

SHORT REPORT

Working conditions and common mental disorders in physicians in Brazil

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Background	Common mental disorders (CMD) are a marker of work-related psychiatric morbidity. Previous studies have shown a high prevalence in Brazilian health care settings.
Aims	To assess the prevalence of CMD and their associated factors in a group of physicians working at a public health unit in Belo Horizonte, Brazil.
Methods	CMD were evaluated using the Self-Reporting Questionnaire-20 (SRQ-20), developed by the World Health Organization and validated for Brazil. The questionnaire consists of 20 questions: four about physical symptoms and 16 about emotional symptoms. Prevalence was calculated as a percentage of physicians with CMD. Poisson univariate and multivariate regression models were applied to assess associated factors.
Results	Analysis was based on 227 physicians who answered the SRQ-20 (97% response rate). The prevalence of CMD was 24%. Dissatisfaction and commitment to work remained positively associated with CMD. Having more than one job and significant social support from peers and superiors remained negatively associated with CMD.
Conclusions	Prevalence of CMD is in a similar range to that reported in other countries and in Brazil generally. Aspects related to work were the only ones that were independently associated with CMD. Work-related aspects and the motivation of physicians are important and need to be taken into account to ensure that physicians remain healthy.
Key words	Health care; mental ill-health; public health; workplace stress.

Introduction

Recent political and economic changes in organizational structures in Brazil have led to increased stress levels among workers. The intensification of demands has not been followed by increased worker control over their tasks. This has led to high rates of illness, absenteeism and professional turnover [1].

The common mental disorders (CMD) are a set of symptoms including fatigue, forgetfulness, insomnia, irritability and poor concentration and are an important marker of psychiatric morbidity [2]. A high prevalence of CMD has been found in workers in Brazilian primary health care settings [3], including physicians [4]. This study aimed to investigate the prevalence of CMD and

its associated factors among public health care physicians in a city in Brazil.

Methods

A cross-sectional study was undertaken of physicians working for the city authorities in the public health system of Belo Horizonte, Brazil, 2009. Based on a CMD estimate of 26% [3], an accuracy of 5% and a 95% confidence level, a sample of 257 physicians was estimated from the 1981 doctors working in public health. The sample was also stratified by number and proportion of eligible subjects for each sanitary district and level of health care (health care centres, specialties, emergency and district managers). The questionnaire

was self-administered and distributed in person, with written answers, and was conducted by a team of nine trained interviewers who went to the physician's health unit after contact by phone. Up to three visits to the workplaces were made in order to locate the sampled physician, who was considered as a 'loss' when the third attempt had no success.

The Self-Reporting Questionnaire (SRQ-20) comprises 20 questions (yes/no answers): four about physical symptoms and 16 about emotional symptoms. The cut-off point was 6 for men and 8 for women as a previous Brazilian study showed that the positive predictive value was lower for men (66%) compared with women (83%) [5].

Independent variables were structured as social and demographic features (sex, age, marital status, education), life style (smoking), self-assessed quality of life; health status (report of physician-diagnosed back pain, alcoholism, or repetitive strain injury/work-related musculoskeletal disorders—RSI/WMSD—and a report of absence from work within the past year); work at other jobs; self-evaluation of job satisfaction and relationships with peers, self-reporting of ability to do the job, opinion on whether they would reapply for the same job or not.

Part of the Effort-Reward Imbalance Scale was applied to investigate commitment to work [6]. The excessive commitment scale consists of six items; answers ranged from strongly disagree to strongly agree—scores 1–4 [7].

CAGE is a screening tool for detecting alcohol misuse [8]. Key words identify four issues: Cut down (C), Annoyed (A), Guilty (G), and Eye-opener (E). The cut-off point for suspected cases was two or more positive answers.

The Job Content Questionnaire (JCQ) addresses psychosocial aspects of work. The combination of demand and control levels produces four groups: low strain (low demand and high control), passive work (low demand and low control), active work (high demand and high control) and high strain (high demand and low control) [9, 10]. Psychological demand and control scores were dichotomized (low/high demand or low/high control) based on the median distribution of each variable.

Social support was assessed by the sum of scores in questions relating to support from work peers and superiors. The cut-off point was the median (low/high support).

The variable 'working conditions' refers to the physician's physical working environment. A scale of 1–3 assessed ventilation, temperature, lighting, technical equipment at the work site as poor (1), reasonable (2), or satisfactory (3); noise at the work site and from outside was classified as negligible (3), reasonable (2), or loud and unbearable (1). The global score comprised the sum of responses for each item; higher scores mean better conditions. The score was categorized

according to quartiles: poor conditions (first quartile), reasonable (second), satisfactory (third) and excellent (last).

Poisson regression analysis was applied to assess factors associated with CMD. All associated factors at $P < 0.20$ in the univariate analysis (not shown) were included in the multivariate model. Factors in the univariate analysis model significant at $P < 0.20$ were removed sequentially until the remaining factors in the model were significant at $P < 0.05$; 95% confidence intervals were provided. STATA 10.0 software was used.

Participants signed a free informed consent form. The institutional review board of the Minas Gerais Federal University approved this study (542/07).

Results

A sample of 266 physicians was obtained, but information on SRQ-20 was answered by 227 (88% response rate). Among those, 24% had seven or more symptoms indicating the presence of CMD. Most physicians were female (Table 1), had taken specialisation courses, were non-smokers, considered quality of life as good/very good, had missed work because of health issues within the previous year, had more than one job and reported satisfactory/reasonable working conditions. Active job, as obtained by the demand-control model, was found for 48% of subjects.

Multivariate analysis showed dissatisfaction and excessive commitment to work as positively associated with CMD (Table 2). Having another job and high social support from peers and superiors were negatively associated with CMD.

Discussion

The present study revealed positive associations between CMD in physicians working in public health care systems and increased dissatisfaction and excessive commitment to work. Negative associations, on the other hand, were found between CMD in physicians working in public health care systems with social support (from peers and superiors at work) and with multiple jobs. Preventive strategies for CMD in physicians in Brazil should, therefore, take account of working conditions of these workers in the public health care system.

There are no published international studies in which the SRQ-20 has been applied to physicians. Our study has some weaknesses. Depressed and anxious physicians may not have answered the questionnaire, or may not have been working during our survey (healthy worker effect). However, the 24% prevalence in our study is close to other studies [3]. The prevalence is comparable

Table 1. Description of the study sample of physicians working for the City Authorities of Belo Horizonte in 2009, Belo Horizonte, Minas Gerais, Brazil

Characteristic	Categories of response	n ^a (%)
Sex	Male	107 (47)
	Female	120 (53)
Age	<35	72 (32)
	35–46	77 (34)
	>46	76 (34)
Living arrangement	Living with someone	142 (63)
Schooling	Medical school only	45 (20)
	Any specialization course	164 (72)
	Master/Doctoral degree	18 (8)
Current smoker	Yes	18 (8)
Self-reported quality of life	Indifferent/Bad/Very bad	76 (44)
Self-reported satisfaction level	Indifferent/Dissatisfied	56 (25)
Medical diagnosis of RSI/WMSD	Yes	15 (7)
Medical diagnosis of Back Pain	Yes	55 (26)
CAGE	Positive	8 (4)
Missed work due to health issues within the previous year	Yes	121 (53)
Other job	Yes	164 (81)
Working Conditions	Satisfactory/Reasonable	129 (58)
	Precarious	94 (42)
Satisfaction with work peers	Indifferent/Dissatisfied	2 (23)
Satisfaction with work	Dissatisfied	79 (35)
Application for current job again	Yes	208 (92)
Excessive commitment to work	Yes	93 (41)
Social support from peers and superiors	Low	113 (53)
	High	101 (47)
JCQ	Low strain	49 (22)
	Passive Work	14 (6)
	Active Work	105 (48)
	High strain	51 (23)

^aSome totals are different from 227 due to missing values.

Table 2. Multivariate prevalence ratios (final model) of CMD according to characteristics, in the 227 physicians working for the City Authorities of Belo Horizonte in 2009, Belo Horizonte, Minas Gerais, Brazil ($P < 0.05$)

Characteristic	Categories of response	Prevalence ratios (95% CI)	P-value
Assessment of personal satisfaction	Satisfied	1.0	NS
	Indifferent	1.2 (0.6–2.1)	
	Not-satisfied	2.6 (1.7–4.0)	
Other jobs	No	1.0	<0.001*
	Yes	0.4 (0.3–0.7)	
Over-commitment to work	No	1.0	<0.001*
	Yes	3.5 (1.9–6.3)	
Social support (JCQ)	Low	1.0	<0.05**
	High	0.6 (0.3–1.00)	

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

with that reported in other professional categories and in other Brazilian studies [4].

Our findings indicate that there should be a discussion of the challenges and dilemmas faced by doctors in their work in order to address aspects

associated with CMD. Strategies to deal with critical experiences to prevent doctors getting sick should be implemented. Management would benefit from a better understanding of physicians' work in the public health care system.

Key points

- Positive associations were found between common mental disorders in physicians working in public health care systems and increased dissatisfaction and excessive commitment to work.
- Negative associations were found between common mental disorders in physicians working in public health care systems with social support (from peers and superiors at work) and with multiple jobs.
- Preventive strategies for common mental disorders in physicians in Brazil should take account of working conditions of these workers in the public health care system.

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Conflicts of interest

None declared.

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