

## Characteristics and Outcomes for Women Physicians Who Work Reduced Hours

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### ABSTRACT

**Objectives:** To understand the characteristics of women physicians who work reduced hours in dual-earner couples and how such work schedules affect the quality of the marital role, parental role, and job role, as well as indicators of psychological distress, burnout, career satisfaction, and life satisfaction.

**Methods:** Survey of a random sample of female physicians between 25 and 50 years of age, working within 25 miles of Boston, whose names were obtained from the Registry of Board Certification in Medicine in Massachusetts. Interviewers conducted a 60-minute face-to-face close-ended interview after a 20-minute mailed questionnaire had been completed.

**Results:** Fifty-one full-time physicians and 47 reduced-hours physicians completed the study, for a completion rate of 49.5%. There was no difference in age, number of years as a physician, mean household income, number of children, or presence of an infant in the home between reduced-hours and full-time physicians. Reduced-hours physicians, however, were more likely to be in a generalist specialty (40% vs. 12%,  $p = 0.001$ ) and to spend a greater portion of their time in patient care (64.5% vs. 50.1%,  $p = 0.003$ ) and less time in research (4.9% vs. 18.0%,  $p = 0.002$ ) than full-time physicians. In addition, there was no difference between the two groups in the perception of work interfering with family life (1.8 vs. 1.7,  $p = 0.17$ ; scale 1–7 with 7 high) or family life interfering with work (1.4 vs. 1.5,  $p = 0.62$ ). Physicians who worked their preferred number of hours (25% of full-time and 57% of reduced-hours physicians), regardless of full-time (self-reported hours 35–90 hours per week) or reduced-hours (20–60 hours per week) status, reported better job role quality ( $r = 0.35$ ,  $p = 0.001$ ), schedule fit ( $r = 0.41$ ,  $p \leq 0.001$ ), lower burnout ( $r = -0.22$ ,  $p = 0.03$ ), better marital role quality ( $r = 0.28$ ,  $p = 0.006$ ), and higher life satisfaction ( $r = 0.29$ ,  $p = 0.005$ ).

**Conclusions:** Women physicians who work their preferred number of hours achieve the best balance of work and family outcomes.

### INTRODUCTION

**I**N RECENT YEARS, THERE HAS BEEN a growing demand in medicine for part-time or reduced-hours positions for physicians. With the increase

in dual-career families and consequent child-rearing issues, many physicians have sought part-time jobs to better balance family demands. Despite this increase in demand, little is known about how well such reduced-hours schedules

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meet the needs of physicians or how this work arrangement affects their ultimate career and life satisfaction. It has been shown previously that high marital role quality and parental role quality buffer the effects of negative job experience on psychological distress, regardless of gender, but the effects of having reduced hours on the job experience is unknown.<sup>1</sup> The work of Morrow et al.<sup>2</sup> revealed that attitudinal differences in measurements of work commitment, but not satisfaction, were associated with full-time vs. part-time employment. They further noted that when employees received their work preferences regarding schedule, they exhibited more favorable attitudes on work-related attitudinal measures.<sup>2</sup> We conducted a study of full- and part-time married female physicians in dual-earner couples to better understand both the defining characteristics of such physicians (specialty, job description, number of and ages of children) and how differences in work hours affect the quality of their marital role, parental role, and job role, as well as their perception of psychological distress, burnout, and career and life satisfaction.

## MATERIALS AND METHODS

The sample was drawn randomly from the registry of the Board of Certification in Medicine, which licenses all physicians practicing in the Commonwealth of Massachusetts. We first identified a subsample of female physicians between 25 and 50 years of age who worked within a 25-mile radius of Boston and sent them introductory letters describing the study. Next, trained screeners contacted each physician to determine if she met the eligibility criteria for inclusion into the study. Our goal was to interview 50 full-time and 50 reduced-hours physicians. However, reduced-hours physicians were harder to locate than were their full-time counterparts. Therefore, we expanded our sampling strategy by asking participants to nominate eligible physicians and by asking Partners, an umbrella organization representing physicians from a number of major Boston hospitals, to send out a letter to member physicians asking eligible staff to contact us if they were interested in participating. These efforts resulted in 6 additional participants.

Data were collected between September 1999 and March 2001. The final sample consisted of 26 white full-time doctors, 25 minority full-time doc-

tors, 33 white reduced-hours doctors, and 14 minority reduced-hours doctors ( $n = 98$ ). For purposes of this study, a doctor was categorized as full-time or reduced-hours if her employer considered her to be so. We also queried participants, both full-time and reduced-hours, to see if they were working their preferred number of hours. Among the 92 doctors obtained via random sampling, the completion or cooperation rate was 49.5% (calculated as participants divided by participants plus refusers). An additional 6 respondents were volunteers or were nominated by other doctors as eligible.

### *Procedures*

Screeners passed on the names of eligible and willing participants to trained interviewers. These interviewers sent a recruitment package to each potential participant indicating that she would be called shortly to set up an interview. The letter described the time commitment and remuneration that participation in the study would entail. The package also included endorsements from the Massachusetts Medical Society and the American Medical Women's Association, along with two articles describing our previous project with reduced-hours physicians. Trained interviewers conducted 60-minute, face-to-face, close-ended interviews with each participant at a time and place convenient to the participant. Each participant also completed a 20-minute mailed questionnaire in advance and returned it at the time of the interview. The interview and mailed survey covered various objective and subjective aspects of participant's jobs (e.g., salary, number of hours worked, career satisfaction, schedule fit), the quality of their major social roles (partner, parent, employee), and various quality of life (QOL) indicators (e.g., psychological distress, life satisfaction, physical symptoms). Each physician received \$25 for her participation.

### *Measures*

Modern sexism was assessed using an 8-item measure by Swim et al.<sup>3</sup> Respondents used a 7-point scale to rate their agreement with such items as: "Women often miss out on good jobs due to sexual discrimination." High scores represent low modern sexism. Cronbach's alpha was 0.74 in the present sample. We measured marital role quality using a 15-item brief form<sup>4</sup> of the marital role quality scale.<sup>5</sup> Respondents indicated

on a 4-point scale the degree to which each item was currently rewarding or of concern. For example, subjects were asked how rewarding was "having a partner who is a good listener" and how much of a concern was "your partner being critical of you."<sup>6</sup> Internal consistency was excellent, with Cronbach's alphas of 0.91 for rewards and 0.89 for concerns in the present sample. We assessed job role quality using a similar measure,<sup>7</sup> asking respondents to indicate on a 4-point scale the degree to which various aspects of their jobs were rewarding or of concern. Cronbach's alphas were 0.82 for rewards and 0.85 for concerns in the present sample.

We measured career satisfaction using a scale developed for a study of academic physicians (for a description of the sample and methods, see Carr et al.<sup>7</sup> Participants used a 7-point scale to rate six aspects of career satisfaction: their current work setting, their potential to achieve their professional goals, their overall professional practice, the extent to which this practice met their expectations, their overall professional research, and the extent to which this research met their expectations. Cronbach's alpha was 0.86 in the present sample. We measured schedule fit using an 11-item scale,<sup>8</sup> asking respondents to assess on a 7-point scale how well the number and distribution of their work hours and the flexibility of their work schedule met their needs and how well their own and their partner's schedules met their own, their partner's, their children's, and, if applicable, their elderly dependents' needs. Only 17 participants had elderly dependents. Cronbach's alpha ranged from 0.71 for the 11-item scale to 0.81 for the 9-item scale omitting the elderly dependents items.

Burnout was assessed using a modified version<sup>9</sup> of the Maslach Burnout Inventory.<sup>10</sup> Respondents used a 7-point scale to rate how frequently they experienced 16 symptoms of cynicism, exhaustion, and lack of professional efficacy on the job. Cronbach's alpha was 0.87 in the present sample. Life satisfaction was assessed using the 5-item Satisfaction with Life Scale.<sup>11</sup> Respondents used a 7-point scale to indicate the degree of their agreement with such items as "In most ways, my life is close to my ideal." Cronbach's alpha was 0.85 in the present sample. We assessed work hours by asking respondents to estimate the number of hours worked in an average workweek. We assessed work-family interference (WFI) and family-work interference (FWI)

using selected items from a scale developed by MacDermid et al.<sup>12</sup> For each of the two 4-item scales, WFI and FWI, we selected one item each addressing the energy, strain, and behavioral components of interference along with a fourth, more global item assessing the overall severity of interference. Cronbach's alphas were 0.73 for WFI and 0.66 for FWI in the present sample.

We asked participants to describe their race/ethnicity and dichotomized responses into a dummy variable representing minority status (1, African American, Hispanic/Latina, Asian/Pacific Islander, Native American/Alaskan Native, or other; 0, white). We calculated household income per capita by dividing each respondent's report of yearly household income by the number of people living in the household. Because the distribution of this variable is highly skewed, we used the natural log of per capita income.

### Analysis

Data were analyzed using SPSS software (Chicago, IL). We generated frequency distributions and descriptive statistics (means and standard deviations) for comparisons of responses by work status. Independent sample *t* tests were computed to test the significance of differences between full-time and reduced-hours physicians, and point-biserial correlation coefficients were computed to test the association between the dichotomous variable of working one's preferred hours (yes/no) and such outcomes as job role quality, schedule fit, burnout, marital role quality, and life satisfaction.

## RESULTS

Our study included 33 white reduced-hours physicians and 14 minority reduced-hours physicians, for a total of 47 reduced-hours physicians, and 26 white full-time and 25 minority full-time physicians, for a total of 51 full-time physicians (Table 1). Reduced-hours physicians worked a mean of 32.1 hours per week (range 20–60 hours per week), and full-time physicians worked 48.7 hours per week (range 35–90 hours per week). There was no difference in the mean age of the physicians in the two groups (40.5 years vs. 39.9 years) or in the number of years as a physician (10.8 years vs. 9.6 years). Full-time physicians, however, had been working full time for a longer period than reduced hours physicians had been

TABLE 1. DEMOGRAPHICS OF FULL-TIME AND REDUCED-HOURS PHYSICIANS

Variable	Reduced-hours physicians n = 47	Full-time physicians n = 51
Hours of work week	32.1	48.7***
Mean age (years)	39.9	40.5
Number of years as a physician	9.6	10.8
Time working in current schedule (months)	48.2	85.6**
Mean household income	\$229,889 ± \$149,714	\$244,421 ± \$140,758
Number of children	2.1 ± 0.9	2.3 ± 1.1
Infant in the home	0.2 ± 0.4	0.2 ± 0.4
Modern sexism score	5.5 ± 0.7	5.5 ± 0.9
Generalist specialty (%)	40.0	12.0**
Medical subspecialty (%)	45.0	68.0*
Other specialty (%)	0.0	12.0*
Surgical specialty (%)	15.0	10.0
Time in patient care (%)	64.5	50.1**
Time in research (%)	4.9	18.0**

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

working reduced hours (85.6 months vs. 48.2 months,  $t(93.4) = 3.33$ ,  $p = 0.001$ ). There was no difference in the mean household income, the proportion of physicians practicing in an academic setting (3 full-time physicians vs. 2 reduced-hours physicians) (Table 2), the number of children, or the presence of an infant in the home. In addition, there was no difference between the two groups in the likelihood of having a preschool, a school-age, or a teenage child at home. The modern sexism score for both groups was similar (5.5 vs. 5.5).

Reduced-hours physicians compared with full-time physicians were more likely to be in a generalist specialty (40% vs. 12%,  $t(78.4) = -3.35$ ,  $p = 0.001$ ) and less likely to be in a medical subspecialty (45% vs. 68%,  $t(93.5) = 2.35$ ,  $p = 0.021$ )

or other specialty (0% vs. 12%,  $t(49) = 2.59$ ,  $p = 0.013$ ) but equally likely to be in a surgical specialty, although the proportions for both groups were low (15% vs. 10%). Full-time physicians had greater career satisfaction (5.3 vs. 4.8, on a scale of 1–7 with 7 being high,  $t(83.3) = 2.05$ ,  $p = 0.044$ ) than reduced-hours physicians. Reduced-hours physicians tended to spend a greater proportion of their time in patient care (64.5% vs. 50.1%,  $t(88.1) = -3.08$ ,  $p = 0.003$ ), and they ideally preferred to spend more time in patient care (65.5% vs. 49.3%,  $t(87.2) = -3.38$ ,  $p = 0.001$ ). They spent less time on research (4.9% vs. 18.0%,  $t(79.5) = 3.25$ ,  $p = 0.003$ ), and they ideally preferred to spend less time on research (9.7% vs. 23.9%,  $t(74.1) = 3.26$ ,  $p = 0.002$ ) than physicians working full time.

TABLE 2. WORK SETTING OF PHYSICIANS IN STUDY

Work setting	Full-time (%) <sup>a</sup> (n = 51)	Part-time (%) <sup>b</sup> (n = 47)	Total (%) <sup>c</sup> (n = 98)
Hospital	26 (51)	19 (40)	45 (46)
Government facility (VA hospital, military base, prison)	1 (2)	2 (4)	3 (3)
Solo private practice	2 (4)	2 (4)	4 (4)
Partnership or group private practice	10 (20)	11 (23)	21 (22)
Clinic	3 (6)	6 (13)	9 (9)
HMO	1 (2)	1 (2)	2 (2)
PPO	0 (0)	1 (2)	1 (1)
Medical school	3 (6)	2 (4)	5 (5)
Other	4 (8)	3 (6)	7 (7)

<sup>a</sup>% of full-time physicians.

<sup>b</sup>% of part-time physicians.

<sup>c</sup>% of total physicians.

TABLE 3. OUTCOMES FOR REDUCED-HOURS PHYSICIANS COMPARED WITH FULL-TIME PHYSICIANS

Variable	Reduced-hours physicians n = 47	Full-time physicians n = 51
Career satisfaction <sup>a</sup>	4.8 ± 1.3	5.3 ± 1.0*
Work interfering with family life	1.7 ± 0.5	1.8 ± 0.5
Family life interfering with work	1.5 ± 0.5	1.4 ± 0.5

<sup>a</sup>Scale of 1–7, with 7 being high.

\* $p < 0.01$ .

There was no difference in the time spent in teaching or administration or in other professional activities. Physicians in both groups, however, were equally satisfied with the proportion of time spent in the various professional activities of patient care, research, teaching, and administration. There was no difference between the two groups in the perception of work interfering with family life or of family life interfering with work (Table 3). Regardless of work status, physicians who reported working their preferred number of hours also reported better job role quality ( $r = 0.35$ ,  $p = 0.001$ ) and schedule fit ( $r = 0.41$ ,  $p < 0.001$ ), lower burnout ( $r = -0.22$ ,  $p = 0.03$ ), better marital role quality ( $r = 0.28$ ,  $p = 0.006$ ), and higher life satisfaction ( $r = 0.29$ ,  $p = 0.005$ ) (Table 4).

## DISCUSSION

Our findings suggest that physicians working reduced hours compared with full-time physicians achieve on average a number of important outcomes, including similar job role quality and satisfaction with time spent in different professional activities. Surprisingly, they report similar marital role quality, parental role quality, psychosocial distress, and life satisfaction as full-time physicians. Their perceptions of work-family balance, such as schedule fit and sense of work in-

terfering with family and family interfering with work, also are similar to those of full-time physicians. Regardless of whether the physician has part-time or full-time status, working the number of hours they prefer rather than simply working fewer hours has the most important impact on job role quality, schedule fit, burnout, marital role quality, and life satisfaction.

However, full-time physicians do report greater career satisfaction. The greater career satisfaction for full-time physicians may reflect the organizational difficulties that exist in part-time positions. These difficulties include problems with timely promotion for part-time workers,<sup>13</sup> the presumption that someone working part time is not serious about a career,<sup>13–15</sup> and the construct of benefit programs for part-time workers, which make these services, such as health insurance, less available to part-time workers.<sup>16</sup> Salaries frequently are not proportional to the amount of work required of part-time positions for physicians,<sup>17</sup> and on-call time is rarely adjusted for part-time status. It is also difficult to know if physicians who elect to work part time do so because they have less job satisfaction to begin with or if working part time results in less job satisfaction for these physicians, who are trying to weigh other personal life concerns with their professional careers.

We found few demographic differences between full-time and reduced-hours physicians ex-

TABLE 4. OUTCOMES FOR PHYSICIANS WORKING THEIR PREFERRED NUMBER OF HOURS

	Physicians working preferred number of hours n = 40	Physicians not working preferred number of hours n = 58
Job role quality	1.4	1.0**
Schedule fit	5.4	4.6**
Burnout	2.5	2.9*
Marital role quality	2.2	1.6**
Life satisfaction	5.6	5.0**

\* $p = 0.05$ ; \*\* $p < 0.01$ .

cept in terms of their specialty choice and the amount of time spent in research and in patient care. In our study, reduced-hours physicians were more likely to be in primary care specialties and less likely to be in either medical subspecialties or other specialties. This may reflect the fact that some specialties are less amenable to working part time or that other specialties may have more limited hours than primary care specialties, therefore, making it less likely for physicians to feel the need to work part time. Further evaluating the various medical specialties to determine how well they can accommodate part-time workers would add valuable information to this literature. Interestingly, there was no difference in the ages of the children or mean household per capita income of full-time and reduced-hours physicians, suggesting that it may be more an issue of personal style in how women choose to meet the competing demands of family life and professional responsibilities than a difference in the demographic features of full-time and reduced-hours physicians.

Our study found that compared with full-time physicians, reduced-hours physicians spend less time in research and that they prefer to spend less time in research. Similar findings were reported in previous studies,<sup>13</sup> suggesting that this professional activity may be less amenable to part-time physicians than patient care or that part-time physicians have a lower desire to engage in research than full-time physicians. Previous studies have also found that part-time physicians spend greater amounts of time in teaching than their full-time colleagues.<sup>3</sup> Our findings did not suggest such a difference. However, we had a trend for a difference in satisfaction with time spent teaching, with reduced-hours physicians reporting slightly lower satisfaction, but it was not statistically significant.

There are a number of limitations to our study. Our data are from one geographic area, and, thus, our findings may not be generalizable to other areas. Regional variations in the percent of practice in managed care contracts as well as other factors that are similarly dependent on location could influence the relevance of our findings. Still, we believe that many issues regarding part-time practice are similar across geographic differences. The in-depth and time-consuming nature of our study does not lend itself to large sample sizes, and for this reason, our results may not be generalizable.

There are a number of strengths to our study.

We have in-depth data from each of our participants that permit us to fully understand the experience of such physicians with part-time and full-time careers and the respective outcomes that such work arrangements provide both for personal and work-related goals. Despite the fact that dual-earner couples are more frequently choosing such part-time schedules, little is known about the outcomes of such schedules, particularly for physicians. Ours is the first study to examine the details of such schedules and their importance for personal and work-related goals.

## CONCLUSIONS

Working the desired number of hours for married female physicians in dual-career couples, whether full-time or part-time, is the most important factor to achieve such positive outcomes as better job role quality, better marital role quality, lower burnout, and higher life satisfaction. Women physicians who work their preferred number of hours achieve the best balance of work-related and personal goals.

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