

Pediatricians Working Part-Time: Past, Present, and Future

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ABSTRACT. *Background.* Pediatrics has consistently attracted a large number of women. Although the majority of practicing pediatricians are male, female pediatricians will soon constitute the majority. The challenge to balance personal and professional life is of particular concern to women, and part-time positions may provide a potential solution.

Objective. To examine how many pediatricians currently work part-time, to examine trends in part-time employment from 1993 to present, to determine pediatric residents' interest in part-time employment, and to identify perceived barriers to part-time work.

Design/Methods. Two data sources were used for these analyses. The first was an American Academy of Pediatrics Periodic Survey from 1993 and 2000 asking a combined national sample of 3218 American Academy of Pediatrics members about their employment status. Multiple mailings were conducted for each survey producing an overall response rate of 62%. The second data source was a survey asking a national random sample of 500 pediatric residents completing training in 2000 about their job search experiences and attitudes toward part-time employment. Four mailings of this survey were completed, and responses were obtained from 71% of residents.

Results. The percentage of pediatricians working part-time increased from 11% in 1993 to 15% in 2000. This increase did not exceed what would be expected based on the rise in the percentage of pediatricians who are female from 36% in 1993 to 45% in 2000. On average, pediatricians working part-time provided 36% fewer direct patient care hours than full-time pediatricians (42 hours vs 27 hours). No statistically significant difference in direct patient care hours was apparent between male and female pediatricians working full-time. Female residents were more likely than male residents to consider part-time or reduced-hours positions (42% vs 14%) and to accept part-time or reduced-hours positions (14% vs 3%). Also, considerably more female residents (58%) than male residents (15%) indicated that they would be inter-

ested in arranging a part-time position within the next 5 years. The most commonly perceived barriers to working part-time by both male and female residents included loss of income (70%), reduction in job benefits such as health insurance (47%), and loan repayment (46%). When those who reported some interest in part-time employment were asked how they would spend their extra time, most reported that they would address family needs related to children (females: 92%; males: 63%). Finally, residents interested in working part-time were more likely to be without a position when surveyed than residents not interested in part-time work (15% vs 2%).

Conclusions. The relative percentages of female pediatricians and pediatricians working part-time will likely continue to grow. As a result, the total direct patient care hours available for children may be reduced. Pediatric practices will benefit by better accommodating the needs of pediatricians to balance work and family goals, and future workforce projections and training decisions must begin taking part-time employment rates into account. *Pediatrics* 2002;109:1015–1020; *part-time, reduced hours, pediatric workforce, female pediatricians.*

ABBREVIATIONS. AAP, American Academy of Pediatrics; OR, odds ratio.

From 1980 to 1998, the percentage of all physicians who were female increased from 12% to 23%. Pediatrics has historically drawn a larger number of female physicians than other specialties, and the percentage of female pediatricians has also increased dramatically from estimates of 28% in 1980 to 46% in 1998.¹ Meanwhile, the percentage of pediatric residents who are female is currently over 60%.² Thus, as more female doctors enter the workforce and many male retirees leave the workforce over the next several years, female pediatricians will soon comprise the majority. This continuing trend has compelled researchers to consider the ways that the changing gender distribution influences pediatrics.^{3–8}

Women pediatricians have been shown to be more likely to work part-time than their male counterparts³ and, therefore, to work fewer hours overall.⁸ This finding is likely related to greater family demands placed on female rather than on male pediatricians. It is unclear to what extent the rate of part-time employment has paralleled the rise in the percentage of female pediatricians. Increasing rates of part-time employment would affect the future pediatric workforce by requiring more total pediatricians to provide the same number of direct patient care hours. This increase also may reduce or elimi-

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nate the surplus of pediatricians that some have projected.⁹⁻¹¹

In this study, we examined rates of part-time work among practicing pediatricians in 1993 and 2000 to determine whether there was an increase and also to determine whether this increase exceeds that which would be expected based on the changing gender distribution alone. We also examined pediatric residents' interest in and attitudes toward part-time work to project future trends in part-time employment and to determine whether pediatricians interested in part-time work experience difficulty finding a job.

METHODS

Periodic Surveys of 1993 and 2000

The Periodic Survey of Fellows is conducted 4 times each year by the American Academy of Pediatrics (AAP) Division of Health Policy Research to collect information from the AAP membership on current issues in pediatric practice and on topics of concern to AAP policy makers. Each Periodic Survey is mailed to a unique random sample of approximately 1600 active, US AAP members. We analyzed data from 2 Periodic Surveys that asked the same questions about part-time employment in 1993 and 2000. These surveys shared several components including questions on hours in practice, practice type, practice location, length of patient visits, number of patient visits per week, and physician demographics. To define part-time employment, pediatricians were simply asked whether they consider their position to be full-time or part-time. These data were used to track trends in part-time employment from 1993 to 2000. These analyses were restricted to practicing pediatricians; residents, semi-retired pediatricians, and retired pediatricians were excluded from all analyses.

The 1993 survey (Periodic Survey 21) was sent to 1616 pediatricians. After 5 mailings from July to September of 1993, 71% of those surveyed responded. The total *N* for the statistical analyses was 892 once residents and retired pediatricians were excluded. The 2000 survey (Periodic Survey 43) was sent to 1602 pediatricians. After 6 mailings from August 1999 to March 2000, 52% of those surveyed responded.

The lower response rate in 2000 was likely associated with a historical trend toward lower survey response rates and with the other items on the survey that focused on practice expenses and may have required additional effort for pediatricians to complete. The total *N* for the statistical analyses was 644 once residents and retired pediatricians were excluded. The gender, age, practice setting, and practice location of respondents to the 1993 and 2000 surveys were also similar to those of other Periodic Surveys conducted during their respective time frames.

Third-Year Resident Survey 2000

To anticipate future developments in part-time practice, current pediatric residents were surveyed about their consideration of and interest in part-time arrangements. This survey asked residents a set of questions focusing specifically on residents' attitudes and job search experiences related to part-time employment and a set of general questions about their education and training, their career goals, and factors influencing their job selection. The classification of residents' current position as part-time or full-time was made based on resident self-report. Demographic information about the respondents' race and ethnicity, gender, and medical school was also collected.

The survey was sent to a national random sample of 500 third-year categorical or primary care pediatrics residents finishing training in 2000. Residents in combined specialty programs, such as med/peds residents, were not included. Residents were surveyed as they were concluding their training or just after (June-September). The residents were randomly selected from a database of residents enrolled in the Pediatrics Review and Education Program conducted by the AAP. Pediatrics Review and Education Program is an educational program offered free to all pediatric residents in Accreditation Council for Graduate Medical Education-accredited US pediatric residency programs. The survey was mailed to residents up to 4 times. A total of 354 (71%) residents returned the survey. No significant differences were apparent between responders and nonresponders in their gender (percent female: 67 vs 66, *P* = .95) or age (mean years: 31.4 vs 31.9, *P* = .16). All surveys used in this study were approved by the AAP Institutional Review Board.

Statistical Analyses

For all statistical analyses the periodic survey data and the resident survey data were analyzed separately. Several statistical techniques were used to analyze the data. For all categorical outcome variables, eg, part-time status, χ^2 analyses were used to examine relationships with a single predictor variable, and logistic regression modeling was used to examine multiple predictor variables. For continuous outcome variables, eg, direct patient care hours, independent-groups *t* tests were used to examine associations with a single predictor variable, and independent-groups analysis of variance was used to examine multiple predictor variables and interactions between predictors. Some values were missing for each of the predictor or outcome variables, producing slight variation in the number of cases used in each analysis. A *P* value < .05 was considered statistically significant for all analyses.

RESULTS

Trends in Part-Time Employment

Table 1 presents the percentage of pediatricians working part-time across survey years broken down by gender. The table shows that the percentage of all pediatricians who are female increased significantly across survey years from 36% in 1993 to 45% in 2000 (*P* < .001). The table also shows that the percentage of all pediatricians working part-time increased from 11% in 1993 to 15% in 2000 (*P* = .019). This represents relative increases of 25% in the percentage of pediatricians who are female and 36% in the percentage of pediatricians working part-time. The rates of part-time employment were much higher for females than for males in both 1993 and 2000. For both survey years combined, 26% of women compared with 4% of men worked part-time (*P* < .001).

In an attempt to better understand how these various trends are related, a logistic regression analysis was conducted examining part-time employment as a function of survey year, gender, and age. Results showed that in this multivariate model female pediatricians were significantly more likely to work part-time (odds ratio [OR] = 9.2; < .001) and that survey year itself (OR = 1.16; *P* = .38) and physician age

TABLE 1. Percentage of Pediatricians Working Part-Time by Survey Year and Gender

Gender	1993			2000		
	<i>n</i>	Percentage of Sample	Percent Working Part-Time	<i>n</i>	Percentage of Sample	Percent Working Part-Time
Males	563	64	4	342	55	4
Females	311	36	24	282	45	28
Total	874	100	11	624	100	15

(OR = 1.00; $P = .96$) were not significant predictors of part-time employment. This finding suggests that within the female pediatrician group and within the male pediatrician group, rates of part-time work did not change reliably from 1993 to 2000, but rather the gender distribution of pediatricians shifted in favor of females, thus increasing the overall part-time rate.

There also was a statistically significant difference for the combined survey years between men and women in their reasons for working part-time. For 57% of women working part-time compared with 7% of men working part-time, child care was reported as their primary reason for working part-time ($P < .001$). This finding is consistent with past research suggesting that female physicians have more family responsibilities than do male physicians.³⁻⁵

To investigate the number of direct patient care hours that part-time pediatricians provide, a 2-factor analysis of variance was conducted. This analysis examined direct patient care hours as a function of part-time employment status and gender. The mean direct patient care hours are presented in Fig 1. As should be expected, there was a significant main effect of employment status, with full-time pediatricians providing roughly 15 more direct patient care hours per week on average than part-time pediatricians ($P < .001$). Neither the effect of gender ($P = .245$) nor the interaction between gender and employment status ($P = .519$) were significant within the analysis of variance. These results are important because they refine the general conclusion that women work fewer hours than men. Although it is true within our data that women on average do work fewer direct patient care hours than men (43 hours vs 37 hours; $P < .001$), the analysis of variance results show that it is more precise to say that women are more likely to have part-time practice arrangements than are men. Among full-time pediatricians, women did not work significantly fewer hours than did men.

Resident Interest in Part-Time Employment

A sizeable number of residents completing training in 2000 considered part-time employment in their job search. As shown in Table 2, females (42%) were significantly more likely than males (14%) to consider part-time positions in their job search ($P < .001$), and females (14%) were significantly more likely than males (3%) to accept a part-time position ($P = .002$). Gender differences between residents

were also apparent when residents were asked about their interest in arranging a part-time position within the next 5 years ($P < .001$). Over half of female residents (58%) compared with 15% of male residents reported a greater than 50% likelihood of being interested in arranging a part-time position within the next 5 years. Furthermore, 26% of female residents and 4% of male residents reported a 100% likelihood of interest in a part-time position within the next 5 years.

Gender differences were also apparent in the ways residents would use their extra time. Those residents who indicated that they had absolutely no interest in arranging a part-time position were excluded from the analysis of extra time. Women (92%) were significantly more likely than men (63%) to report that they would spend their extra time with their children ($P < .001$). Men, on the other hand, were significantly more likely than females to report that they would spend their extra time with parents (19% vs 7%; $P = .022$), pursuing business interests (23% vs 9%; $P = .013$), and in other activities (12% vs 4%; $P = .044$).

Consistent with male residents' lower interest in part-time positions, males overall were significantly more likely than females to report reasons for not working part-time. More specifically, 80% of males considered loss of income to be an important barrier to part-time employment compared with 65% of females ($P < .001$), and 57% of males considered loan repayment to be an important barrier compared with 40% females ($P = .005$). Males were also more likely than female residents to personally miss working full-time (34% vs 15%; $P < .001$) or to have a service obligation (15% vs 5%; $P < .001$). Males also reported significantly more total barriers on average than did females (mean totals: 3.5 vs 2.8; $P < .001$). For both men and women, loss of income, reduction in benefits, and loan repayment were the top 3 barriers to part-time employment. Although not significant, females were more likely than males to report that there are not many part-time opportunities available (28% vs 19%; $P = .076$) and to be concerned with the influence of part-time employment on practice stability (33% vs 25%; $P = .151$).

Residents accepting a general pediatrics practice position were asked the number of practice hours that they anticipate working in their new position. Rounding hours and on-call hours were not included in this estimate. Figure 2 shows mean anticipated practice hours as a function of gender and part-time status. A 2-factor independent groups analysis of variance revealed a significant main effect of part-time status ($P = .013$) and no significant main effect of gender ($P = .515$) or significant interaction between gender and part-time status ($P = .849$). Part-time pediatricians anticipated working an average of 10 practice hours per week less than full-time pediatricians. The lack of a gender effect or an interaction effect suggests that differences in anticipated practice hours between males and females is primarily a result of women having more part-time arrangements. These results are very similar to those shown for practicing pediatricians in Fig 1. Within the part-time or full-time classifications, women residents did not

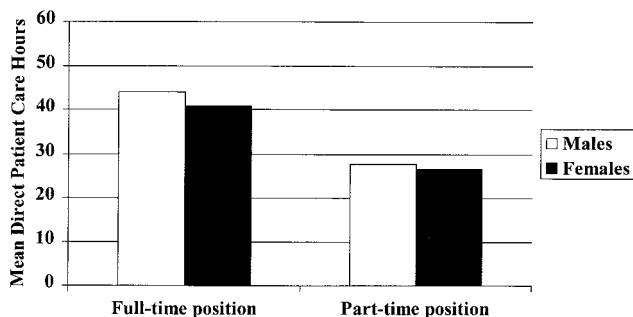


Fig 1. Pediatricians' direct patient care hours per week by gender and part-time status.

TABLE 2. Resident Attitudes Toward Part-Time or Reduced-Hours Positions by Gender

Part-Time Practice Variable	Female Resident (N = 235)	Male Resident (N = 117)	P Value
Considered part-time or reduced-hours positions in job search (%)	42	14	.001*
Reported that new position is a part-time or reduced-hours position (%)	14	3	.002*
Likelihood of being interested in arranging a part-time or reduced-hours position in the next 5 years		($\chi^2[3] = 74.9$)	.001*
0% likelihood (%)	21	66	
1%–50% likelihood (%)	21	19	
51%–99% likelihood (%)	32	11	
100% likelihood (%)	26	4	
Ways residents would spend extra time if they arranged a part-time position (Those with no interest in a part-time position were excluded from this analysis. Residents could mark >1 category.)			
With children (%)	92	63	.001*
With spouse (%)	48	54	.544
With parents (%)	7	19	.022*
Pursue business interest (%)	9	23	.013*
Return to school (%)	9	9	.932
Other (%)	4	12	.044*
Barriers to seeking part-time or reduced-hours employment (Residents could mark >1 category.)			
Loss of income (%)	65	80	.006*
Reduction in benefits (%)	43	56	.080
Loan repayment (%)	40	57	.005*
May limit future professional success (%)	35	44	.107
Negative influence on practice stability (%)	33	25	.151
Not many part-time positions available (%)	28	19	.076
Personally miss working full-time (%)	15	34	.001*
Negative reaction from coworkers (%)	18	14	.354
Service obligation (%)	5	15	.001*

* P value < .05.

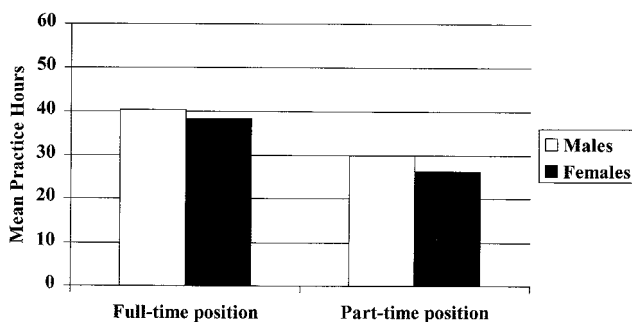


Fig 2. Residents' anticipated practice hours per week by gender and part-time status.

anticipate working significantly fewer hours than men.

Many differences between residents who are interested in part-time positions and those who are not may be linked to the association of gender and part-time interest demonstrated in Table 2. To isolate better the independent effects of part-time practice interest, we conducted additional logistic regression analyses examining differences in resident demographics and resident job search experiences between those interested and those not interested in part-time employment while controlling for gender. For these analyses, residents were divided into 2 groups. The first group included those who have accepted a part-time position and those who indicated a >50% interest in arranging a part-time position in the next 5 years, while the second groups included those who indicated a <50% interest. Table 3 reveals many differences in resident demographics and job search experiences between those interested in part-time positions and those who are not.

With the exception of subspecialty practice as a future clinical goal, all of the part-time differences in demographics and job search experiences remained when gender effects were controlled. Specifically, those interested in part-time positions were significantly less likely to have debt >\$50 000 (OR = 0.44; $P < .001$) and more likely to be married (OR = 3.0; $P < .001$). Of the married residents, 34% were married to a physician. Those interested in part-time work were also more likely to report that their spouse/partner's career plans or their family situation limited their selection of positions (OR = 2.38; $P < .001$). The job search experiences of residents did in fact demonstrate greater job search difficulty for those interested in part-time positions. They were much more likely to not have a position when surveyed (OR = 17.2; $P < .001$), and they were less likely to report that a new position was their first choice (OR = 0.48; $P = .034$). The unadjusted difference in subspecialty practice as a future clinical goal favoring those not interested in part-time work, however, was attenuated when gender was accounted for. Female gender was inversely related to having a subspecialty goal (OR = 0.49; $P = .001$). This suggests that women's lesser interest in subspecializing is unrelated to their greater interest in part-time work.

DISCUSSION

A clear relationship between gender and part-time employment emerged for practicing pediatricians and for pediatric residents. Among practicing pediatricians, women were considerably more likely than men to work part-time and to use their extra time for child care. Among residents, women were more

TABLE 3. Resident Demographics and Job Search Experiences by Interest in Part-Time Employment

Resident Characteristic	Unadjusted Part-Time Effects			Multivariate Part-Time Effects Adjusted for Gender	
	Interested in Part-Time (N = 144)	Not Interested in Part-Time (N = 191)	P Value	OR	P Value
Married (%)	79	64	.002*	3.00	.001*
Have children (%)	38	35	.663	1.30	.306
Have educational debt >\$50 000 (spouse included) (%)	47	65	.001*	.44	.001*
Subspecialty practice is future clinical goal (%)	22	33	.025*	.76	.331
Had a mentor during residency (%)	80	77	.513	1.23	.478
Did not have a position when surveyed (%)	15	2	.001*	17.20	.001*
New position is in same city or area as residency (%)	50	39	.064	1.62	.065
New position was resident's first choice (%)	79	89	.014*	.48	.034*
Spouse/partner's career plans or family situation limited selection of positions (%)	55	30	.001*	2.38	.001*

* P value <.05.

likely than men to consider part-time employment in their job search and to be interested in part-time work in the next 5 years. Because pediatrics has the largest percentage of women among medical specialties, part-time employment is an especially important issue for the pediatric workforce.

This study is unique in that part-time employment rates of pediatricians were obtained for the past and present, and estimated for the future. The rates of part-time employment found for women were fairly similar from 1993 (24%) to 2000 (28%). This rate is also similar to the percentage of female residents who reported that they were certain they would arrange a part-time position in the next 5 years (26%). Likewise, the rates of part-time employment found for men were identical in 1993 (4%) and 2000 (4%), and this rate was the same as the percentage of male residents who were certain that they would arrange a part-time position in the next 5 years (4%). This similarity within gender groups across survey years, as also demonstrated in the logistic regression analyses, suggests that the increase in part-time employment from 1993 and likely into the future is driven primarily by the growing numbers of female pediatricians. Assuming that the rates of part-time employment among women and men remain constant and the percentage of women in pediatrics increases to 55%, for example, the rate of part-time employment for males and females combined would increase fairly modestly from 15% to 17%. However, if the interest in part-time employment reported by residents does translate into actual part-time employment then this rate could be considerably higher.

Future projections of part-time employment are also made more complex by the likely possibility that pediatricians working part-time will periodically alternate between full-time and part-time work. Given the changes that occur in child care and other responsibilities across various life stages, some of this movement in part-time work may be anticipated.

Our results also revealed several other important distinctions between gender and part-time employment effects. In looking at direct patient care hours for example, part-time status rather than gender explained the lower number of direct patient care

hours for women. Women working full-time did not work significantly fewer hours than did men working full-time. Similarly, men working part-time did not work significantly more hours than did women working part-time. Women simply were more likely than men were to have part-time arrangements. Although this distinction may be subtle, it is both more accurate and less biased to say women have more part-time arrangements. The statement that women work fewer hours than men has the added negative connotation that women are not honoring their work contracts to the extent that men do. In reality, more women simply have reduced-hours arrangements that they are fulfilling.

When gender effects were controlled for, several differences in residents' demographic situation were apparent. Those interested in part-time employment were more likely to be married. These residents were also less likely to be burdened by heavy educational debts, but at the same time they were more likely to report that their spouse's career plans or family situation limited their selection of positions. Given that the majority of residents interested in part-time work foresee using their extra time to care for children, it is surprising that those interested in part-time work were not significantly more likely to have children. Perhaps, many of those interested in part-time employment were responding to the future component of the part-time interest question (in next 5 years) and are planning to have children soon.

Greater job search difficulty was apparent for residents interested in part-time employment. These residents were over 7 times more likely to not have a position when surveyed than were residents not interested in part-time work. This effect was not influenced when gender was controlled. That is, there does not seem to be a hiring bias favoring men. Rather, there seems to be substantial barriers in the pediatric market making it difficult to enter pediatrics in a part-time capacity. Job search difficulties among part-timers was also unrelated to international medical graduate visa problems or hiring restrictions, because the percentage of international medical graduates was 19% for both those interested and for those not interested in part-time work ($P = .994$).

As is true with the findings of any study, there are limitations, which must be recognized. First, the information from both surveys, including part-time designation, is self-reported and the response rate was somewhat lower for the year 2000 Periodic Survey. Second, the timing of the survey of third-year pediatric residents provides a prospective view rather than one based on actual employment situation and certainly, residents' plans may change. Finally, the data presented herein represent a physician perspective and do not assess part-time employment opportunities from either employer or patient perspectives.

CONCLUSION

The findings of these surveys add a critical element to issues of physician workforce productivity. They show that women are more likely than men to work part-time, but they also lay to rest the perception that women physicians working full-time are less productive (work fewer hours) than their male counterparts. The discussion has been shifted from the realm of anecdotal to the data-driven conclusions regarding part-time employment patterns, which will serve as the underpinning of future policy development deliberations.

With the gender distribution of pediatrics continuing to shift toward females and with high resident interest in part-time employment, we expect increased pressure on pediatric employers in the future to hire part-time pediatricians or to allow current pediatricians to work part-time. It is also possible that we may see increases in practices that are specifically established to accommodate part-time employment arrangements. As noted in the report of the Future of Pediatric Education II Project, both practices and academic settings should consider coordinated schedules, fair leave policies, quality day care at or near the workplace, and flexibility in academic promotion and advancement.⁷

Future pediatric workforce projections will need to take into account the current percentage of part-time

pediatricians (15%) and the potential increase in the percentage of pediatricians working part-time in the future. Moreover, the increases in part-time employment are occurring at the same time when there is an ongoing call at the federal level for universal insurance coverage for children and when state children's health insurance programs are increasing the number of insured children. These factors may require researchers to examine the forecasted supply of pediatricians relative to possible increased demand and changing employment preferences.

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