Career and parenting satisfaction among medical students, residents and physician teachers at a Canadian medical school

Research

Recherche

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See related article page 663

Abstract

Background: Studies of career and parenting satisfaction have focused separately on medical students, residents and practising physicians. The objective of this study was to compare satisfaction across a spectrum of stages of medical career.

Methods: A survey of incoming medical students, current medical students, residents and physician teachers at the University of Saskatchewan was conducted in the spring of 1997. Response rates were 77% (43/56), 81% (177/218), 65% (134/206) and 39% (215/554) respectively. Factors assessed in the stepwise regression analysis were the effect of sex, parenting and level of training on the likelihood of recommending parenting to medical students or residents, and on parenting dissatisfaction, job dissatisfaction, career dissatisfaction and the importance of flexibility within the college program to accommodate family obligations.

Results: More male than female physician teachers had partners (92% v. 81%, $p < 0.01$) and were parents (94% v. 72%, $p < 0.01$). Female physician teachers spent equal hours per week at work compared with their male counterparts (mean 52 and 58 hours respectively) and more than double the weekly time on family and household work (36 v. 14 hours, $p < 0.01$). Physician teachers were the most likely respondents to recommend parenting to residents and their peers. Residents were the most dissatisfied with their parenting time. At all career stages women were less likely than men to recommend parenting, were more dissatisfied with the amount of time spent as parents and were more likely to regard flexibility within the college program as beneficial. There were no sex-related differences in job dissatisfaction and career dissatisfaction. However, married women were more dissatisfied with their jobs than were married men. Job dissatisfaction was greatest among medical students, and career dissatisfaction was greatest among residents.

Interpretation: The optimal timing of parenthood appears to be upon completion of medical training. Women were less likely to recommend parenting, less satisfied with the time available for parenting and more likely to value flexibility within the college program to accommodate family needs. These differences did not translate into women experiencing more job or career dissatisfaction.

Medical training is demanding.[1,2] Stressors include excessive work demands, inadequate support networks, a sense of professional inadequacy and depression. Medical students and residents may wonder when in their medical career to expect the greatest rewards. Many residency training programs are stretched thin and lack the human resources and flexibility to deal with the increased service demands created by pregnancy or parental demands on residents.[3,4] Women bear the brunt of child-rearing responsibilities. Role overload is common among female physicians who must juggle their work and parenting roles.[5–9] Studies of parenting and professional satisfaction have focused separately on medical students,[10] residents[11,12] and practising physicians[13–17] and have not assessed changes in satisfaction during career progression.

We hypothesized that career and parenting satisfaction would increase after

completion of medical training. We performed a cross-sectional survey of incoming medical students, current medical students, residents and physician teachers at the University of Saskatchewan to assess the effect of different levels of training on career and parenting satisfaction.

Methods

Ethics approval was obtained from the University of Saskatchewan Advisory Committee on Ethics in Human Experimentation, and a consent form was signed and returned to the investigators by the study participants. Surveys were mailed in March 1997 to all medical students, residents and physician teachers registered at the College of Medicine, University of Saskatchewan. The survey was sent to incoming medical students in June 1997 with their acceptance letter from the college. To encourage participation a $10 voucher redeemable through an independent third party was given to all students and residents who received the questionnaire. A reminder postcard was sent to each resident and teacher 3 weeks after the initial mailing. Medical students received an oral reminder in class.

The survey was adapted from a previously published survey that examined health status, job satisfaction, job stress and life satisfaction among academic and clinical physician teachers.[13] Questions were added from other published surveys to address sex-specific issues.[14,17] The pre-specified primary outcome domains were dissatisfaction with time for parenting ("parenting dissatisfaction") and recommendation not to have children ("parenting not recommended"), job dissatisfaction, career dissatisfaction and importance of flexibility within the college program to accommodate family obligations. [A list of the survey items in each domain accompanies the online version of the article (www.cma.ca/cmaj/vol-162/issue-5/0637app1.htm).] In this article, "job dissatisfaction" relates to day-to-day frustrations in the practice of medicine; "career dissatisfaction" attempts to capture a broader, long-term perception of the medical profession.

Participants responded to the survey items using a 5-point Likert scale. Each question was set up so that an unfavourable experience or dissatisfaction would be on the high end of the scale. Scores were summed for each domain and scaled from 0 (least problems, most satisfied) to 100 (most problems, least satisfied); in the case of college program flexibility, 0 meant that it was very unlikely that flexibility would have a favourable impact, and 100 meant that it was very likely that it would have a favourable impact.

Respondents were asked to estimate the total number of hours spent each week working, studying, parenting and doing household work, and doing leisure activities during the month before the survey. The number of household employees (child care provider, cook, housekeeper/housecleaning service staff, day-care staff, skilled tradesperson or counsellor at children's camp) in the past month was summed and expressed as either 0, or 1 or more.

To ensure clarity of the survey questions and to estimate the time required to complete the survey, we pretested the questionnaire among 10 graduate students at the university. As a result, we changed the wording in some of the introductory explanations to the question sets. The response time was between 15 and 20 minutes. Validity was assumed to be similar to that of the surveys from which the questions were derived.

Demographic variables were reported using descriptive statistics. Internal consistency (measured by Cronbach α) was calculated for each domain. We compared the primary outcome domains (expressed as mean group values) by career stage using analysis of variance (ANOVA). We also performed a multivariate analysis controlling for sex, marital status, presence of dependents (children), age, spousal occupation and selected interaction terms. Significance was defined as a p value of less than 0.05. All results are expressed as crude unadjusted means and standard deviations (SDs) unless otherwise stated.

Results

The response rates were as follows: 77% (43/56) of the incoming medical students, 81% (177/218) of the current medical students, 65% (134/206) of the residents and 39% (215/554) of the physician teachers. The returned surveys demonstrated no statistical sex bias between respondents and nonrespondents. The mean age was similar between

Table 1: Personal and professional characteristics of medical students, residents and physician teachers surveyed at a Canadian medical school

	Incoming medical students		Current medical students		Residents		Physician teachers	
Characteristic	Men *n = 23*	Women *n = 20*	Men *n = 94*	Women *n = 83*	Men *n = 82*	Women *n = 52*	Men *n = 158*	Women *n = 57*
Mean age (and SD), yr	23.9 (4.1)	21.6 (2.2)	25.0 (4.4)	23.7 (3.8)	29.5 (5.1)	30.0 (5.5)	49.1 (10.7)	40.9 (6.3)
% with partner	26	5	25	24	65	63	92	81
% with children	10	0	9	8	32	25	94	72
Activity, mean no. of hours per week (and SD)								
Working/studying	52 (21)	58 (17)	63 (20)	62 (21)	75 (26)	75 (22)	58 (18)	52 (16)
Parenting and household work	8 (8)	6 (6)	8 (8)	8 (13)	11 (16)	10 (16)	14 (14)	36 (38)
Leisure	21 (8)	27 (18)	24 (16)	22 (13)	19 (13)	19 (17)	20 (17)	17 (15)
No. (and %) with ≥ 1 household employees*	3 (13)	3 (15)	12 (13)	15 (18)	19 (23)	19 (37)	98 (62)	44 (77)

Note: SD = standard deviation.
*Child care provider, cook, housekeeper/housecleaning service staff, day-care staff, skilled tradesperson or counsellor at children's camp.

men and women at the same level of training except for male physician teachers, who were significantly older than their female counterparts ($p < 0.01$) (Table 1). More male than female physician teachers had partners (92% v. 81%, $p < 0.01$) and were parents (94% v. 72%, $p < 0.01$).

The total weekly work and study time was greatest among the residents (Table 1). Female physician teachers spent more time on family and household work and had more hired help than all other groups, including male physician teachers.

Table 2 presents the group values (out of 100) for each of the primary outcome domains by career stage. The multivariate analysis confirmed our crude findings (data not shown). The mean group value for "parenting not recommended" (where 50 = uncertain, and 25 = disagreement) was higher for women than for men (43 v. 34, $p < 0.001$), for respondents without a partner than for those with a partner (49 v. 31, $p < 0.001$) and for respondents without children than for those with children (51 v. 26, $p < 0.001$). Physician teachers were more likely (lower score) to recommend parenting than were residents and medical students ($p < 0.01$) (Table 2). At all career stages, women were more likely than men not to recommend parenting (mean group value 44 v. 40 for medical students, 51 v. 42 for residents and 29 v. 24 for physician teachers; $p < 0.01$).

In the domain "parenting dissatisfaction" (where a mean group value of 50 = uncertain, and 75 = agreement), women at all career stages were more likely than men to indicate dissatisfaction with the amount of time spent with children (mean value 57 v. 51 for medical students [$p = 0.028$], 72 v. 70 for residents [$p = 0.018$] and 64 v. 58 for physician teachers [$p = 0.013$]). Women with children were more likely than men with children to report dissatisfaction with the amount of parenting time (mean value 62 v. 48, $p < 0.001$).

Although flexibility of the college program to accommodate family obligations was generally considered beneficial (mean group value of 75 = likely and 100 = very likely to have a favourable impact), men were less likely than women to agree (mean value 75 v. 81, $p < 0.001$), and physician teachers were less likely than medical students and residents to agree ($p < 0.01$) (Table 2). Among the men, those with children were more likely than those without children to consider such flexibility beneficial (mean value 77 v. 73, $p = 0.005$), as were married women compared with married men (mean value 82 v. 74, $p = 0.024$).

Residents had the greatest level of career dissatisfaction ($p < 0.01$) (Table 2). None of the independent variables of interest (sex, marital status, dependent children and level of training) was a significant factor in this domain. As for job dissatisfaction, the current medical students and the residents were more dissatisfied ($p < 0.01$) than the incoming medical students (Table 2). Respondents without children were more dissatisfied with their day-to-day work than those with children (mean group value 42 v. 37, $p < 0.001$). Married women were more dissatisfied with their jobs than were married men (mean value 40 v. 38, $p = 0.012$).

Interpretation

The optimal timing for parenthood appears to be after the completion of medical training. Physician teachers were most likely to recommend becoming parents to their peers, and residents expressed the greatest dissatisfaction with the time available to attend to their children's needs.

In a survey of 24 medical schools, Carr and colleagues[15] found that female physician teachers with children had lower job satisfaction, less institutional support and slower career progress than male physician teachers with children. We found that women starting their medical careers seemed to be aware of the potential for role overload in combining family and career and were less likely than men to recommend parenting to their peers.

In our study the respondents without children had greater job dissatisfaction than those with children. Possi-

Table 2: Effect of career stage on parenting and career dissatisfaction

	Group; mean group value (and SD)*			
Domain	Incoming medical students *n = 43*	Current medical students *n = 177*	Residents *n = 134*	Physician teachers *n = 215*
Parenting not recommended†	53 (26) *n = 18*	48 (30) *n = 96*	47 (29) *n = 110*	25 (26) *n = 205*
Parenting dissatisfaction†	44 (31) *n = 4*	54 (23) *n = 12*	70 (24) *n = 31*	59 (27) *n = 142*
College program flexibility	81 (19)	82 (17)	77 (22)	72 (19)
Career dissatisfaction	38 (12)	43 (10)	50 (13)	45 (13)
Job dissatisfaction	29 (14)	46 (13)	42 (14)	35 (14)

*All values are reported in relative scales between 0 (least problems, most satisfied) to 100 (most problems, least satisfied). In the case of college program flexibility, 0 = very unlikely that it would have a favourable impact and 100 = very likely that it would have a favourable impact.
†The number of respondents (*n*) is given because less than 90% of the total possible responses were recorded.

ble reasons include different career expectations among respondents with children, spillover effects from parenting satisfaction to job satisfaction, and perhaps greater sensitivity and a more humanistic approach to medicine leading to greater job satisfaction among respondents with children.[9,15]

According to career stage, the medical students expressed the greatest need for flexibility within the college program to accommodate family needs. Regardless of career stage, women who were married and men with children were significantly more likely than married men and men without children, respectively, to express the need for such flexibility. This flexibility is frequently lacking despite the large number of female students and residents currently enrolled in Canadian medical schools. Medical schools should consider developing policies and programs that recognize the parenting needs of physicians in training and faculty members.[18]

In our study career dissatisfaction increased during medical training and was greatest among the residents. Long work hours, verbal and emotional abuse, uncertainty about future physician resource needs and financial debt probably contribute to dissatisfaction with the medical profession. Job dissatisfaction was highest among the medical students. Kay[19] coined the phrase "traumatic deidealization" to describe the cynicism of medical students (i.e., deflation, pessimism, loss of humanitarianism) that results from endemic abuse of medical students in North American medical schools.[10,20]

Out study had limitations. The generalizability of our results to other medical schools of different sizes and cultural mixes may be limited. We encourage others to conduct similar surveys in their environments. The response rate declined with increasing level of training, and the response rate among the physician teachers was low (39%). The physician teachers who completed the survey may have been the least busy, which might have introduced a bias toward greater job and parenting satisfaction in this group. However, the same would be true of the residents and medical students who responded, which would negate this bias. The ideal method of assessing changes in attitude during the professional career would be a longitudinal study of a cohort of incoming medical students. However, it would be exceedingly difficult to adjust for the strong influence of local cultures on physicians' attitudes as they move into practices far from their medical school. Finally, the importance of measured scale differences cannot be determined because there are no markers of actual observed behaviour. The scales should not be assumed to be linear. Equal differences in scale values in any one domain or between different domains are not necessarily equivalent.

Conclusion

Practising physicians were most likely to recommend parenting to their peers and had greater job satisfaction than residents and medical students. Medical schools should consider developing policies and programs that recognize the family needs of physicians in training and faculty members, particularly as the schools revise their curricula to focus on the biopsychosocial model of medicine.[21]

Competing interests: None declared.

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