

Impact of the psychosocial aspects of work on the quality of life of teachers

Impacto dos aspectos psicossociais do trabalho na qualidade de vida dos professores

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Abstract

Objective: To investigate the impact of psychosocial aspects on the quality of life of teachers from municipal schools in Natal, Brazil. **Method:** descriptive study with a cross-sectional design and a sample of 242 elementary school teachers. We used the WHOQOL-bref to assess the quality of life as well as questions about the level of control and the psychological demand of work from the Job Content Questionnaire. **Results:** the overall evaluation of quality of life showed that the physical and environmental domains had the lowest mean scores. According to the psychosocial aspects, most of the subjects (67 individuals = 32.1%) were characterized as having active work (high demand and control), followed by 54 teachers (25.8%) with demanding work (high demand and little control). These two groups have shown to be more affected in the assessment of physical ($p < 0.001$), psychological ($p < 0.001$), and environment ($p < 0.001$) domains of quality of life. **Conclusions:** Teachers who had tasks characterized as active and demanding were more affected in the quality of life domain. This finding suggests the need for greater investment in health-promotion policies among teachers.

Descriptors: Quality of life; Faculty; Brazil; Working conditions; Psychosocial impact

Resumo

Objetivo: Investigar o impacto dos aspectos psicossociais sobre a qualidade de vida dos professores da rede municipal de Natal-RN. **Método:** Pesquisa descritiva com corte transversal, tendo como amostra 242 docentes da rede básica. Foi utilizado o Whoqol-breve para avaliação da qualidade de vida e questões sobre o grau de controle e demanda psicológica referentes ao trabalho do Job Content Questionnaire. **Resultados:** Na avaliação geral da qualidade de vida os domínios físico e meio ambiente foram os que apresentaram menores escores médios. De acordo com os aspectos psicossociais, a maioria dos investigados foi caracterizada pelo trabalho ativo (alta demanda e controle), com 67 indivíduos (32,1%), seguidos pelo trabalho com alta exigência (alta demanda e baixo controle), com 54 docentes (25,8%). Esses dois grupos foram os que apresentaram maior comprometimento na avaliação dos domínios físico ($p < 0,001$), psicológico ($p < 0,001$) e meio ambiente ($p < 0,001$) da qualidade de vida. **Conclusões:** Os professores com trabalho caracterizado com ativo e de alta exigência apresentam um maior comprometimento nos domínios da qualidade de vida, sendo necessário maior investimento em políticas de promoção da saúde desses trabalhadores.

Descritores: Qualidade de vida; Docentes; Brasil; Condições de trabalho; Impacto psicossocial

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Introduction

The labor force has undergone a restructuring process due to the new socio economic model arising from globalization, which has brought about structural changes based on capitalist practices¹.

This new worldwide demand has led to negative consequences, such as precarious working conditions, intensified professional activities, and increased exposure to health risk factors, which, in turn, has resulted in social exclusion and a progressive decline in health conditions².

Teachers have been increasingly presented with significant occupational health problems³. They have been assigned an increasing number of activities, which exceed those traditionally allocated to this profession. These activities are held mainly responsible for the success or failure of educational results⁴.

The teaching profession is characterized by overcrowded classrooms, the presence of unhealthy factors and the structural inadequacy of the institutions. When added to the increased work load, these deficiencies may cause discomfort and dysfunction. They stem from the lack of rest breaks, a situation that contributes to high absenteeism and job abandonment⁵.

The work environment and psychosocial factors have been considered largely responsible for the health problems observed in teachers¹.

Psychosocial aspects refer to *the interaction between work environment, content and conditions and worker capacity, needs, culture, extra-work personal elements, which may, according to perception and experience, influence health, satisfaction, and work performance*⁶.

Therefore, the assessment of these aspects may be fundamental for the prevention of occupational diseases and in promoting the workers' health. The model developed by Karasek⁷, denominated Demand-Control, analyzes factors related to the psychosocial characteristics of work, considering occupational stress as a result of the differences between working conditions and the response capacity of workers involved in task performance and the level of control available to meet their demands.

The aforementioned model focuses on two psychosocial dimensions of work: control over work and the psychological demand of the professional activities developed. Control corresponds to the use and development of skills, such as the need to learn new practices, repetition level, creativity, diversified tasks and the development of special individual skills. Psychological demands include requirements imposed on workers in the course of their activities. These include variables that measure pace, volume, time to perform tasks, and the existence of conflicting requests⁸.

The combination of experiences in the higher and lower levels of these two dimensions results in different work characteristics represented by four categories as follows: low work demand (low psychological demand, high control over the work itself), active work (high demand and high control), passive work (low demand and low control) and high demand (high demand and low control). Some of these situations can be considered as potential risk factors for the onset of psychological and/or physical pathology among the working class⁹.

However, there are few studies on the psychosocial aspects of work, with respect to elementary school teachers. One of these was the study conducted with school teachers in Vitória da Conquista, a city in the State of Bahia, Brazil, in which a larger number of individuals who developed work activities characterized as active and undemanding, in addition to a high prevalence of psychic disturbances associated with work demands were observed⁹.

The different forms of work, reflected in their organizational aspects, may cause various health consequences and compromise the quality of life of teachers⁴. According to the World Health Organization¹⁰, quality of life (QOL) is *the perception of individuals of their position in life, in the context of culture and the system of values in which they live in as well as their goals, expectations, standards, and concerns*.

A number of important characteristics about the quality of life construct are built into the WHOQOL group concept, such as subjectivity, multidimensionality, and the presence of positive and negative dimensions¹¹.

In a cross-sectional study carried out with 1319 workers, aged between 18 and 64 years, negative associations were reported between the psychosocial aspects of work and quality of life. The results showed a significant statistical association between the high work demand variable (high demand and low control) and low scores in the following quality of life domains: functional capability, physical limitations, vitality, social aspects and mental health¹².

In this context, according to the Demand-Control model, we consider the hypothesis that the teaching profession, which is characterized as active and very demanding, compromises the quality of life of elementary school teachers. It is believed that the results of this investigation can help direct public policies aimed at promoting the health of this group of workers.

The aim of the present study was to investigate the quality of life of public school teachers in Natal, Brazil, and to describe the psychosocial characteristics of control and the psychological demands of work in addition to investigate the existence of a difference between the means of quality of life domains and the categories of the demand-control model.

Method

This is a descriptive cross-sectional study with a population of 2,651 public elementary teachers in Natal, Brazil, in 2007 (data provided by the Municipal Health Secretariat). The sample (242 teachers) was calculated from this population, using a mean reference value for the quality of life domain of 56.1¹³, in addition to a confidence level of 95% and a margin of error of 3%.

First, we determined the number of individuals to be selected from each of the four city districts, using the proportionality between the total number of teachers as the sample number. The teachers were randomly selected after those occupying administrative positions were excluded.

Once they were informed about the aims of the study, the teachers were given a 3-part self-report questionnaire.

The first block of questions were related to demographics and socioeconomic data (sex, age, marital status, income and schooling level) and occupational data (number of years in the teaching profession, weekly work load, number of students in the classroom and whether or not the school was located in the same district of the teacher's residence).

The second part corresponded to the assessment of quality of life using the Quality of Life-Bref (WHOQOL-bref) instrument of the World Health Organization, validated for the Brazilian population, and which showed satisfactory internal consistency (Cronbach's coefficient ranging between 0.69 and 0.91)¹⁴.

The WHOQOL-bref consists of 26 questions pertaining to four domains that express the quality of life of the subjects investigated: physical, psychological, environment and social relations. Each question was assigned a score between one and five, and the results of each domain were then transformed into a scale graduated from

0 to 100, zero corresponding to the worst quality of life status and one hundred to the best status, enabling the individual analysis of each dimension.

The third part contained questions from the Job Content Questionnaire (JCQ)¹⁵ about the degree of control and the psychological demand of work. The questionnaire was translated and validated in Brazil, resulting in a Cronbach coefficient between 0.45 and 0.85¹⁶.

From the Demand-Control model proposed by Karasek, the teachers' responses were assigned to four categories: non-demanding work (little psychological demand, high control over the work itself), active work (high demand and control) passive work (little demand and control) and demanding work (high demand and little control).

The control and demand variables were summed, considering the aspects foreseen in the operationalization process of the model. The median was adopted as a reference to classify control (little/high) and psychological demand (little/high).

This paper is part of the research project entitled "Quality of life and conception of health: what elementary school teachers think and do when the topic is health". The study was approved by the Research Ethics Committee of the Universidade Federal do Rio Grande do Norte (protocol no. 010/06), following the norms established by the Resolution 196/96, including the signing of a consent form.

Data analysis was performed using SPSS (Statistical Package for the Social Sciences, version 15.0) software. Data distribution, using the Kolmogorov-Smirnov test, showed non-normal distribution. Descriptive statistics, determining means (\bar{x}) and standard deviation (SD) were used for the quantitative variables, and simple and relative frequencies for the categorical variables. The Kruskal-Wallis test obtained different quality of life domain results between the demand-control models, at a significance level of 5%.

Results

Of the teachers studied, 197 (81.7%) were women and 44 (18.3%) were men, with mean age of 43.24 years (SD = 9.23; 95% CI = 41.96-44.52). With respect to marital status, 150 (62%) of the teachers were married and 64 (26.4%) were single.

Table 1 - Distribution of the results of the quality of life domains of teachers from the public school system in Natal, Brazil

Quality of life domains	n	Mean	SD	CI (95%)
Physical	242	62.68	16.50	60.59-64.77
Psychological	242	67.77	14.43	65.94-69.60
Social relations	242	68.70	17.44	66.49-70.91
Environment	242	54.02	14.77	52.15-55.89

Source: Data collected by the authors.

In regard to schooling, 127 (53.4%) were university graduates and 101 (42.4%) were postgraduates. Mean monthly income was R\$1,449.75 (\approx US\$652.00 at exchange rate of 1usd = R\$2,3) (SD = 642.60; 95% CI = 1,359.82-1,539.59), corresponding to about four times the minimum monthly wage at the time of data collection.

Mean number of years of teaching experience was 18.01 (SD = 8.69; 95% CI = 16.79-19.23). Weekly work load showed a mean of 31.91 hours (SD = 14.82; 95% CI = 29.84-33.98), and the mean number of students per classroom was 32.07 (SD = 6.72; 95% CI = 31.13 - 33.01). A total of 64.9% of the teachers did not live in the same district they worked at.

The quality of life domains that showed the lowest mean scores were environment, with a mean of 54.02 and physical with 62.68 (Table 1).

According to the demand-control model, 67 teachers (32.1%) were characterized as having active work, followed by 54 (25.8%) with demanding work, 45 (21.5%) with non-demanding work and 43 (20.6%) with passive work.

The physical, psychological, and environment domains were more affected in teachers whose work was characterized as active and demanding when compared to the groups whose work was characterized as passive and non-demanding, with a statistically significant difference (Table 2).

Discussion

Several studies conducted with elementary school teachers showed similar socioeconomic and occupational findings to those of the present study, demonstrating homogeneity in the working characteristics of Brazilian educators^{13,17-20}.

Table 2 - Distribution of the means of the quality of life domains and the demand-control model categories

	Work characteristics	n	Mean number of rank	p
Physical domain	Demanding ^a	54	80.49	0.000
	Active work ^a	67	98.28	
	Passive work ^b	43	118.53	
	Undemanding ^b	45	131.49	
Psychological domain	Demanding ^a	57	89.50	0.001
	Active work ^a	67	95.42	
	Passive work ^b	43	108.90	
	Undemanding ^b	45	134.14	
Social relations domain	Demanding ^a	54	91.75	0.096
	Active work ^a	67	101.23	
	Passive work ^b	43	111.91	
	Undemanding ^b	45	119.81	
Environment domain	Demanding ^a	54	85.34	0.001
	Active work ^a	67	97.54	
	Passive work ^b	43	112.47	
	Undemanding ^b	45	132.56	

Same letters mean work characteristics equal with respect to quality of life domains; and different letters mean different work characteristics with respect to quality of life domains.

Source: Data collected by the authors.

In the specific assessment of the quality of life of the teachers investigated, the physical and environment domains were the most affected. Similar results were reported in studies with public school teachers in the cities of Rio Claro-SP¹³ and Jequié-BA²¹.

With respect to the psychosocial aspects of the teaching profession, represented in the categories of the demand-control model, most of the municipal teachers of Natal, Brazil, were categorized as having demanding (high-demand and little control) and active (high demand and control) work. In a study carried out with 1,024 private school teachers in Vitória da Conquista, BA, the active work category was also quite important (32.5%)⁸.

It is hypothesized that highly-demanding work, that is, when highly-demanding situations are combined with little control, is responsible for the high risk of physical and psychological disorders⁹, which may be detrimental to the quality of life of workers.

Another factor that must be considered is that the higher number of women in the teaching profession could have a negative effect on these workers, owing to the extended workday that includes both professional and domestic activities²². This situation usually provokes an emotional division between the working demands and the family needs, causing increased feelings of guilt in these professionals and leading to a higher predisposition to the onset of diseases, which contributes to greater psychological demand at work⁴.

Specifically in regard to the affected physical domain in individuals characterized as having psychologically demanding work, the assessment of this psychosocial aspect included questions about the time required to perform activities, excessive amount of work and the presence of conflicting demands. These factors may contribute to the emergence of physical pathologies, such as muscular-skeletal pathologies that lead to chronic pain and the need for medication. These disorders could indirectly influence the performance of the daily life activities, the capacity to work and mobility.

Another aspect resulting from high psychological demand is fatigue⁹, which may have also contributed to the lower physical domain score obtained by teachers characterized as working in highly demanding and active jobs when compared to those whose work is not psychologically demanding. This hypothesis is based on the fact that, in the assessment of this quality of life dimension, fatigue also influences other aspects such as the presence of pain and discomfort.

All work generates factors that are determinants in the health-sickness process experienced by workers and which affect quality of life at work²¹. The affected physical domain, besides acting negatively on teaching and leading to higher absenteeism, may induce greater indifference in the accomplishment and innovation of educational practices.

The demand-control model may have a direct effect on the health-related quality of life, given that the psychosocial aspects of work influence individual perception of functional capability and well-being¹², important features that are also assessed in the physical domain of QOL.

A study accomplished out with 250 elementary teachers in Vitória da Conquista (Bahia) showed that various aspects linked to the high psychological demand of work, such as the frenetic pace of activities and the long periods of intense concentration on a single task, contribute to the diminished vitality of teachers²⁰. This is a determinant factor for work capacity, the performance of activities of daily life, and mobility, all of which are important facets for achieving good physical domain results.

In regard to the affected psychological domain, positive associations are generally observed between highly-demanding

work and the greater occurrence of mental health disorders²³. The work-related stress suffered by teachers may have contributed to the lower score obtained in this domain by the group of teachers characterized by psychologically-demanding work who may present with anxiety and depression⁹. These aspects could interfere in self-esteem, memory and concentration, in addition to contributing to the emergence of negative feelings, which are questions assessed in this quality of life dimension.

Several psychosocial stressors are present in teaching activities, some of which are inherent to the functions proper, and others related to the institutional and social context in which they are practiced. When these stressors persist, the burnout syndrome may result. This condition is linked to work situations resulting from constant and repetitive emotional pressure associated with intense interaction with individuals for long periods of time. Several consequences of this syndrome affect the educational environment and interfere with pedagogic objectives, leading to health problems, absenteeism and abandonment of the profession³.

The most stressful characteristics of a teacher's work, consistent with psychologically-demanding aspects, are repetitive work, intense concentration on a same task for an extended period, excessive work load, hectic work pace, unfinished tasks, insufficient time to complete tasks, lack of interest on the part of work colleagues, exposure to hostility, conflicts with work colleagues and with students' families, in addition to the absence of a democratic process in the school environment²⁰.

Although the investigation of the teachers' mental health was not the aim of this study, the results of other studies point to worrisome data that may help understanding this affected psychological domain of QOL. A study conducted with 30,000 Brazilian teachers showed that 26.0% of the individuals studied suffered from emotional exhaustion²². In Salvador-BA, a cross-sectional epidemiological study with 573 private teachers revealed a marked process of physical and mental fatigue, with a prevalence of less severe psychic disorders in 20.1%¹⁹. In private teachers in Vitória de Conquista, BA, the prevalence of these disorders was 41.5%²⁰.

Those with demanding and active work were also more affected in the environment domain, highlighted by the problem of low salaries. This lower social status hinders the access of these workers to health services, to leisure options and to asset acquisition, including owning a car. Many of these teachers depend on the precarious urban mass transit system, a problem aggravated by the fact that 65% of those studied did not live in the same district of their school and of these, a considerable number had to travel long distances.

Working for many hours on a weekly basis may be one of the factors responsible for difficulties related to transportation, since many teachers work at more than one institution and have more than one work schedule, and for the lack of leisure and recreational activities. These problems may be aggravated by physical and psychological exhaustion provoked by the large number of activities imposed on teachers.

Another important aspect to be considered in the poor results obtained for the environment domain in the group of teachers with psychologically demanding work is school infrastructure, generally characterized by lack of ventilation, elevated noise levels, chalk dust, and low illumination. This situation, which contributes to a negative result in the psychosocial aspects of the teaching profession, is also investigated in the assessment of the environment domain of quality of life.

It is important to underscore that the data of the present study were collected in the last two months of the 2007 school year, a period of time of work overload for teachers, although being part of the teaching routine.

The limitations of the results of cross-sectional studies that use self-report questionnaires, depict a health situation characteristic of a specific moment in time, assess only healthy workers and exclude those who, for health reasons, were not working at the moment of data collection, must also be considered.

Conclusions

The municipal public teachers in Natal, Brazil, had a lower mean score in the overall assessment of quality of life in the physical and environment domains.

Most of the teachers investigated were classified according to the Demand-Control model as having demanding and active

work and affected physical, psychological and environment domains.

Questions related to the psychosocial aspects of work and the quality of life of teachers in the elementary school system should receive more attention from health professionals as well as from educational and health administrators, who must develop strategies and actions aimed at promoting these workers' health.

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Marcos Henrique Fernandes	UESB	---	---	---	---	---	---
Vera Maria da Rocha	UFRGS	---	---	---	---	---	---

* Modest

** Significant

*** Significant. Amounts given to the author's institution or to a colleague for research in which the author has participation, not directly to the author.

Note: UESB = Universidade Estadual do Sudoeste da Bahia; UFRGS = Universidade Federal do Rio Grande do Sul.

For more information, see Instructions for authors.

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