

Time spent on professional activities and unwaged domestic work

Is it different for male and female primary care physicians who have children at home?

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OBJECTIVE To examine how having children affects the hours spent by male and female family physicians on professional activities and on unwaged domestic work.

DESIGN Survey fielded between September 1993 and February 1994.

SETTING Ontario.

PARTICIPANTS All Ontario-based physicians certificated by the College of Family Physicians of Canada between 1989 and 1991 after completing a family medicine residency.

MAIN OUTCOME MEASURES Self-reported hours spent per week on professional activities and unwaged domestic work.

RESULTS Response rate was 70%; men and women were equally likely to respond. About half (47.7%) had children at home. Women with children at home spent fewer hours on professional activities ($P < 0.001$) than men with children, whose hours of professional activity were similar to hours of men without children. Both women and men with children reported spending more time on household maintenance than did those without children. Among physicians with children, although men spent time on child care (mean time 11.4 hours; SD 11), women spent much more time on it (mean time 39.7 hours; SD 21; $P < 0.001$). The women worked an average of 90.5 hours per week in professional and unwaged activities; men averaged 68.6 hours. Childless physicians worked fewer hours: men 54.1, women 52.6.

CONCLUSIONS Female physicians with children at home spend more time on child care and household maintenance than their male partners. These responsibilities reduce professional work time (at least until all children are at school full time) and might deter women from active involvement in professional organizations.

OBJECTIF Examiner dans quelle mesure le fait d'avoir des enfants affecte le nombre d'heures que les hommes et les femmes médecins consacrent aux activités professionnelles et aux tâches domestiques non rémunérées.

CONCEPTION Enquête menée entre septembre 1993 et février 1994.

CONTEXTE Ontario.

PARTICIPANTS Tous les médecins ontariens certifiés du Collège des médecins de famille du Canada entre 1989 et 1991 après avoir complété un programme de résidence en médecine familiale.

PRINCIPALES MESURES DES RÉSULTATS Nombre d'heures par semaine signalées par les médecins eux-mêmes et consacrées aux activités professionnelles et aux tâches domestiques non rémunérées.

RÉSULTATS Le taux de réponses fut de 70 % ; les hommes et les femmes avaient des chances égales de répondre. Près de la moitié (47,7 %) avaient des enfants à la maison. Les femmes avec des enfants à la maison ont consacré moins d'heures aux activités professionnelles ($p < 0,001$) comparativement aux hommes avec des enfants ; le nombre d'heures de ces derniers s'est avéré semblable au nombre d'heures des hommes sans enfant. Les hommes et les femmes avec enfants ont rapporté consacrer davantage de temps au maintien du domicile que les couples sans enfant. Dans le groupe des médecins avec enfants, même si les hommes ont mentionné consacrer du temps au soin des enfants (moyenne 11,4 heures, écart-type 11), les femmes y ont consacré beaucoup plus de temps (moyenne 39,7 heures, écart-type 21 ; $p < 0,001$). Les femmes consacraient une moyenne de 90,5 heures par semaine aux activités professionnelles et aux tâches domestiques non rémunérées ; la moyenne des hommes fut de 68,6 heures. Les médecins sans enfant travaillaient moins d'heures : les hommes 54,1 ; les femmes 52,6 heures.

CONCLUSIONS Les femmes médecins avec des enfants à la maison consacrent plus de temps au soin des enfants et au maintien du domicile que leurs partenaires masculins. Ces responsabilités réduisent le temps consacré aux activités professionnelles (au moins jusqu'à ce que les enfants fréquentent l'école à temps plein) et peuvent dissuader les femmes de s'impliquer activement dans les organismes professionnels.

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STUDIES OF CANADIAN PHYSICIANS HAVE repeatedly shown that more female physicians than male physicians work part time,¹⁻³ a finding also noted elsewhere.^{4,5} Even when they work full time, women usually report spending less time per week in professional activities.^{6,7} Women also take more time away from their practices to bear and rear children and do other things.⁸

How the "lower productivity" of female physicians affects physician resource requirements has been the subject of considerable discussion,⁹⁻¹¹ but to date more heat than light has been shed on the implications of women's shorter professional hours. The extent to which younger women continue to work fewer professional hours and the strategies needed to allow women to spend more time in professional practice have not been explored well. These issues are growing in importance because the composition of the primary care medical work force in Canada, once predominantly male, is rapidly changing. Women now comprise more than half of new family physicians trained in Ontario¹² and a quarter of the primary care physicians in Canada.³

A mounting number of reports suggest that female physicians' tendency to work fewer hours is linked to marital status or, when such data are also collected, parenthood.^{8,13} Weisman and Teitelbaum¹⁴ noted that differences between male and female physicians' professional work hours were attributable to the effects of family variables on men and women rather than the converse. However, why children at home should reduce female physicians' professional work hours when they do not reduce male physicians' professional work hours⁸ is not well understood.

Several studies, in fact, have suggested that the presence of children leads to an increase in men's hours of professional activity.^{15,16} One study,¹⁵ reporting that female physicians' marital status was more important than parenthood in explaining fewer hours worked, noted that the sampling strategy excluded certain types of women physicians: women working in larger groups (health maintenance organizations and clinics), women whose practice changed during the previous year,

and women who worked less than 20 hours weekly during the previous year. This strategy likely excluded younger female physicians, especially those taking time to bear and rear children.

A recent study of women physicians only documented that those married to male physicians assumed primary responsibility for more domestic tasks than women married to nonphysicians.¹⁷ Increases in the number of domestic tasks for which women were responsible correlated with decreases in the number of professional hours worked.

This study examined how much time a cohort of recent family medicine residency graduates reported they devoted to professional work and unwaged domestic work (household chores and child care), the difference in time spent weekly by men and women on these activities, and whether children at home affected women's professional activities. Previous studies have quantified only the professional work time of physicians; this study examined time spent in both professional activities and unwaged domestic work.

METHODS

Sample

Members of the cohort were identified by the College of Family Physicians of Canada. All physicians residing in Ontario who had received certification in family medicine between 1989 and 1991 after completing a family medicine residency were eligible for inclusion.

Questionnaire

The questionnaire asked for information about physicians' personal circumstances and professional practice, using partially closed-ended and short self-completion questions. The demographic and practice descriptor questions were adopted from previous physician surveys.^{1-3,8}

Survey implementation

The survey was fielded in September 1993. A thank you or reminder card was sent to all respondents within 10 days of the initial mailing. Nonrespondents received two subsequent mailings. Data collection closed on February 1, 1994.

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The few questionnaires received after that date were not included in the analyses.

Variables

For current marital status, response options were single, married, separated, divorced, widowed, or remarried. Physicians in stable living-together relationships were asked to consider this equiva-

lent to "married." All who considered themselves married or remarried were grouped into the married category for data analysis. Respondents who indicated they had one or more children at home most of the time were categorized as having children. Respondents were asked the age (last birthday) of each child to identify households with at least one child younger than 6 years.

Table 1. Characteristics of respondents

CHARACTERISTIC	MEN N (%)	WOMEN N (%)	TOTAL N (%)
All respondents	183 (46.3)	212 (53.7)	395 (100)
Type of practice			
• Private group	87 (48.1)	120 (56.9)	207 (52.8)
• Solo	37 (20.4)	28 (13.3)	65 (16.6)
• Community health centre	11 (6.1)	18 (8.5)	29 (7.4)
• Locum	17 (9.4)	20 (9.5)	37 (9.4)
• Other*	29 (16.0)	25 (11.8)	54 (13.8)
Fee for service			
• 95% of income	120 (69.5)	136 (67.7)	256 (68.5)
• <95% of income	53 (30.5)	65 (32.3)	118 (31.5)
Location			
• Urban	156 (85.2)	191 (90.1)	347 (87.8)
• Rural	27 (14.8)	21 (9.9)	48 (12.2)
Marital status			
• Single	34 (18.7)	36 (17.5)	70 (18.0)
• Married	143 (78.6)	156 (75.7)	299 (77.1)
• Separated or divorced	5 (2.7)	14 (6.8)	19 (4.9)
Occupation of spouse			
• Physician	22 (16.9)	56 (35.9)	78 (27.3)
• Other health profession	38 (29.2)	6 (3.8)	44 (15.4)
• Other profession	44 (33.8)	66 (42.3)	110 (38.5)
• Other	26 (20.0)	28 (17.9)	54 (18.9)
Work hours of spouse			
• Full time	70 (47.6)	140 (86.4)	210 (68.0)
• Part time	34 (23.1)	7 (4.3)	41 (13.3)
• Occasional	13 (8.8)	6 (3.7)	19 (6.1)
• Not working outside home	30 (20.4)	9 (5.6)	39 (12.6)
Children at home			
• Yes	87 (48.1)	98 (47.3)	185 (47.7)
• No	94 (51.9)	109 (52.7)	203 (52.3)
Child younger than 6 at home (n = 185)			
• Yes	83 (95.4)	87 (88.8)	170 (91.9)
• No	4 (4.5)	11 (11.2)	15 (8.1)

*Includes physicians in academic settings, emergency rooms, and other places.

Physicians were asked to estimate the average number of hours they usually spent weekly in professional activities (excluding on-call time). They also were asked how many hours on average they personally spent on maintaining the household (indoor and outdoor household tasks, excluding child care). Physicians with children were asked how many hours on average per week they took primary responsibility for the care and supervision of their children (excluding hours of sleep). Answers to these three questions became the dependent variables in the analysis. Finally, total hours worked per week were derived by adding the hours reported for each of these three questions.

Data handling and analysis

Data were entered into a SPSS-PC+ (Statistical Package for the Social Sciences) database and audited. Descriptive statistics were used to examine the characteristics of respondents and nonrespondents and to describe the respondent group. Bivariate associations were examined using χ^2 for nonparametric data and *t* tests for parametric data. Analysis of variance (ANOVA) was used to examine the importance of sex of physician, presence of children (or presence of a child younger than 6) and the interaction of these two factors on time spent weekly on professional activities, two types of unwaged work (child care and household maintenance), and total hours spent on professional and unwaged work. Associations of $P \leq .01$ were regarded as significant; associations of $P < 0.05$ and $P > 0.01$ were seen as interesting.

RESULTS

Response rate

Of the 564 eligible physicians, 395 (70%) responded to the survey by February 1, 1994, the final date for receiving responses. No differences were observed between respondents and nonrespondents in sex of physician, medical school of graduation, or likelihood of having a rural address. However, those who had received certification in 1990 were less likely to respond than those in 1989 and 1991 ($\chi^2_4 = 8.45$; $P = 0.015$).

Respondents

Slightly more than half the respondents (53.7%) were women (Table 1), and 52.8% worked in private (mainly fee-for-service) group practices in communities. More than two thirds (68.5%) reported that 95% or more of their income came from fee for service; most (87.8%) lived in urban areas and more than three quarters were married. A significant difference was observed between men and women in the occupations of their spouses ($\chi^2_3 = 54.5$; $P < 0.001$): women were more likely to have spouses who were physicians or nonmedical professionals (eg, lawyers, engineers). Female physicians' spouses (86.4%) were more likely ($\chi^2_2 = 53.3$; $P < 0.001$) to work full time than male physicians' (47.6%). Almost half (47.7%) reported having children at home. Most (91.9%) households with children included a child younger than 6.

We examined the individual and interactive effects of sex of physician and having one or more children at home on the amount of time spent by physicians on professional activities and unwaged work (Table 2). Men with and without children at home reported similar time spent on professional activities, although men with children reported working slightly longer hours (mean difference = 2.1 hours; 95% confidence interval [CI] = 5.4 more to 1.2 fewer hours). Having children at home decreased women's time spent on professional activities by about 7.0 hours (95% CI = 3.53 to 10.46 fewer hours). Analysis of variance indicated that while sex of physician ($f = 42.8$; $P < 0.001$) and presence of children ($f = 5.0$; $P = 0.03$) both affected the time spent on professional work, the interaction between sex of physician and presence of children at home was highly significant ($f = 13.8$; $P < 0.001$). This suggests that physicians responded differently to the presence of children at home: women curtailed their professional activities; men maintained or increased them.

Both men and women with children performed more household maintenance than those without children (Table 2). Although men with children reported they did about 1 hour more household maintenance weekly (95% CI = 2.9 more to

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Table 2. Reported hours spent weekly in professional activities and unwaged domestic work by sex of physician

TIME SPENT	MEN		WOMEN	
	N	MEAN HOURS (SD)	N	MEAN HOURS (SD)
Professional activities				
• Children at home	84	49.5 (11.2)	95	36.7 (13.1)
• No children at home	90	47.4 (11.1)	102	43.7 (11.6)
• All physicians	174	48.8 (11.2)	197	40.4 (12.8)
Household maintenance				
• Children at home	86	8.2 (6.0)	96	13.9 (8.9)
• No children at home	93	7.2 (6.6)	109	8.3 (5.1)
• All physicians	179	7.6 (6.3)	205	10.9 (7.7)
Child care*				
• Children at home	86	11.4 (11.4)	95	39.7 (20.0)
• No children at home	94	0 (0)	109	0.4 (3.4)
• All physicians	180	5.4 (9.7)	204	18.7 (24.4)
Professional and unwaged work				
• Children at home	83	68.6 (15.0)	102	90.5 (22.9)
• No children at home	89	54.1 (12.0)	90	52.6 (13.6)
• All physicians	172	61.1 (15.3)	192	70.3 (26.5)

* Two women reported child care activities even though the children did not reside full time with them.

0.8 fewer hours) than men without children, this difference was not significant. Women with children reported spending significantly more time (5.6 hours, 95% CI = 3.6 to 7.6 more hours) than women without children in such activities. The effect of children on time spent in household maintenance was significantly different for men and women (interaction effect $f = 10.9$; $P = 0.001$); women increased their hours more than men.

All men who reported child care activities had children living with them. Two female physicians, who share responsibility for their children, reported child care activities even though these children did not live with them. The median number of hours men and women with children at home spent on child care was 20. However, 73 of the 95 women (76.8%) but only 10 of the 86 men

(11.6%; median test $\chi^2_2 = 74.7$; $P < 0.001$) spent 20 or more hours weekly on child care. Women reported spending, on average, almost 40 hours weekly in child care; men spent a little over 11 hours.

When the time spent on all activities was totaled, female physicians with children worked about 22 hours more than their male counterparts per week, even though they reported spending fewer hours per week in professional activities. Both the presence of children ($f = 243.3$; $P < 0.001$), which increased total hours worked by both sexes, and sex of physician ($f = 31.1$; $P < 0.001$) were important in explaining the variation in total time spent on professional and unwaged activities and the interaction ($f = 46.0$; $P < 0.001$) (Table 2).

Table 3. Reported hours spent weekly in professional activities and unwaged domestic work with and without children younger than 6 years at home

TIME SPENT	MEN		WOMEN	
	N	MEAN (SD)	N	MEAN (SD)
Professional activities				
• Child younger than 6 years	80	49.6 (11.5)	84	35.1 (11.4)*
• Child 6 or older	4	46.5 (4.4)	11	49.4 (18.3)
Household maintenance				
• Child younger than 6 years	82	8.2 (6.1)	85	13.8 (9.2)
• Child 6 or older	4	6.8 (2.4)	11	14.5 (6.5)
Child care				
• Child younger than 6 years	82	11.7 (11.5)	84	43.1 (19.3)*
• Child 6 or older	4	4.2 (3.0)	11	14.2 (14.5)*
Both professional and unwaged work				
• Child younger than 6 years	79	69.2 (15.1)	79	92.2 (22.0)*
• Child 6 or older	4	57.5 (3.7)	11	78.2 (26.4)

* Significant ($P < 0.01$) difference between women with and without school-aged children.

We also examined whether the extent to which spouses of physicians worked outside the home was affected by having children at home. The proportion of physicians' wives who worked full time outside the home was significantly different when children were present (30.2%) from when they were not (73.3%); $\chi^2_2 = 26.33$; $P < 0.001$). However, the proportion of husbands of physicians with children (85.3%) who worked full time was similar to husbands with no children (88.1%). Only 30.2% of physicians' wives worked full time outside the home when there were children compared with 85.3% of physicians' husbands ($\chi^2_2 = 53.31$; $P < 0.001$).

We tried to examine whether having children younger than 6 years (not attending school all day) increased the child care burden of physicians. Most (95.4%) male physicians with children had at least one child younger than 6, as did 88.8% of women physicians. Female physicians with school-age children only ($n = 11$) reported

working many more hours professionally than those with younger children ($n = 84$; mean 14.4 hours more; 95% CI = 6.6 to 22.3 more hours). Age of children did not affect men's working hours.

Using ANOVA, both sex of physician and age of children (under 6) were highly significant ($P < 0.01$) in explaining how many hours these physicians spent on professional activities. Results paralleled the bivariate analyses. The interaction effect between sex of physician and age of youngest child is also noteworthy ($f = 6.02$; $P = 0.015$) because it just missed the preset significance cutoff, likely because so few physicians had no children under 6. Age of the children made no difference to the time spent on household maintenance by male or female physicians. Women with children under 6 reported significantly more time (mean = 28.9 hours) spent weekly on child care than those with only older children (95% CI = 16.9 to 40.9 hours more). Time spent on child care reported by

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men with young children (7.5 hours more, on average) was not significantly different from time spent by men with only older children (95% CI = 4.0 fewer to 19.0 more hours). However, as noted earlier, very few male physicians did not have young children at home.

Women with children under 6 restricted their professional work hours while women with children at school full time worked professionally about as much time as men. If all children were at school, women's child care hours were significantly less than if they had a child at home. Although both women and men with children under 6 worked longer hours in total than those with older children ($f = 6.43$; $P = 0.012$), they spent their time differently (Table 3).

DISCUSSION

Although family responsibilities, especially child care, have long been touted as a reason for female physicians' lower participation in professional activities, this study is the first to give a detailed quantitative breakdown of the hours that such unwaged work entails. Both male and female physicians do more unwaged work when there are children, but women do markedly more. It is somewhat surprising that these women who spend, on average, more than 50 hours weekly on child care and household maintenance do not curtail their professional activities more. Most work professionally almost as much as average industrial workers (38.8 hours) in Canada.¹⁸

Although the number of women in the sample with school-aged children only is small, this study suggests that their hours of professional activity are similar to men's. This finding has implications for medical human resource planning, which often discounts the contributions of female physicians to the resource pool.¹¹ Female family physicians might reduce their professional work only until their children are in school full time. We caution that this study involved only family physicians, who might find it easier to adjust their work schedules to balance family and work roles¹⁹ than specialists (eg, surgeons).

It is not clear that more available and adequate child care would substantially decrease the heavy workload reported by female physicians with young children. Clearly, the money they could earn by working 10 hours more weekly would more than pay for day-care or household help. Female physicians' spouses did not seem to curtail their professional activities whether there were children or not, but male physicians' wives (who were unlikely to be physicians themselves) were very likely to work part-time, occasionally, or not at all when they had children. These factors might be important in explaining why women physicians spend so much more time in child care than men.

Female physicians might place a high value on their parenting role and be reluctant to have their children cared for by others. As well, typical child care arrangements require that parents have fixed or predetermined hours of work. Physicians often require flexible hours.

Our findings also could help explain why women are less active in voluntary professional organizations, another type of unwaged work. Our study suggests that women have less time left in the week for voluntary professional work. Their low level of participation early in their careers might make it more difficult for them to become involved later and subsequently achieve leadership positions. Lorber²⁰ claims that structural discrimination will have the same effect.

Limitations

This study has several limitations. First, the cohort studied was recently certificated Ontario family physicians and the findings might not be generalizable to all recently certificated family physicians. Second, data are cross-sectional. It would be useful to follow this cohort as more male physicians' children reach school age to see whether the increase in professional time seen cross-sectionally is also seen longitudinally. Third, as noted previously, only family physicians were studied. We suspect that women in some specialties find it harder to reduce their professional activities substantially while they raise children.²⁰ Finally, although the response rate was acceptable

(70%) and no difference was observed by sex of respondent, physicians most overburdened by professional and unwaged domestic work might not have had time or energy to respond to this survey.

Conclusion

Male and female family physicians without children work similar hours professionally. Female physicians with children spend significantly less time on professional activities than male physicians with children. These women are spending many more hours weekly than men in unwaged work, mainly child care. Women physicians whose children are all school aged report that they practise similar hours to men with families. These findings have implications for medical human resource planning. ■

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