

Correlation of Work Structure and Job Satisfaction among Israeli Family Physicians*

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Key words: work structure, job satisfaction, Israeli physicians

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Abstract

Background: Physicians need a professional environment that is conducive to efficient and satisfying work. Little has been published about the effect of work structure on the satisfaction that family physicians derive from their work.

Objectives: To assess the structure and the positive and negative job components of family physicians in Israel, as well as the effect of these components on their satisfaction with their work.

Methods: A questionnaire was sent to a random selection of members of the Israel Society of Family Physicians (n=225).

Results: Altogether 183 questionnaires were returned. Specialist family doctors, practice medical directors and salaried doctors were involved in more activities than non-specialist doctors, trainees and self-employed doctors. Overall satisfaction was highest for specialists and lowest for non-specialists. Work overload, insufficient resources and abundant paperwork were most frequently cited as negative work components. The opportunity to utilize medical knowledge, challenging work and work variety scored highest as positive components.

Conclusions: The more professionally active physicians were also the more satisfied. Clinical work and teaching provided the most satisfaction, while administrative work and lack of time were the main causes of dissatisfaction.

IMAJ 1999;1:236-240

Physician satisfaction is a prerequisite of commitment to the field of practice [1]. Satisfaction is also one of the factors reported to influence both the choice of medical specialty and the quality of patient care [2-4]. However, the characteristics and components of the family physician's job are constructed such that they satisfy the needs of the

patients and the demands of the medical system that employs the physician. Identifying the various components of job satisfaction among family physicians should help produce suggestions for promoting job satisfaction as a means of improving the working lives of family physicians.

Only a few studies, including one from Israel [5], have surveyed the structure of the family physicians' job but none has studied the positive and negative job characteristics. In addition, these studies obtained global measures of job satisfaction but none reported the levels of satisfaction regarding each of the specific job characteristics; neither did they relate to the professional commitment of the family physicians.

The objectives of the present study were to assess both the structure and the positive and negative job characteristics of family physicians in Israel, as well as the family physician's satisfaction with specific job characteristics.

Subjects and Methods

Population

The study population included 225 members of the Israel Association of Family Physicians, comprising 25% of the total membership selected by computer randomization of the Association's mailing list. The Israel Association of Family Physicians represents approximately 80% of family physicians in Israel. A questionnaire and a self-addressed and stamped envelope were mailed to each of these physicians.

Questionnaire

In addition to the demographic details of the respondents, we developed four questionnaires concerning the work structure and the negative and positive characteristics of the family physician's job. For this purpose we first interviewed 27 physicians — males and females, specialists and residents. Each interview lasted on average about 90 minutes and took place at the physician's office. The items included in the first round of pilot questionnaires were based on the information gathered in these interviews. The questionnaires were pre-tested on this sample of physicians.

* This article is dedicated to the memory of our dear friend, Dr. Michael Herz, who contributed to the writing of it.

Table 1. Demographic and personal data

Gender		
Males	67.2%	
Females	32.8%	
Age (yr)		
Range	31–74	
Mean (SD)	43.12 (6.87)	
Place of birth		
Europe	55%	
Israel	40.4%	
Other	4.6%	
Specialty status		
Specialist FP	78.5%	
Residents	12.7%	
Non-specialists	8.3%	
Marital status		
Married	93.4%	
Unmarried	6.6%	
No. of children		
Mean (SD)	2.7 (1.8)	
Location of clinic		
Urban	73.6%	
Rural	15.7%	
Kibbutz	9.0%	
Hospital	1.7%	
Working hours		
Full time	85.9%	
Part time	14.1%	
Status in clinic		
Directors	51.4%	
Others	48.6%	

FP = family physician

• Work Structure

This questionnaire included two parts:

Job components: Respondents rated the amount of time they spent at work on each of the following nine professional tasks: routine consultations, extended consultations, house calls, family interventions, appointments in children health clinics, management, health promotion projects in the community, administrative jobs including paperwork and telephone calls, and consultations with colleagues, participation in continued medical education activities, research, and tutoring trainees and medical students. The response scale ranged from 1 (a little) to 3 (a lot). Respondents were also asked which of the tasks they would like to increase and which to reduce.

Satisfaction: Each of the above tasks was rated for the amount of satisfaction they provided, ranging from 1 (not at all) to 4 (a lot).

• Job characteristics

Two scales were developed for the present study to assess negative and positive characteristics of the physician's job. The items for the scales were derived from personal interviews with 24 family physicians and trainees concerning sources of stress and satisfaction at work.

Negative job characteristics: These comprised 23 items relating to sources of conflicts and problems in the physician's work environment. Sample items were: "Over-

Table 2. Work structure: means and standard deviations of frequency and satisfaction from various professional activities

Activity	Mean satisfaction score**	Mean frequency score*
Routine consultations	3.46 (0.59)	2.90 (0.38)
Extended consultations	2.90 (0.78)	1.86 (0.69)
House calls	2.89 (0.92)	1.79 (0.74)
Family interventions	3.17 (0.86)	1.55 (0.67)
Children's health clinic	2.22 (1.20)	1.25 (0.61)
Management	2.51 (1.03)	1.82 (0.84)
Community health promotion	2.76 (1.07)	1.44 (0.63)
Administrative and paperwork	1.98 (0.71)	2.44 (0.70)
Consultations with colleagues and CME participation	3.67 (0.62)	2.17 (0.66)
Research	2.78 (1.06)	1.39 (0.64)
Tutoring students and residents	3.16 (1.17)	1.80 (0.85)

* 1 = a little; 2 = moderately; 3 = a lot.

** 1 = none; 2 = a little; 3 = moderately; 4 = a lot.

Bold type indicates the highest reported frequencies.

load, too many things to accomplish," "Work is routine and repetitive," and "My job provides me with little opportunity for promotion." The coefficient of reliability (Cronbach's alpha) for this scale was 0.80. The scale was subjected to a principal factor analysis with varimax rotation that supported the independence of the factors underlying the scale. The factor analysis provided evidence of the unidimensionality of the scale based upon examination of the factor loadings and eigen values (available from the authors).

Positive job characteristics: These comprised 10 items involving sources of satisfaction from the job and the work environment. Sample items were: "My work is challenging" and "My work provides me with the opportunity to utilize my medical knowledge." The coefficient of reliability for this scale was 0.77.

Procedures and data analysis

A month after mailing the questionnaires we telephoned all the physicians who had not returned them and emphasized the importance of this study. Each was sent an additional questionnaire. About a month later we began to analyze the data using the SAS package [16]. Differences between groups (defined by demographic characteristics) were analyzed by independent *t* tests or univariate analyses of variance.

Results

Of the 225 questionnaires, 183 (81.3%) were returned. Table 1 summarizes the demographic details of the respondents.

Job Content

The most frequent professional tasks reported by the physicians in descending order were: routine consultations, administrative tasks and paperwork, consultations with colleagues and participation in CME activities. The most enjoyable activities were: consultations with colleagues and

CME = continuing medical education

participation in CME activities, routine consultations, family interventions, and tutoring medical students and residents [Table 2]. It can be seen from the table that whereas routine consultations and CME activities were both time consuming and satisfying, paperwork was extremely time consuming but most disliked, and tutoring students was less frequent but enjoyed.

Two general scores were constructed for the above data: the total activity score, obtained by averaging the sum total for all frequency scores, and the total satisfaction score, obtained by averaging the sum total for all satisfaction scores. The data show that reported total activity levels were higher among salaried than self-employed physicians ($P < 0.005$), certified specialists in family medicine versus residents and non-specialists ($P < 0.0001$), practice directors vs. non-directors ($P < 0.004$), and among those engaged in a considerable amount of tutoring ($P < 0.0001$). Total satisfaction scores were higher among salaried physicians ($P < 0.04$), men ($P < 0.04$), specialists ($P < 0.0001$), managers ($P < 0.0006$) and those engaged in a great deal of tutoring ($P < 0.0001$).

The effects of several demographic variables (gender, age, speciality status, management status, place of work, hours of work, work status, training status, and extent of job) on the frequency of and satisfaction from each of the above activities were examined by using either *t* tests for independent means or one-way analyses of variance. These comparisons revealed the following findings. The frequency of routine consultations and satisfaction therefrom did not depend on any of the demographic variables. The frequency of paperwork was highest among residents and lowest among non-specialists ($P < 0.002$), higher among practice directors than non-directors ($P < 0.03$), higher among those working full-time than among part-time workers ($P < 0.02$), and lower among self-employed physicians than salaried workers ($P < 0.0001$). The frequency of consultations with colleagues and CME participation was lowest among non-specialists ($P < 0.008$), and the satisfaction was highest among residents and lowest among non-specialists ($P < 0.01$), lower among self-employed physicians than among salaried workers ($P < 0.06$), and lower for those hardly engaged in tutoring ($P < 0.0001$). Satisfaction from family interventions was highest for specialists and lowest for non-specialists ($P < 0.0001$), higher among directors than among non-directors ($P < 0.03$), and higher among tutors ($P < 0.02$) compared to the rest.

Satisfaction from tutoring medical students and family medicine residents was higher for male than female physicians ($P < 0.02$), highest for specialists ($P < 0.0001$), higher for directors than non-directors ($P < 0.01$), and among those physicians who reported the highest frequency of tutoring ($P < 0.0001$).

Job characteristics [Table 3]

Negative characteristics: The five negative characteristics with the highest scores (ranging from 1 to 6) were: overload and too many tasks ($X = 4.43$), insufficient resour-

Table 3. Mean scores of job characteristics according to demographic variables (standard error in parentheses)

	Negative characteristics	Positive characteristics
Gender		
Men	2.64 (.06)	4.45 (.061)
Women	2.99 (.09)**	4.13 (.10)**
Age (yr)		
<45	2.84 (.06)	4.24 (.06)
≥45	2.66 (.10)	4.43 (.09)
Professional status		
Specialist FP	2.78 (.07)	4.39 (.07)
Residents	2.97 (.15)	4.00 (.15)
Non-specialists	2.42 (.02)	3.99 (.21)*
Work status		
Salaried	2.86 (.06)	4.28 (.07)
Self-employed	2.17 (.14)***	4.46 (.15)
Place		
Urban	2.74 (.06)	4.33 (.06)
Rural	3.08 (.13)	4.25 (.14)
Kibbutz	2.92 (.18)	4.35 (.19)
Clinic director status		
Director	2.73 (.07)	4.36 (.07)
Non-director	2.84 (.08)	4.26 (.08)
Tutoring		
A little	2.83 (.08)	4.20 (.08)
Moderately	2.82 (.10)	4.36 (.10)
A lot	2.72 (.10)	4.54 (.10)*
Extent of job		
Full time	2.83 (.06)	4.31 (.07)
Part time	2.85 (.17)	4.36 (.11)

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

ces for coping with and organizing the job ($X = 4.27$), too much administrative and paperwork ($X = 4.03$), low salary ($X = 3.95$), and conflicts between the professional and the administrative systems in the employing organizations ($X = 3.79$).

A factor analysis on the results of this questionnaire revealed seven factors in the following descending order — low professional status, administrative overload, dissatisfaction with administration, relationships in the clinic (professional dissatisfaction), lack of resources, and problems related to immigration (many of the physicians are emigrants from the former Soviet Union). Comparing the prominence of these factors among the various demographic categories showed that younger physicians reported low professional status ($P < 0.05$) and more immigration-related problems ($P < 0.01$) than did others, and that salaried physicians reported more administrative overload ($P < 0.01$), more dissatisfaction with administration ($P < 0.0001$), worse relations in the clinic ($P < 0.0001$), fewer resources ($P < 0.0001$) and more immigration-related difficulties ($P < 0.002$). Women reported lower professional status ($P < 0.0002$) and lack of resources ($P < 0.002$), and specialists reported lower professional status ($P < 0.006$) and more immigration-related problems ($P < 0.007$).

Positive job characteristics: The five positive characteristics with highest scores (ranging from 1 to 6) were: opportunity to utilize medical knowledge ($X = 5.10$), chal-

lenging work ($X=5.03$), skill utilization — i.e., the opportunity to do tasks one is good at ($X=4.93$), work variety ($X=4.88$), and perceived control over the way the job is performed ($X=4.74$).

Challenging work was higher among specialists than among residents and non-specialists ($P<0.02$). Skill utilization was significantly higher among men than among women ($P<0.012$), and among those who do more tutoring ($P<0.04$). Work variety was highest among specialists and lowest among non-specialists ($P<0.0001$), and highest among those who do more tutoring compared to those who do little ($P<0.006$).

Results of the factor analysis on the positive characteristics revealed three factors as the highest scoring job components: job enrichment, contributing to occupational health, and time for the family. Specialists and tutors reported more job enrichment ($P<0.03$, $P<0.01$ respectively). Younger physicians and women reported that their job allowed them to spend more time with the family ($P<0.04$, and $P<0.03$, respectively).

Discussion

The response rate was high (81.3%), which we attributed to the personal contact between participants and professional colleagues.

As part of an international study (NIVEL), Gross et al. [5] conducted a pilot study of 677 primary care doctors in Israel but concentrated on the clinical aspects, especially prescribing patterns. They found that 89% of the doctors had problems with motivation in their work in general, particularly with administrative tasks that many of the doctors found unnecessary. Rennert et al. [6], in an Israeli study primarily analyzing 366 family doctors' own health care, found that 43% claimed to suffer stress from work overload — 10% as a result of poor relationships with the medical team, 16% because of their relationship with their patients, and 18% for other reasons. Only 13% claimed not to suffer from any stress related to their medical work. This high level of stress agrees with Morrice [7] who reported that 68% of British general practitioners found their work stressful.

One of the major conclusions of our study is that there is no clear relationship between the amount of time the family doctor devotes to any one function and the amount of satisfaction derived from it. Paperwork is the second most time-consuming occupation and the least satisfying, whereas family interventions and teaching are both highly satisfying despite the fact that the doctor devotes relatively little time to them. Several other studies [8–10] found that administration and paperwork were responsible for dissatisfaction and stress among family doctors.

Other interesting findings from our study include the relationship between the style and setting of the physician's work and the gender and specialist status of the physician. Female physicians felt the force of the negative aspects of the job more strongly and emphasized low status and lack of

resources. On the other hand they felt that family medicine gave them more time to spend with their own families, although their total activity score was equal to that of male physicians. This contrasts with the findings of Wilkin et al. [11] who reported that women general practitioners had fewer patients on their list and gave fewer consultations. Meyerson [12], in a narrative study of female family doctors, suggests that the women's work stress was caused by organizational problems and relationships with their colleagues, and Branthwaite and Ross [13] found that women were less satisfied than their male colleagues with the management of work. In a study of general practitioners and their spouses, Rout [14] stated that women physicians were more stressed because they take on a full professional workload and maintain domestic responsibility. In their study on gender differences in general practitioners at work, Chambers and Campbell [15] found that women worked fewer sessions and were more satisfied than men with their relationships with patients, but men were more likely to be responsible for minor surgery and for the computers and finances of the practice.

It appears from our study that female family doctors are attracted to the profession partly because it enables them to spend more time with their families, but they would prefer to be in another specialty. This would explain the feeling of low professional status felt by these doctors. It is possible that the male doctors choose family medicine for professional reasons and therefore do not feel that the specialty is of low status.

In our study we found that specialists in family medicine perform more functions within the profession and gain more satisfaction from them as compared to non-specialists and residents. Specialists give more weight to the positive aspects of their job, citing challenges, opportunity to use medical knowledge, professional achievement, and variety of work.

The residents in family medicine seem to be more occupied with paperwork than the other groups, and in general do less than the specialists. This is in agreement with a study [9] in which the major causes of dissatisfaction among family practice residents were paperwork and interference in the doctor–patient relationship.

The non-specialist physicians were least involved in both teaching and learning (continued medical education), and in general were less satisfied professionally than the specialists or residents. It is impossible to determine from our study whether non-specialists remain non-specialists because they do not spend time learning, or if the non-specialists simply have less opportunity to attend CME. Our impression is that non-specialists value participation in CME but are not given enough opportunity to attend appropriate courses. In a study of non-attenders at CME, Pitts and Vincent [10] cited the main reasons to be lack of time, practice workload and family pressures. The attractiveness of the CME was not mentioned. Branthwaite and Ross [13] reported that physicians who participated in CME

derived more satisfaction from the psychosocial and administrative aspects of their work, and felt less professionally isolated.

Our study on a sample of Israeli family physicians has shown the contribution of different components of the job to workload and satisfaction, and identified the positive and negative characteristics of these components. Further studies are required to test the relationship between these factors and stress and burnout among primary physicians as well as ways to alleviate these common problems.

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The strength of women is the facade of weakness, the weakness of men is the facade of strength.

Anonymous

Capsule



Antithrombotic regimens for unstable coronary artery disease patients

Antithrombotic therapy has been a major focus of drug companies in recent years. In the 1980s, aspirin was the sole drug of choice for unselected populations with unstable coronary artery disease as it was shown to reduce the 7 day rates of death and myocardial infarctions from about 10% to 5%. In the early 1990s, the addition of 5–7 days of standard heparin or twice-daily subcutaneous injections of low molecular weight (LMW) heparin further reduced the rates to nearly 2.5%. Recent studies with intravenous hirudin proved even more effective and lowered the rates to 2.0%. Patients with unstable coronary artery disease should be divided into lower and higher risk

groups for future events based on background and clinical presentation. Lower risk groups can be treated with aspirin and LMW heparin. Higher risk patients should undergo triple antithrombotic treatment with the addition of a glycoprotein IIb/IIIa inhibitor, such as integrilin, abciximab, or tirofiban. These drug regimens are all effective for short-term treatment only. Therefore, since unstable coronary artery patients are at risk for 1–3 months after their initial symptoms, new treatments need to be explored to cover this period.

Lancet 1999;353:4234