 0.17
Q6-m	Job security	3.42 ± 0.06	3.67 ± 0.22	3.12 ± 0.15 ^L	3.60 ± 0.15	3.53 ± 0.16	3.41 ± 0.21	3.22 ± 0.15	3.52 ± 0.19
Q6-s	Personal interaction with other doctors	3.30 ± 0.07	4.08 ± 0.23 ^H	3.14 ± 0.16	3.81 ± 0.16 ^H	3.19 ± 0.17	2.59 ± 0.21 ^L	3.06 ± 0.16	3.27 ± 0.19
Q6-t	Altruism	3.27 ± 0.06	3.92 ± 0.22 ^H	2.90 ± 0.15 ^L	3.96 ± 0.16 ^H	3.05 ± 0.17	2.74 ± 0.21 ^L	3.14 ± 0.15	3.42 ± 0.19
Q6-e	Favorable work hours	3.27 ± 0.06	3.58 ± 0.22	3.24 ± 0.15	2.54 ± 0.15 ^L	3.35 ± 0.16	3.63 ± 0.20	3.02 ± 0.15	3.88 ± 0.18 ^H
Q6-f	Favorable daily workload	3.24 ± 0.06	3.33 ± 0.21	3.12 ± 0.14	2.77 ± 0.15 ^L	3.42 ± 0.16	3.59 ± 0.20	3.06 ± 0.14	3.48 ± 0.18
Q6-h	Impact of a teacher/mentor	3.20 ± 0.07	3.54 ± 0.24	3.18 ± 0.17	3.25 ± 0.17	3.33 ± 0.18	2.96 ± 0.23	3.33 ± 0.17	2.82 ± 0.21 ^L
Q6-k	Favorable financial compensation	3.10 ± 0.06	2.71 ± 0.22	2.88 ± 0.15	3.46 ± 0.16 ^H	3.12 ± 0.17	3.41 ± 0.21	3.18 ± 0.15	2.64 ± 0.19 ^L
Q6-d	Strengthen an area of weakness	2.88 ± 0.07	2.67 ± 0.25	2.96 ± 0.17	2.42 ± 0.18 ^L	3.49 ± 0.19 ^H	3.48 ± 0.23 ^L	2.63 ± 0.17	2.91 ± 0.21
Q6-q	Patient contact	2.82 ± 0.07	3.46 ± 0.22 ^H	2.36 ± 0.15 ^L	3.92 ± 0.15 ^H	2.53 ± 0.16	1.93 ± 0.20 ^L	2.37 ± 0.15 ^L	3.64 ± 0.18 ^H
Q6-g	Little or no call responsibilities	2.80 ± 0.07	2.83 ± 0.23	2.73 ± 0.16	1.98 ± 0.16 ^L	3.10 ± 0.18	3.33 ± 0.22 ^H	2.55 ± 0.16	3.36 ± 0.20 ^H
Q6-n	Domestic/geographic limitations	2.70 ± 0.07	3.08 ± 0.27	2.88 ± 0.18	2.40 ± 0.19	2.81 ± 0.20	2.96 ± 0.25	2.43 ± 0.19	2.79 ± 0.23
Q6-p	Research	2.46 ± 0.06	2.21 ± 0.23	2.20 ± 0.16	2.58 ± 0.17	2.60 ± 0.18	2.44 ± 0.22	2.67 ± 0.16	1.85 ± 0.20 ^L
Q6-r	Patient's health/physical status	2.27 ± 0.06	2.96 ± 0.22 ^H	1.94 ± 0.15 ^L	2.35 ± 0.15	2.60 ± 0.16 ^H	2.07 ± 0.21	2.00 ± 0.15 ^L	2.58 ± 0.19
Q6-l	Desire to join a specific group/practice	2.24 ± 0.06	2.50 ± 0.23	2.33 ± 0.16	2.10 ± 0.17	2.35 ± 0.17	2.30 ± 0.22	2.20 ± 0.16	1.85 ± 0.20 ^L

Note: Data are expressed as mean ± SE. MRI = magnetic resonance imaging. A superscript letter "H" ("L") indicates that the mean in the current subspecialty is significantly higher (lower) than that of other subspecialties excluding itself (*P* < .05).

*See Appendix for variables as they appeared on the original questionnaire. Each variable (or question) ranged from 1 = not important to 5 = extremely important.

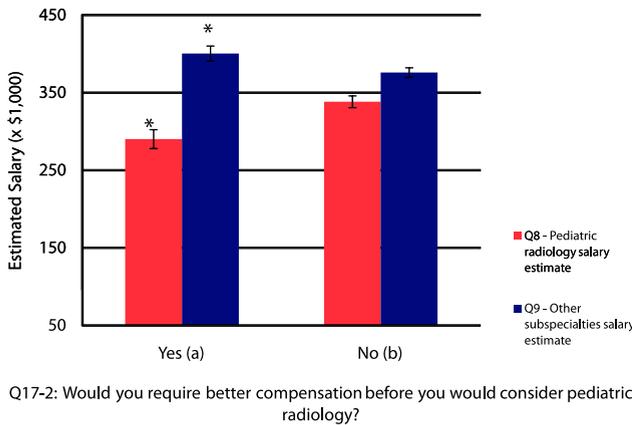


Fig 2. Comparison of estimated pediatric radiology and nonpediatric radiology salaries among participants who (a) required higher compensation to consider pediatric radiology and (b) did not require higher compensation to consider pediatric radiology. Q = question.

showed that starting salaries in pediatric radiology were 8.8% lower than for general body imagers at that time [7]. This income differential was less than the 15.6% (\$60,000 per year) discrepancy estimated by respondents in our survey.

No up-to-date scientific study comparing salaries among all subspecialties of radiology is available. However, if an income differential persists, this disparity is not absolute for all pediatric radiology graduates. Many positions currently being advertised in pediatric radiology are for partnership tracks in adult-centered practices, with an opportunity to read 50% to 100% pediatric cases. Subspecialists in these groups become partners after 1 to 3 years and enjoy equal earning potential in the partnerships [3].

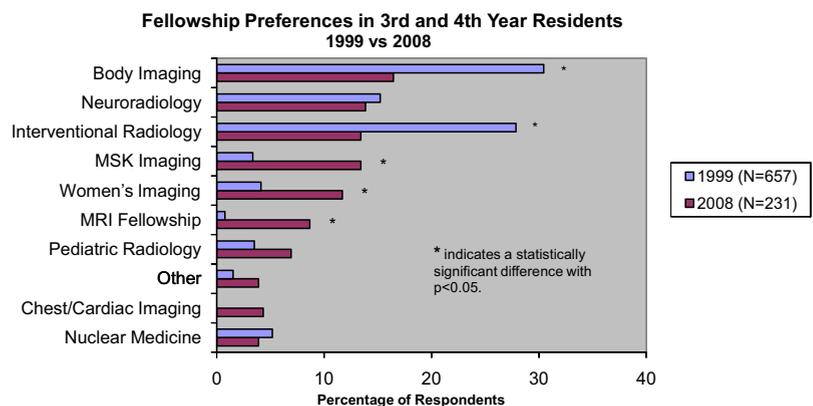
“Inflexible career opportunities” was the strongest factor keeping residents from choosing pediatric radiology in our survey. This perceived drawback may be based on the fact that up to half of pediatric radiologists work in

academic practices, and two-thirds practice in large metropolitan areas. In contrast, only 20% of subspecialists outside of pediatric radiology work at academic centers, and approximately one-third practice in large metropolitan areas [8]. Most surveyed residents plan to work in either private practice or “mixed” teaching-community environments. Only 19% had plans to pursue research during their careers, with 16% planning careers in academics. Thus, it appears that subspecialties overemphasizing academics would be less popular. It may be helpful to promote the varied career options in pediatric radiology: >50% of advertised positions are nonacademic [3].

Several additional strategies for promoting pediatric radiology are suggested from this survey, some of which have been endorsed in prior articles [1,4,9]. Residents were noted to choose their fellowships between their second and third years of training, highlighting the importance of positive exposure to pediatric radiology early in residency. At times, the first pediatric rotation does not occur until late in the third year. Also, during some early rotations, residents may be delegated to basic radiography and fluoroscopy, limiting their exposure to the cross-sectional modalities that are viewed as desirable. With the transition to a 3-year radiology residency and a fourth year of subspecialty electives, it will become more important that residents gain favorable firsthand experiences of shortage fields, like pediatric radiology, by the second year.

Another difference between residents interested in pediatric radiology and those going into other subspecialties, in terms of motivations in their fellowship choice, was the importance of “altruism—making the biggest impact in the lives of patients.” Other highly ranked values among those interested in pediatric radiology were physician-physician interaction, degree of patient contact, and health status of patients encountered in the subspecialty. Medical students motivated by these ideals may not initially consider the field of radiology, thinking that specialties such as pediatrics or family practice are better suited to their altruistic goals. Streamlined pro-

Fig 3. Comparison of fellowship preferences among third-year and fourth-year radiology residents in 1999 and 2008. MRI = magnetic resonance imaging; MSK = musculoskeletal.



grams, combining years of clinical pediatrics with radiology, may be an efficient way to direct medical students with these interests into pediatric radiology. Several such curricula, called the Pediatric Emphasis Diagnostic Radiology Alternative Pathway, are currently being used with some success [10].

Pediatric radiologists enjoy several unique advantages compared with other subspecialists. They use a wide variety of modalities, reading computed tomographic, magnetic resonance imaging, fluoroscopic, ultrasound, plain-film, and nuclear medicine studies, often on a daily basis. They also work with patients who are generally free from degenerative changes and self-inflicted ailments. An increased degree of interaction with patients, parents, and clinicians is also rewarding.

Study Limitations

In our survey, 7% of the respondents indicated a primary interest in pediatric radiology. A different resident questionnaire, also conducted in 2008, found the proportion of residents interested in pediatric radiology to be 4.4% [11]. The increased proportion interested in pediatric radiology in our survey is attributed to response bias, as the cover letter included with the questionnaire deliberately identified the survey as a project of the SPR. This identification was an attempt to boost response rate by associating the survey with a formal organization. Despite the self-selection bias in our survey, the sample size of residents with interest in pediatric radiology remained small and was subject to sampling variability. Negative social perceptions associated with persons who are overly interested in money may have introduced some degree of self-deception bias in questions evaluating the importance of financial motivations. This effect may have been partially mitigated through the affirmation of the anonymous nature of the survey. The overall response rate (34%) was very good for unsolicited e-mail surveys.

CONCLUSIONS

Fellowship preference among residents is based primarily on subjective factors, such as personal interest and desire to use advanced modalities. To effectively recruit residents to fields experiencing a workforce shortage, such as pediatric radiology, resident rotations need to be early in their training and demonstrate the use of advanced im-

aging modalities. The many job opportunities, diverse practice settings, and well-compensated private practice positions available to pediatric radiology graduates should be emphasized. If these recruiting strategies are successful, pediatric radiologists will be able to continue offering their unique contributions in the care of humankind's most important resource: our children.

ACKNOWLEDGMENT

We wish to acknowledge Jennifer Boylan, SPR executive director, for her many contributions in data gathering and organization.

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SUPPLEMENTARY DATA

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.jacr.2009.05.005](https://doi.org/10.1016/j.jacr.2009.05.005).