

**FACTORS ASSOCIATED WITH JOB SATISFACTION
AMONG PUBLIC-SECTOR PHYSICIANS
IN BELO HORIZONTE, BRAZIL**

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Evidence indicates an association between job satisfaction and illness among physicians. There are also negative consequences of physician dissatisfaction on the quality of medical services. With this in view, a cross-sectional study of a stratified random sample of physicians ($n = 266$) was conducted in the municipal public health care system in Belo Horizonte, Brazil. Participants answered a questionnaire about job satisfaction, socio-demographic and lifestyle characteristics, work and employment conditions, and health status. Of the 232 respondents, 150 (64.94%) declared themselves satisfied with the work, with no significant difference between male and female physicians (66.4% vs. 64.2%; $p = 0.74$). The number of physicians satisfied with their work was significantly higher among those who experienced a high level of social support at work ($p < 0.01$) and was significantly lower among those working under high-strain conditions ($p = 0.01$) and those who screened positive for the presence of common mental disorders ($p < 0.01$). These findings suggest that policies to promote social support and mental health in the workplace, as well as the implementation of strategies to increase physicians' control over their work activities, can have a positive effect on the job satisfaction of these professionals.

Recent studies indicate that a high proportion of health care professionals are dissatisfied, regardless of the socioeconomic situation of the country where they work. There is agreement among health care workers when they are asked about the reasons that led them to quit their jobs or to continue working despite

their dissatisfaction (1–3). Physicians cite a decrease in professional autonomy, pressure from superiors and patients, time-consuming paperwork, diminished professional recognition, inadequate work conditions, and low salaries (4). The study of such factors should provide information relevant to the development of programs aimed at improving the quality of health systems while also promoting the health of a specific occupational group.

Recently, in the wake of health system reforms, research on physicians' satisfaction with their work was carried out in Turkey (5), Canada (6), Japan (2, 7), and India (8). Satisfaction is an expression of an individual's judgment of the gap between his or her actual professional life and that which he or she envisioned. Satisfaction with life implies contentment or acceptance by individuals of the conditions of their existence and is associated with the way they perceive the fulfillment of that which they desire or need. In this way, satisfaction is a subjective measure of the quality of life of an individual, measured by the difference between "what you have" and "what you want" (9). Satisfaction with the work, therefore, represents the judgment that the individual makes comparing his or her actual work circumstances to an idealized job, taking into consideration several factors such as the duration of shifts, work conditions, and relationships with colleagues (10).

Most research studying physician satisfaction addresses, through different conceptual frameworks, at least one of the following dimensions: satisfaction with life (11–13), satisfaction with career (also described as professional satisfaction) (6, 14–16), and job satisfaction (2, 5, 10, 17–19). This article discusses factors that are involved in job satisfaction.

Different occupational and employment factors are involved in a physician's satisfaction with work, including: (a) organizational structure, (b) amount of overtime, (c) level of control over work, (d) adequate resources to perform tasks, (e) physical characteristics of the workplace, and (f) interpersonal relationship with colleagues. Deficiencies in these areas have been associated with morbidity in this group, such as affective disorders, burnout, and depression (2, 4, 5, 19).

Studies evaluating the work of physicians in Brazil are rare. Nascimento-Sobrinho and colleagues (2006) (20) examined working conditions in Salvador, Bahia, and observed the frequent occurrence of multiple employment, long shifts, and mental illness. Campos and Malik (2008) (18) found a correlation between factors of satisfaction (training, distance to health facilities, availability of equipment) and turnover of general practitioners in Sao Paulo.

This study investigates the factors associated with physicians' satisfaction with their work. Using a multidimensional approach for the construct "satisfaction," the goal was to identify whether sociodemographic characteristics and attributes of the occupational setting are associated with physicians' satisfaction with work performed in the municipal public health care system in Belo Horizonte, Minas Gerais, Brazil.

METHODOLOGY

A cross-sectional study of the public health care system in Belo Horizonte, Minas Gerais, Brazil, was conducted in 2009. Access to the lists available from the human resources department made it possible to identify the distribution of subjects in different medical services and regions of the city. A stratified sample of physicians was constructed so that the number and proportion of professionals reflected their geographical distribution among administrative districts within the municipality and their role in the health care system: (a) primary care clinics, (b) outpatient specialty clinics, (c) urgent care and emergency care services, and (d) management.

All physicians actively working in the municipal health system, whether permanent or temporary employees, were eligible for the study. From a universe of 1,981 physicians, a stratified random sample of 266 was selected to participate in the study. Those who were on vacation or had been transferred and those who had died or recently retired were replaced with another physician in the same district who occupied a comparable function at the same level of complexity.

This study complied with the ethical principles expressed in the Declaration of Helsinki and was approved by the Ethics Committee of Federal University of Minas Gerais (protocol 542/07). The physician subjects were informed about the research objectives, the institution responsible, and the voluntary and confidential nature of their participation. All participants signed an informed consent form.

Satisfaction is a subjective construct defined by individuals based on different dimensions and for which there is supposed to be a global measure (21). Accepting this hypothesis, job satisfaction domains were addressed through a self-administered questionnaire. Among the sociodemographic characteristics evaluated were sex, age, skin color, marital status, number of children, education level attained, and monthly gross income. Lifestyle characteristics investigated included the practice of leisure activities, frequency of physical activity, and smoking.

We analyzed the following factors related to physicians' work: (a) job characteristics: level of complexity (primary care clinics, outpatient specialty clinics, urgent care and emergency care services, and management); number of years working in the public system; period of time working in the current facility; total hours worked weekly; working hours (per week) in the municipal health care system; number of jobs; type of employment contract; work schedule (day versus night shifts); and frequency of night shifts; (b) working conditions: availability of protective equipment and supplies required for professional duties; threats to personal safety; threats to the security of personal belongings; occurrence of aggression against colleagues in the prior 12 months; and occurrence of aggression to users in the last 12 months; and (c) psychosocial factors at

work: the relationship between effort and remuneration; desire to reapply for the employment; relationship between assigned tasks and available resources; social support; context of work demands (demands and control over one's work); and overcommitment to work.

Job satisfaction was measured by the question "Are you satisfied with your work?" and quantified using a Likert scale ranging from 1 to 4 points: the response "very dissatisfied" was scored as 1; 2, "dissatisfied"; 3, "satisfied"; and 4, "very satisfied." For analysis purposes, physicians who answered "satisfied" or "very satisfied" were considered satisfied professionals. Individuals who responded "very dissatisfied" or "dissatisfied" were classified as dissatisfied.

Other dimensions of satisfaction were also detailed: satisfaction with interpersonal relationships; satisfaction with oneself; and satisfaction with one's ability to work. Self-perceived quality of life was assessed using a single question, with responses ranked on a Likert scale ranging from 1 (very bad) to 5 (very good). These four factors were measured using questions taken from the World Health Organization short-form Quality of Life instrument, the WHOQOL-BREF (22).

To study the psychosocial aspects of work, the Job Content Questionnaire (JCQ) in the version translated into Portuguese and validated by Araújo and Karasek (2008) (23) was used. The JCQ identifies psychosocial aspects of work such as control over one's work, psychological demands, physical demands, and social support from colleagues and superiors. By combining the level of control and the psychological demands involved in the work, four work situations are defined: low strain (low demands combined with high control), passive work (low demand and low control), active work (high demand and high control), and high strain (high demand and low control).

Questions selected from the Effort-Reward Imbalance (ERI) Questionnaire, in its version translated to Portuguese by Chor and colleagues (2008) (24), were added to the questionnaire used to study subjects' behavior on the job. The ERI assesses two facets of the effort-reward ratio: one extrinsic, related to working conditions indicative of strain (demands) and rewards (salary, opportunities), and one intrinsic, which focuses on the individual's style of adjustment to these conditions. The intrinsic component is called "overcommitment to work" and defines a set of emotions and behaviors that express a combination of excessive dedication and a strong desire for approval (25).

With regard to health status, the following characteristics were studied: alcohol abuse (as assessed using the CAGE questionnaire); presence of common mental disorders (CMDs); sick leave; and the report of a medically justified absence from work.

The CAGE questionnaire is a screening tool for detecting problematic alcohol use, validated in Brazil by Masur and Monteiro (1983) (26). Its four questions are identified by keywords: Cut down (C), Annoyed (A), Guilty (G), and Eye-opener (E). In this study, the presence of two or more positive responses was adopted as the threshold/cutoff for the definition of a suspect case.

The 20-question version of the Self-Reporting Questionnaire (SRQ) was used to screen for neuropsychiatric morbidity (common mental disorders). The SRQ-20 is an instrument designed by the World Health Organization for use in populations of developing countries. It has been widely used in occupational studies in Brazil (20, 27). In the present study, the cutoff chosen for the classification of a subject as suspected of having a CMD was seven or more positive responses, a standard adopted by other authors (20, 27).

All variables mentioned were analyzed through Poisson univariate regression. Following the strategy used in other studies (28), a level of statistical significance that would avoid excessive rigidity and the exclusion of important variables was used. Those that were statistically significant in the Poisson univariate analysis at a $p \leq 0.20$ were included in the model. An analysis with an alternative cutoff at 10 percent was also performed, but it did not significantly change the final result of the multivariate analysis. Rather, it inflated the explanatory model, hampering the subsequent evaluation of the results.

For the multivariate analysis, a level of significance of 5 percent ($p \leq 0.05$) and a confidence interval of 95 percent (CI 95%) were used. STATA statistical software version 10.0 (Stata Corp., College Station, USA) was used for the calculations.

We chose to use the prevalence ratio to measure the strength of association between job satisfaction and the other factors. However, there still is no consensus in the literature regarding the use of odds ratio or prevalence ratio in cross-sectional studies. In this study, due to high frequency of job satisfaction (65%) in the sample, the odds ratio could overestimate the strength of association and thus was considered inappropriate (29). Thompson and colleagues (1998) (30) present an illustrative comparison of this effect by presenting the results obtained in the form of odds ratios and prevalence ratios for the same hypothetical sample. The authors also explain that the derivation of the prevalence ratio from the odds ratio can be problematic.

Because the prevalence ratio cannot be derived directly from logistic regression equations, we opted to estimate it by performing a Poisson regression. Cox regression and log-binomial regression would also be reasonable alternatives for direct calculation of prevalence ratio. Usually, the Poisson regression is used for the analysis of longitudinal cohorts in which the dependent variable is a count of the number of occurrences of an event over time. In the case of cross-sectional studies, in which there is no follow-up of the sample, the time may be adjusted considering the time at risk for each individual is equal to one. This will allow an estimate of the point prevalence. Since the application of the Poisson regression to cross-sectional studies can generate an overestimation of the measures of association, similarly to logistic regression, we used the robust variance method, which allows the results to converge to similar findings obtained by the Mantel-Haenszel method (29).

RESULTS

Characterization of the Sample

Of the total of 266 randomly selected physicians, three declined to participate and 31 could not be located in three interview attempts; thus 232 completed the questionnaire, for a response rate of 87.2 percent.

There was a slight predominance of females (53.0%). The mean age was 41.4 ± 9.9 years, with about 33 percent of professionals aged 30 to 39 years. The proportion of physicians who described themselves as satisfied increased with advancing age, and was almost twice as high among those over age 50, but this relationship did not attain statistical significance. A majority of respondents identified themselves as white (79.1%), living with a spouse or a partner (62.07%), and having at least one child (57.1%). The practice of leisure activities and physical activity was commonly reported (86.5% and 83%, respectively) and was more frequent among professionally satisfied physicians. Only 7.9 percent of the interviewees reported smoking.

The physicians studied were predominantly career civil servants (83.3%). Having multiple jobs was common: 80.1 percent of the professionals reported other activities. The average workweek was 53.9 ± 15.1 hours.

Regarding working conditions studied, 53.0 percent of physicians reported a shortage of supplies to carry out their clinical duties. With regard to the condition of available equipment and supplies, only 14.2 percent considered them satisfactory. Problems regarding violence were frequently mentioned: 41.8 percent of physicians felt their security threatened at work and 26.8 percent reported the occurrence of at least one episode of aggression toward colleagues during working hours in the year preceding the study.

A hundred and fifty physicians (64.9%) declared themselves satisfied with their work, with no statistically significant difference between male and female physicians (66.4% vs. 64.2%; $p = 0.74$). Most reported being satisfied with themselves (74.6%), with their personal relationships (76.3%), and with their ability to carry out their jobs (66.9%). However, a majority of physicians who worked at urgent care settings (54.5%) and emergency rooms (45.5%) described themselves as dissatisfied. About one in four (23.3%) of physicians stated that their daily work caused them suffering. Eighteen physicians (7.7%) would not seek reappointment to their current jobs.

With respect to health status, the most prevalent morbidities were: rhinitis/sinusitis (35.6%), back pain (25.9%), gastritis (17.4%), obesity (15.9%), and sleep disorders (15%). The self-reported rates of CMDs and the diagnosis of depression were 23.79 percent and 12.04 percent, respectively. Three physicians (1.3%) said they had the idea of ending their lives at the time of the survey. Screening for inappropriate consumption of alcohol—as measured by the CAGE instrument—was positive for 4.72 percent of the physicians. As for absenteeism,

more than half of physicians (53.9%) reported having missed work at least once in the previous year for health reasons, while 6.96 percent claimed to be suffering from an occupational disease.

All the factors that were statistically significant in univariate analysis were included in the multivariate model and are presented in the tables pertaining to the first step of multivariate analysis (Tables 1–3). The results of the univariate analysis and of the three steps of the multivariate analysis are presented below.

Univariate Analysis

The following factors were positively associated with job satisfaction in univariate analysis: being a doctor over 40 years of age ($p = 0.05$), having a partner ($p = 0.09$), having one or two kids ($p = 0.02$), being a specialist, having a master's or a doctorate ($p = 0.03$), taking time in leisure activities ($p = 0.03$), exercise three or more times per week ($p = 0.03$), more than 10 years working in public service ($p = 0.04$), more than two years working at the current health unit ($p = 0.05$), working more than 20 hours per week but no more than 40 hours ($p = 0.02$), daytime work ($p = 0.06$), receiving high social support at work (JCQ) ($p < 0.01$), working in a low-strain condition (JCQ) ($p < 0.01$), and being excessively committed to work (ERI) ($p < 0.01$).

In contrast, all the factors below were negatively associated with job satisfaction in univariate analysis: being a doctor aged 30 to 39 years ($p = 0.04$), working in an emergency unit ($p = 0.02$), being a state or federal public server working for the municipality ($p = 0.07$), not having enough material resources to accomplish tasks in the area of work ($p = 0.15$), feeling personal safety threatened at work ($p < 0.01$), declaring an incident or threat of aggression committed by bosses or coworkers to another coworker (while working) over the past 12 months ($p = 0.12$), declaring an incident or threat of aggression committed by bosses or coworkers to a user of the service (while working) over the past 12 months ($p = 0.12$), having a positive screening for CMD ($p < 0.01$), and having a medical leave or absence from work over the past 12 months ($p = 0.02$).

The variables that showed no statistical association with job satisfaction in univariate analysis were: gender ($p = 0.73$), ethnicity ($p = 0.22$), gross monthly income ($p = 0.84$), total work throughout the week, considering all activities that generate income ($p = 0.27$), having another job ($p = 0.63$), availability of personal protective equipment ($p = 0.31$), problematic use of alcohol ($p = 0.39$), and a current or previous diagnosis of an occupational disease ($p = 0.85$).

Multivariate Analysis – First Step

The following factors were positively associated with job satisfaction in univariate analysis: being a doctor over 40 years of age ($p = 0.05$), having a partner ($p = 0.09$), having one or two kids ($p = 0.02$), being a specialist, having a master's or a

doctorate ($p = 0.03$), taking time in leisure activities ($p = 0.03$), exercise three or more times per week ($p = 0.03$), more than 10 years working in public service ($p = 0.04$), more than two years working at the current health unit ($p = 0.05$), working more than 20 hours per week but no more than 40 hours ($p = 0.02$), daytime work ($p = 0.06$), receiving high social support at work (JCQ) ($p < 0.01$), working in a low-strain condition (JCQ) ($p < 0.01$), and being excessively committed to work (ERI) ($p < 0.01$).

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The first stage of the analysis is presented in Tables 1 through 3. With respect to sociodemographic characteristics and lifestyle, none of the factors studied were found to be statistically significant in the multivariate model, and thus were excluded from the subsequent steps (Table 1).

With regard to characteristics of employment, only the number of hours worked (per week) in the municipal health system was significantly associated with the outcome (satisfaction) ($p = 0.04$) (Table 1). Among work conditions and psychosocial factors, only the level of social support ($p = 0.01$) and the situation of demand-control of the work demonstrate statistical significance in this step (Table 2).

Regarding the association between job satisfaction and health status, there was a significant relationship between the outcome variable (job satisfaction) and the presence of CMD ($p = 0.04$) (Table 3).

Multivariate Analysis – Second Step

The retest of the relevant factors in the first stage of the analysis demonstrated statistical significance for the following factors: level of social support ($p < 0.01$),

the situation of demand-control of work ($p = 0.02$), and the presence of CMD ($p < 0.01$) (Table 4).

Multivariate Analysis – Third Step

The third step of the multivariate analysis consisted of the assembly and testing of the final model, which included only the three significant factors identified in the second step. From Table 5 it can be observed that the number of physicians satisfied with their work was significantly higher among those who experienced a high level of social support at work ($p < 0.01$) and was significantly lower among those working under high-strain conditions ($p = 0.01$) and those who screened positive for the presence of CMD ($p < 0.01$).

DISCUSSION

Six of every 10 physicians (64.9%) were satisfied with their work. This proportion is higher than the rates found in India (44.8%) (8) and Japan (55.0%) (7), but is lower than that observed in a sample of U.S. surgeons (75.0%) (16) and among Australian physicians (85.7%) (31).

In this study—as with the findings reported by Edwards and colleagues (2002) (32) and Davidson and colleagues (2002) (33)—multivariate regression analysis showed that the proportion of satisfied physicians was significantly higher among those who experienced a high level of social support at work and was significantly lower among those working under high-strain conditions and those who screened positive for the presence of CMD.

Social support can be defined as the availability of interpersonal relationships based on mutual trust, which provide opportunities for recognizing the self-worth of individuals and for providing help when needed. In the workplace, social support is derived both from the individual's relationships with colleagues and the individual's relationships with supervisors and the organization (Fonseca and Moura, 2012) (34).

The current view is that social support is one of the main moderators of occupational stress, modulating the impact of stress on the individual's health and job satisfaction (Collins, 2008) (35). As with the findings reported by Wada and colleagues (2009) (7), which showed a statistically significant association between Japanese physicians' job satisfaction and a good relationship with physician colleagues and with technical staff, in this study, the frequency of professional satisfaction was also significantly higher among those who reported a high level of support from colleagues and from management.

The association between psychological demands and control over one's work with satisfaction was reported by De Jonge and colleagues (2000) (36) in a study that investigated Dutch professionals who worked in various sectors. It was observed that individuals who were subjected to high work demands and had low

Table 1

Prevalence ratios (PR) and corresponding 95% confidence interval (CI 95%) for the association between sociodemographic characteristics and lifestyle, job characteristics, and job satisfaction of physicians in Belo Horizonte, Brazil, 2009 (multivariate analysis—first step)

	PR	SD	CI 95%	z	P value
Sociodemographic characteristics and lifestyle					
<i>Marital status</i>					
Lives with partner	1.00	—	—	—	—
Lives without partner	1.06	0.05	0.96–1.16	1.10	0.27
<i>Number of children</i>					
None	1.00	—	—	—	—
1 or 2	1.06	0.06	0.95–1.18	1.08	0.28
3 or more	1.10	0.08	0.95–1.27	1.31	0.19
<i>Do you usually participate in leisure activities?</i>					
Yes	1.00	—	—	—	—
No	0.90	0.07	0.76–1.06	1.29	0.20
<i>How often do you exercise?</i>					
Never	1.00	—	—	—	—
1 or 2 times per week	0.99	0.05	0.90–1.08	0.31	0.76
3 or more times per week	0.99	0.06	0.88–1.12	0.14	0.89
Job characteristics					
<i>Insertion in the health care system according to the level of complexity</i>					
Basic health units	1.00	—	—	—	—
Specialty ambulatory	1.05	0.05	0.95–1.15	0.95	0.34
Urgency and emergency units	0.88	0.08	0.74–1.04	1.50	0.13
Management services	0.82	0.10	0.65–1.03	1.69	0.09
<i>Time working in the public service</i>					
Less than 2 years	1.00	—	—	—	—
2 to less than 5 years	1.06	0.10	0.89–1.28	0.67	0.50
5 to less than 10 years	1.02	0.08	0.88–1.18	0.27	0.79
10 to less than 20 years	0.99	0.08	0.84–1.17	0.09	0.93
20 years or more	1.00	0.09	0.84–1.19	0.02	0.98
<i>Time working at the current health unit</i>					
Less than 2 years	1.00	—	—	—	—
2 to less than 5 years	1.00	0.07	0.87–1.15	0.03	0.98
5 to less than 10 years	1.06	0.07	0.92–1.21	0.79	0.43
10 or more	1.08	0.08	0.94–1.25	1.11	0.27

Table 1 (Cont'd.)

	PR	SD	CI 95%	z	P value
<i>Workday in the municipal public service</i>					
Up to 20 hours	1.00	—	—	—	—
More than 20 hours, no more than 40 hours	1.18	0.09	1.01–1.38	2.09	0.04
More than 40 hours	1.02	0.05	0.93–1.12	0.43	0.67
<i>Type of employment</i>					
Municipal public server	1.00	—	—	—	—
State or federal public server working for the municipality	0.90	0.08	0.76–1.06	1.24	0.21
Regular contract labor	1.14	0.09	0.99–1.33	1.77	0.08
<i>Labor regime</i>					
Daytime	1.00	—	—	—	—
Dayshift	0.87	0.07	0.74–1.02	1.76	0.08
Nightshift	0.99	0.07	0.86–1.15	0.07	0.95

control over their tasks were at greater risk of emotional exhaustion, health complaints, and job dissatisfaction.

In the present study sample, in agreement with the findings cited above, lower rates of satisfaction were found among physicians subject to the high-strain, active work, and passive work conditions, when compared to those working in low-strain conditions. Notably, this association was statistically significant for professionals working under high-strain (high demand/low control) conditions.

This finding is also consistent with and reinforces the findings of Melo and colleagues (2007) (37) in a study conducted in a pediatric urgent care service in the same city as the present study.

The authors suggest that the high demand for care relative to the number of workers available and the emotional burden experienced caring for gravely ill children are some of the factors associated with fatigue and frustration of physicians who work in the emergency setting. In short, professionals subjected to stressful environments and situations experienced lower levels of satisfaction (2, 19, 38).

Screening of professionals for psychological distress showed that 23.8 percent of physicians studied were experiencing a CMD when surveyed. This rate is higher than the 14 percent rate found in a sample of Nigerian physicians (38).

Given the results of previous studies (2, 5, 19, 38), the association between job satisfaction and CMD could be expected. It has been shown that prolonged periods of being overworked can adversely affect the welfare of physicians and lead to manifestations of neurotic mental illness, substance abuse, problems

Table 2

Prevalence ratios (PR) and corresponding 95% confidence interval (CI 95%)
for the association between psychosocial factors and work conditions,
and job satisfaction of physicians in Belo Horizonte, Brazil, 2009
(multivariate analysis—first step)

	PR	SD	CI 95%	z	P value
Psychosocial factors					
<i>Social support (JCQ)</i>					
Low	1.00	—	—	—	—
High	1.13	0.05	1.03–1.23	2.73	0.01
<i>Demand/control of the work (JCQ)</i>					
Low strain	1.00	—	—	—	—
Passive work	0.91	0.07	0.77–1.07	1.20	0.23
Active work	0.92	0.04	0.85–1.00	1.88	0.06
High strain	0.84	0.06	0.73–0.96	2.51	0.01
<i>Excessive commitment to work (ERI)</i>					
No	1.00	—	—	—	—
Yes	1.05	0.05	0.96–1.16	1.04	0.30
Work conditions					
<i>In the area where you work, are the material resources enough to accomplish the tasks?</i>					
No	1.00	—	—	—	—
Yes	1.07	0.05	0.98–1.18	1.49	0.14
<i>Do you feel your personal safety threatened in your work?</i>					
No	1.00	—	—	—	—
Yes	0.91	0.05	0.83–1.01	1.83	0.07
<i>Over the past 12 months, was there an incident or threat of aggression committed by your bosses or coworkers to another coworker (while working)?</i>					
No	1.00	—	—	—	—
Yes	0.98	0.05	0.89–1.08	0.36	0.72
<i>Over the past 12 months, was there an incident or threat of aggression committed by your bosses or coworkers to a user of the service (while working)?</i>					
No	1.00	—	—	—	—
Yes	1.01	0.05	0.91–1.12	0.15	0.88

Table 3

Prevalence ratios (PR) and corresponding 95% confidence interval (CI 95%)
for the association between health status and job satisfaction of physicians
in Belo Horizonte, Brazil, 2009 (multivariate analysis—first step)

	PR	SD	CI 95%	z	P value
Health status					
<i>Common mental disorders</i>					
No	1.00	—	—	—	—
Yes	0.76	0.05	0.67–0.87	4.19	0.00
<i>Over the past 12 months, have you had a medical leave or been away from work?</i>					
No	1.00	—	—	—	—
Yes	0.97	0.04	0.89–1.06	0.59	0.55

in personal relationships, and depression (4). Concurrent with the present study, Cano-Prais and colleagues (2011) (39) found a correlation between repeated strain injury/work-related musculoskeletal disorder and self-reported diagnosis of depression among physicians in the same sample.

CMDs, although frequent, refer to the less severe range of mental disorders. Symptoms include forgetfulness, difficulty concentrating and making decisions, irritability, fatigue, and somatic complaints (headache, poor appetite, tremors). Excluded are personality disorders, drug addiction, and psychotic disorders. The main concerns related to CMDs are the social costs in terms of psychological distress and the resulting impairment of the performance of daily activities (40). Absenteeism, in particular, translates into personal and financial losses for the physician and increased costs for the health system (4).

For 23 percent of the respondents, the daily work routine causes them suffering. As mentioned, the results of the analysis of the SRQ 20 measures indicate that almost a quarter of the physicians surveyed probably were experiencing a CMD. Given these two results, a higher frequency of professionals dissatisfied with work could be expected. And yet, 65 percent of the doctors declared that they were satisfied with their jobs. This apparent paradox has already been explored by researchers of the psychodynamics of work (41). Dejours clarifies the ambivalence regarding pleasure and suffering at work, noting on the one hand, the positive aspects of work in the construction of identities, and on the other hand, the suffering that stressful situations (e.g., dealing with intense life and death situations) can elicit. It was not possible within the scope of this study to explore

Table 4

Prevalence ratios (PR) and corresponding 95% confidence interval (CI 95%) for the association between job characteristics, psychosocial factors and health status, and job satisfaction of physicians in Belo Horizonte, Brazil, 2009 (multivariate analysis—second step)

	PR	SD	CI 95%	z	P value
Job characteristics					
<i>Workday in the municipal public service</i>					
Up to 20 hours	1.00	—	—	—	—
More than 20 hours, no more than 40 hours	0.98	0.06	0.88–1.10	0.29	0.78
More than 40 hours	1.00	0.04	0.93–1.08	0.05	0.96
Psychosocial factors					
<i>Social support (JCQ)</i>					
Low	1.00	—	—	—	—
High	1.14	0.05	1.05–1.23	3.12	0.00
<i>Demand/control of the work (JCQ)</i>					
Low strain	1.00	—	—	—	—
Passive work	0.91	0.07	0.79–1.05	1.28	0.20
Active work	0.94	0.03	0.87–1.01	1.79	0.07
High strain	0.86	0.05	0.76–0.97	2.38	0.02
Health status					
<i>Common mental disorders</i>					
No	1.00	—	—	—	—
Yes	0.78	0.05	0.70–0.88	4.26	0.00

the dynamics that might explain the paradox that this investigation in Belo Horizonte presented.

Finally, the results of the multivariate analysis indicated no significant association between job satisfaction and sociodemographic and lifestyle characteristics (marital status, age, domestic overload, leisure and physical activity), which are known to be associated with satisfaction with life (9, 21, 42, 43). Thus, what remains is the burden of working conditions on physician satisfaction.

Several limitations of this study should be noted. The cross-sectional design precludes the establishment of causal relationships between occupational

Table 5

Final model of factors associated with job satisfaction of doctors in
Belo Horizonte, Brazil, 2009

	PR	SD	CI 95%	z	P value
Psychosocial factors					
<i>Social support (JCQ)</i>					
Low	1.00	—	—	—	—
High	1.13	0.05	1.05–1.23	3.15	0.00
<i>Demand/control of the work (JCQ)</i>					
Low strain	1.00	—	—	—	—
Passive work	0.91	0.07	0.79–1.05	1.27	0.20
Active work	0.94	0.03	0.87–1.00	1.83	0.07
High strain	0.85	0.05	0.76–0.96	2.56	0.01
Health status					
<i>Common mental disorders</i>					
No	1.00	—	—	—	—
Yes	0.78	0.04	0.70–0.87	–4.40	0.00

conditions, health status, and job satisfaction. Future prospective studies are needed to elucidate the direction of the associations found. The present study examined the self-reported satisfaction and the work and health conditions of a small sample of public-sector physicians in Belo Horizonte; biases arising from the subjectivity of the respondents and the particularities of the public service could not be excluded. Still, the high response rate (87.2%) encourages affirmations regarding the relevance of occupational factors. Finally, despite the length of the questionnaire, which sought to address the multiple factors involved in the construct “satisfaction,” factors related to the emotional state and to the personality of the subjects were not included, hampering more specific analyses with respect to individual factors and demonstrating the challenges we face in addressing the multiple dimensions that relate to satisfaction.

CONCLUSION

Although the literature suggests the influence of sociodemographic and lifestyle characteristics on job satisfaction, in this study job satisfaction was associated only with occupational characteristics and the mental health of the physicians. We

found that the proportion of satisfied professionals increases significantly in the presence of a high level of social support. On the other hand, working under conditions of high psychological demands and minimal control over activities (high strain), as well as presenting an increased risk for mental distress, is associated with a significantly lower proportion of individuals being satisfied with their jobs. These findings suggest that policies that promote social support and mental health in the workplace, as well as the implementation of strategies to increase physicians' control over their work activities, can have a positive effect on the job satisfaction of these professionals.

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