

# Burnout, workaholism and quality of life among professors in graduate-level nursing programs

Burnout, workaholism e qualidade de vida entre docentes de pós-graduação em enfermagem  
*Burnout, workaholism y calidad de vida de docentes de posgrado en enfermería*

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## Descriptores

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## Abstract

**Objective:** To verify the association of burnout between workaholism and quality of life among graduate-level nursing professors.

**Methods:** A cross-sectional study was conducted with permanent professors linked to Postgraduate Programs in Nursing at 47 public universities in the five regions of Brazil. Between July and December 2018, 919 teachers were invited, of whom 368 answered four questionnaires: sociodemographic, health and occupational characterization, Maslach Burnout Inventory - Human Services Survey, Dutch Work Addiction Scale and World Health Organization Quality of Life Assessment Instrument - Bref. The data were analyzed using descriptive statistics and the associations were verified by unadjusted and adjusted multiple logistic regression.

**Results:** The prevalence of indicative of burnout was 28.0%, of workaholism was 35.5% and of low general quality of life was 17.7% among the permanent professors investigated. Working excessively, working compulsively and being a workaholic significantly increased the chances of high levels of emotional exhaustion, depersonalization and low professional accomplishment. On the other hand, significantly lower levels were observed in the positive professionals, with a high perception of general, physical, psychological, social, and environmental quality of life. The multiple models of the syndrome indicated that its dimensions are directly and positively associated with workaholism and directly and negatively associated with the general quality of life, even after adjustment with sociodemographic, health and occupational variables.

**Conclusion:** Burnout was associated with professors with workaholism and those who consider themselves as having a poor quality of life.

## Resumo

**Objetivo:** Verificar a associação do *burnout* com *workaholism* e qualidade de vida entre docentes de mestrado e/ou doutorado em enfermagem.

**Métodos:** Estudo transversal realizado com docentes permanentes vinculados aos Programas de Pós-Graduação da área da Enfermagem de 47 universidades públicas das cinco regiões do Brasil. Entre julho e dezembro de 2018, convidou-se 919 docentes, dos quais 368 responderam a quatro questionários: caracterização sociodemográfica, de saúde e ocupacional, *Maslach Burnout Inventory - Human Services Survey*, *Dutch Work Addiction Scale* e *World Health Organization Quality of Life Assessment Instrument - Bref*. Os dados foram analisados por estatística descritiva e as associações foram verificadas por regressão logística múltipla bruta e ajustada.

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**Conflicts of interest:** nothing to declare.

**Resultados:** A prevalência de indicativo de *burnout* foi de 28,0%, de *workaholism* foi de 35,5% e de baixa qualidade de vida geral foi de 17,7% entre os docentes permanentes investigados. Trabalho compulsivo, trabalho excessivo e ser *workaholic* aumentaram significativamente as chances de altos níveis de exaustão emocional, despersonalização e baixa eficácia profissional. Por outro lado, níveis significativamente menores foram observados nos trabalhadores positivos, com alta percepção de qualidade de vida geral, física, psicológica, social e do meio ambiente. Os modelos múltiplos das dimensões da síndrome indicaram que suas dimensões são direta e positivamente associadas com o *workaholism* e direta e negativamente associadas à qualidade de vida geral, mesmo após o ajuste com variáveis sociodemográficas, de saúde e ocupacionais.

**Conclusão:** A síndrome de *burnout* foi associada aos professores de mestrado e/ou doutorado com *workaholism* e que consideravam ter uma baixa qualidade de vida.

## Resumen

**Objetivo:** Verificar la relación del *burnout* con el *workaholism* y la calidad de vida de docentes de maestría y doctorado en enfermería.

**Métodos:** Estudio transversal realizado con docentes permanentes vinculados a los Programas de Posgrado del área de Enfermería de 47 universidades públicas de las cinco regiones de Brasil. Entre julio y diciembre de 2018, se invitó a 919 docentes, de los cuales 368 respondieron cuatro cuestionarios: caracterización sociodemográfica, de salud y ocupacional, *Maslach Burnout Inventory - Human Services Survey*, *Dutch Work Addiction Scale* y *World Health Organization Quality of Life Assessment Instrument - Bref*. Los datos fueron analizados mediante estadística descriptiva y las relaciones fueron verificadas mediante regresión logística múltiple bruta y ajustada.

**Resultados:** La prevalencia de indicios de *burnout* fue del 28,0 %, de *workaholism* del 35,5 % y de baja calidad de vida general del 17,7 % entre los docentes permanentes investigados. Trabajo compulsivo, trabajo en exceso y ser *workaholic* aumentaron significativamente la probabilidad de altos niveles de agotamiento emocional, despersonalización y baja eficacia profesional. Por otro lado, se observaron niveles significativamente menores en trabajadores positivos, con una alta percepción de calidad de vida general, física, psicológica, social y del medio ambiente. Los modelos múltiples de las dimensiones del síndrome indicaron que sus dimensiones están directa y positivamente relacionadas con el *workaholism* y directa y negativamente relacionadas con la calidad de vida general, inclusive después de ajustar las variables sociodemográficas, de salud y ocupacionales.

**Conclusión:** El síndrome de *burnout* está relacionado con profesores de maestría y doctorado con *workaholism* y que consideran que tienen una mala calidad de vida.

## Introduction

Teachers' activities require many hours of daily work and intense mental effort.<sup>(1)</sup> This predisposes them to work for an excessive amount of time, and even collaborates in creating a compulsion to work more, in the attempt to achieve constant success, leading to job addiction.<sup>(2)</sup>

Workaholism refers to the psychological and pathological dependence of an individual on his work, which is characterized by excessive and compulsive work to meet organizational standards, neglecting rest and one's personal life. Thus, two dimensions of workaholism are present: excessive working, in the behavioral dimension, and compulsive working, in the cognitive dimension.<sup>(3)</sup>

Working excessively interferes with the relationship between satisfaction and pleasure that the individual has with his work, and his quality of life, as its perception is temporal and circumstantial.<sup>(4)</sup> Quality of life is related to the subjective perception of the individual with regard to wellbeing in the context of his/her life: in a multidimensional perspective that interrelates physical, psychological,

social relations, and aspects related to the environment where he/she lives.<sup>(5)</sup>

Studies indicate that workaholism and the high levels of demands front of complex activities faced by professors are significantly and positively correlated with burnout.<sup>(2,6)</sup> Investigations conducted with nurses showed that quality of life,<sup>(7)</sup> as well as workaholism,<sup>(8,9)</sup> were singly related to burnout.

Burnout is a psychological syndrome that occurs in response to overload and chronic interpersonal stressors from the occupational environment, which results in exhaustion of the individual. The three dimensions of this response are overwhelming exhaustion, feelings of cynicism and professional ineffectiveness.<sup>(9,10)</sup>

Professor wear has devastating consequences for him and the quality of education, such as low job satisfaction, lower levels of commitment, intention to leave their teaching position in the institution, and absenteeism.<sup>(1,11)</sup> The syndrome impacts health with cardiovascular, respiratory, gastrointestinal, musculoskeletal, endocrine problems, changes in pain experiences, serious injuries and mortality under 45, sleep disorders and depression, in addition to other organizational repercussions, such as presenteeism and disability retirement.<sup>(13)</sup>

Workaholism and quality of life can be associated with burnout. However, research that has iden-

tified the relationship between these phenomena and burnout is incipient, especially among graduate-level professors, as there is little knowledge produced about their working conditions, not only as an activity in itself, but as an activity among other academic activities at universities.<sup>(14)</sup> Understanding this relationship will enable the development of interventions to promote work quality of life, and the health of these individuals, which can produce a favorable environment for learning and academic development of researchers.

Hypothetically, the dimensions of burnout are directly and positively associated with workaholism, and directly and negatively associated with quality of life, regardless of: sex, age, depression, work regimen, scholarship productivity, years of graduate-level teaching, number of postgraduate programs or masters/doctoral candidates, according to the model presented in Figure 1.

Therefore, the objective of this study was to verify the association of burnout between workaholism and quality of life among graduate-level nursing professors.

## Methods

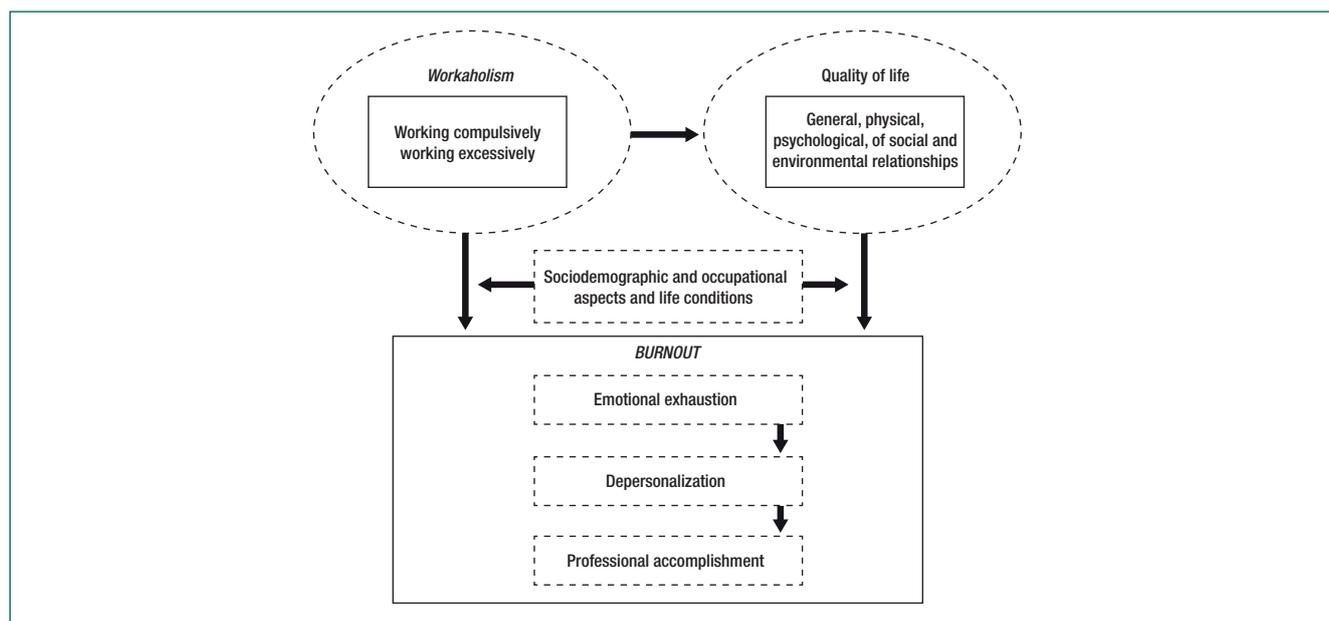
Cross-sectional and quantitative research conducted between July and December of 2018, with pro-

fessors from 51 graduate-level programs (GLP) in the nursing discipline, from 47 public Brazilian public universities.

The population invited to participate in the study was comprised of 919 professors (data extracted from the Sucupira Platform in May 2018) who met the following inclusion criteria: (1) were a permanent professor - designation assigned to those who simultaneously develop graduate and undergraduate teaching activities, participate in GLP research projects, advise MSc or PhD students in the GLP, and have an institutional link established; (2) have been accredited for at least one year, in at least one of the GLP under study; and (3) not be away by licenses of any kind.

The sample size was calculated using the formula  $n = N \cdot p \cdot q \cdot (Z\alpha/2)^2 / p \cdot q \cdot (Z\alpha/2)^2 + (N - 1) \cdot (E)^2$ , in which a proportion of 50% was assumed, using a 95% confidence interval and maximum error of 5%, resulting in a minimum of 270 participating professors. Considering possible losses, 919 eligible professors were invited to participate, of which 368 (40.1%) responded to this survey.

The data on sociodemographic characterization, health and work were collected through a questionnaire with the information: age, sex, son, marital status, use of antidepressants, undergraduate area, work regimen, productivity scholarship, time teaching in



**Figure 1.** Hypothetical model of the association of burnout with workaholism and quality of life

the master's/doctoral program, number of graduate programs to which they were associated, and number of students in the master's/doctoral program.

The Brazilian version of the Maslach Burnout Inventory - Human Services Survey (MBI-HSS) was used to verify burnout, as it has the necessary requirements regarding factor validity and internal consistency.<sup>(15)</sup> It is a 22-item instrument with seven-point Likert scale responses (0: never, to 6: daily), which are divided into three dimensions: emotional exhaustion, depersonalization, and professional accomplishment.

Workaholism was verified by the Dutch Work Addiction Scale (DUWAS), Portuguese version of Brazil, which has factorial validity and adequate reliability.<sup>(16)</sup> The instrument is composed of 10 items with four-point Likert scale responses (1: never, to 4: always), which generate two dimensions: working excessively and working compulsively. From the combination of the DUWAS dimensions, two profiles emerge: relaxed workers (low score in working excessively and compulsively) and workaholics (high score in working excessively and compulsively).<sup>(3)</sup>

Quality of life was assessed by the Brazilian version of the World Health Organization Quality of Life Assessment Instrument-Bref (WHOQOL-Bref), that contains 26 items, two general and the others grouped into four domains: physical health, psychological, social relationships, and environmental, where the individual is inserted. The responses have a five-point Likert scale, which generates a score by domains and, by means of the formula  $((\bar{x} \text{ domain} * 4) - 4) * (100/16)$ , they on a linear scale ranging from zero: least favorable quality of life to 100: most favorable quality of life.<sup>(5)</sup>

These self-report instruments were inserted in an Internet platform, developed by the research team for data collection. The system was set up to make all items mandatory, to avoid missing data, as well as to send invitations to professors to participate in the study, which occurred every 15 days, and automatically excluded from the list those who did not respond up until the fifth attempt. The invitations were sent by e-mail, with content that included explanations about the search, and an access link to the online platform.

The system generated a spreadsheet with the responses of the participating professors that was coded for statistical analysis using *Statistical Package of Social Sciences* (SPSS), version 20.0. Descriptive statistics were used to describe all study variables. The Shapiro-Wilk test indicated that the numerical variables did not follow a normal distribution ( $p < 0.001$ ), so a description by medians and interquartile ranges were presented (IIQ) (p25-p75).

The dependent variables were the three dimensions of burnout: emotional exhaustion, depersonalization, and professional accomplishment. The independent variables were the two dimensions of workaholism: working excessively and working compulsively, and their profiles: workaholic and relaxed worker; and the quality of life domains, overall, physical, psychological, social relationships, and environment. All scores of these dimensions/domains were dichotomized into high and low, considering the median as cutoff point.

Univariate binary logistic regressions were performed to verify the isolated association of dependent variables with independent variables. The regressions were repeated in multiple models, inserting the adjustment variables: sex, age, years of teaching in graduate-level programs and depression in the literature indicating as aspects to be controlled.<sup>(11)</sup> and work regimen, number of graduate-level programs to which they are linked, scholarship productivity, and number of students in the master's/doctoral programs, considered to be likely confounders of the relationship. Finally, multiple models were elaborated by inserting the workaholism variable (workaholic profile) and the general quality of life (overall domain), which were also controlled by the adjustment variables mentioned above. The quality of the model fit and the explained variance of the multiple model on the outcome were verified by the Hosmer-Lemeshow and Nagelkerke R Square tests, respectively. The results were described by odds ratios (OR) unadjusted and adjusted with 95% confidence intervals.

The study was designed and developed in accordance with principles of ethics in research involving human beings, and was approved by the Research Ethics Committee, according to Opinion No. 2,347,839.

## Results

A total of 368 professors participated in this study, with a median age of 53 years (IIQ: 17), and a minimum of 28 and a maximum of 75 years. The majority were women (84.5%), with son (73.9%), and a stable marital relationship (69.6%). Nursing professors were predominant (90.5%), followed by other health areas (5.7%), and other knowledge disciplines (3.8%). With regards to the work regime in the university, 91.3% were exclusively or fully dedicated. The median time of graduate-level teaching was a median of eight years, with variations of 1 - 40 years. Only 19% received scholarship productivity. Most were involved in only one graduate-level program (68.5%), but 27.7% and 3.8% were associated with two or three programs, respectively. The number of students in the masters and/or doctoral programs ranged from 1 - 17, with a median of 5 students. Regarding the health condition, 13.6% indicated the use of antidepressants.

High emotional exhaustion was found in 49.7% of the professors, high depersonalization in 47.0%, and low professional accomplishment in 51.1%; when combined, these indicated a prevalence of 28.0% of burnout. Working compulsively was identified in 49.7%, and working excessively in 45.7%; when combining these dimensions, 35.1% of these professors presented workaholism, and 39.7% were considered relaxed workers. Regarding quality of life, a high perception of the overall (general) domain occurred in 17.7%; physical in 55.7%; psychological in 60.1%; social relationships in 49.2%, and the environment in 43.5%.

High levels of working compulsively, working excessively, and being a workaholic have significantly increased the chances of high emotional exhaustion, high depersonalization, and low professional accomplishments. However, the odds were significantly reduced for relaxed workers, with high scores on general quality of life, as well as in the physical, psychological, social and environmental domains (Table 1).

Table 2 shows the multiple models of the association between the dimensions of the burnout syndrome with workaholism and the quality of life overall domain.

**Table 1.** Associations between burnout, workaholism, and quality of life, in the study sample

Variables	p-value	Odds ratio <sup>a</sup> adjusted(95% confidence intervals)	p-value	Odds ratio <sup>a</sup> adjusted(95% confidence intervals) <sup>*</sup>
<b>Emotional exhaustion</b>				
Workaholism				
Working compulsively	<0.001	6.109(3.890-9.593)	<0.001	6.440(3.951-10.496)
Working excessively	<0.001	4.008(2.592-6.197)	<0.001	3.579(2.257-5.673)
Workaholic	<0.001	7.874(4.741-13.075)	<0.001	7.548(4.425-12.876)
Relaxed worker	<0.001	0.232(0.148-0.364)	<0.001	0.236(0.145-0.384)
Quality of life				
Overall	<0.001	0.103(0.047-0.223)	<0.001	0.113(0.051-0.250)
Physical	<0.001	0.083(0.050-0.137)	<0.001	0.091(0.054-0.154)
Psychological	<0.001	0.124(0.076-0.201)	<0.001	0.139(0.083-0.230)
Social	<0.001	0.258(0.167-0.398)	<0.001	0.310(0.197-0.487)
Environmental	<0.001	0.179(0.113-0.281)	<0.001	0.205(0.128-0.330)
<b>Depersonalization</b>				
Workaholism				
Working compulsively	<0.001	2.918(1.909-4.460)	<0.001	2.831(1.792-4.471)
Working excessively	<0.001	3.394(2.209-5.214)	<0.001	2.884(1.827-4.553)
Workaholic	<0.001	4.337(2.737-6.874)	<0.001	3.935(2.410-6.424)
Relaxed worker	<0.001	0.362(0.234-0.560)	<0.001	0.398(0.248-0.639)
Quality of life				
Overall	<0.001	0.304(0.165-0.558)	<0.001	0.312(0.165-0.591)
Physical	<0.001	0.302(0.197-0.464)	<0.001	0.353(0.221-0.561)
Psychological	<0.001	0.232(0.148-0.362)	<0.001	0.247(0.152-0.401)
Social	<0.001	0.281(0.183-0.433)	<0.001	0.336(0.213-0.530)
Environmental	<0.001	0.330(0.214-0.508)	<0.001	0.421(0.266-0.665)
<b>Professional accomplishments</b>				
Workaholism				
Working compulsively	<0.001	2.478(1.629-3.770)	<0.001	2.416(1.530-3.817)
Working excessively	<0.001	2.460(1.614-3.750)	0.003	2.005(1.274-3.158)
Workaholic	<0.001	3.320(2.105-5.237)	<0.001	2.934(1.801-4.780)
Relaxed worker	<0.001	0.466(0.305-0.714)	0.007	0.525(0.330-0.837)
Quality of life				
Overall	<0.001	0.111(0.053-0.233)	<0.001	0.115(0.053-0.247)
Physical	<0.001	0.231(0.148-0.359)	<0.001	0.271(0.168-0.436)
Psychological	<0.001	0.205(0.130-0.324)	<0.001	0.227(0.139-0.373)
Social	<0.001	0.217(0.140-0.337)	<0.001	0.250(0.156-0.398)
Environmental	<0.001	0.295(0.192-0.455)	<0.001	0.375(0.237-0.593)

<sup>\*</sup>Adjusted by sex, age, work regime, years of graduate-level teaching, number of graduate programs, scholarship productivity, number of master's / doctoral students, and depression.

The chances of high emotional exhaustion, high depersonalization, and low professional accomplishments were 555.5%, 249.1% and 135.1%, respectively, higher among professors with workaholism. On the other hand, 85.7%, 59.2%, and 86.5%, respectively, were lower in the professors who ranked as having a high quality of life.

**Table 2.** Multiple models of association between burnout and workaholism and quality of life in the study sample

Multiple models	p-value	Odds ratio <sup>unadjusted</sup> (95% confidence intervals)	p-value	Odds ratio <sup>adjusted</sup> (95% confidence intervals)*
<b>Emotional exhaustion</b>				
Workaholism	<0.001	6.783(3.977-11.415)	<0.001	6.555(3.770-11.398)
Quality of life	<0.001	0.134(0.059-0.302)	<0.001	0.143(0.062-0.332)
<b>Depersonalization</b>				
Workaholism	<0.001	3.833(2.398-6.127)	<0.001	3.491(2.120-5.748)
Quality of life	0.006	0.415(0.221-0.781)	0.008	0.408(0.210-0.792)
<b>Professional accomplishment</b>				
Workaholism	<0.001	2.645(1.644-4.256)	<0.001	2.351(1.411-3.920)
Quality of life	<0.001	0.137(0.064-0.290)	<0.001	0.135(0.062-0.296)

\*Nagelkerke R Square: 0.370, 0.241, 0.295; Hosmer & Lemeshow test: 0.612, 0.698, 0.191, respectively; adjusted for sex, age, work regime, years of graduate-level teaching, number of graduate programs, scholarship productivity, number of master's/doctoral students, and depression.

## Discussion

The results of the multiple analyses confirmed the hypothetical model that workaholic professors, and those who considered having a poor quality of life in all its dimensions, are exhausted in their mental energy resources. This data is based on the assertion that workaholism can be one of the source causes of burnout,<sup>(17)</sup> as well as a low quality of life.<sup>(7)</sup> On the other hand, positive or relaxed work was a protective factor against burnout. Another study also found that, compared to workaholics, relaxed workers are significantly less likely to experience severe exhaustion and cynicism.<sup>(3)</sup>

This study demonstrated that about one in three graduate-level professors had results indicative of burnout, and the same proportion occurs for workaholism. These are alarming data, considering that these professionals offer highly specialized and specific services, in addition to the social contribution of their work.<sup>(14)</sup> It has been demonstrated that ensuring work life wellbeing of these professors is essential to ensure high quality teaching,<sup>(18)</sup> which can extend the development of quality research.

The workloads of teaching in higher education, especially at the graduate-level, are permeated by multiple activities, added to short deadlines for its execution.<sup>(19)</sup> Due to the constant demand for professor productivity and competitiveness,<sup>(20)</sup> they often and persistently think about work, even when they are not at work, which is a characteristic of compulsive

work.<sup>(3)</sup> Both situations make them emotionally exhausted, due to insufficient time for recovery.<sup>(1,21)</sup> Still, the intensification of work, academic productivity and precarious work have contributed to the illness of professors at Brazilian public universities, considering their simultaneous activities in undergraduate, graduate and management.<sup>(22)</sup>

Regarding the relationship between low professional efficiency and compulsive and excessive work, given the need to master theories and methods and the dynamics of the health area, the professors can have feelings of incompetence at work and compensate by working hard to be more competent, which is a process permeated by perfectionism socially prescribed, self-discipline, energy, and ambition.<sup>(23-25)</sup>

The socioeconomic and technological context incessantly impacts and redefines the characteristics of teaching, requiring reinvention to meet the needs and tendencies of teaching and knowledge development, ignoring its subjectivity and autonomy.<sup>(26)</sup> The use of information and communication technologies increases the tendency to workaholism and high workload, as life inside and outside of work is delimited by a tenuous line,<sup>(26)</sup> especially with the use of social networks.

Professors with workaholism gradually lose their enthusiasm for work, treat their co-workers and students with indifference, and consequently lose their sense of accomplishment.<sup>(28)</sup> The workaholics concentrate on work activities to avoid participation in social functions at work, and as a result, they have a poor quality of interpersonal relationships and perception about the quality of their lives.<sup>(29)</sup>

This research demonstrates that workaholism is detrimental to the biopsychosocial health of professors by its magnitude of association with burnout, because when work is the priority of life, the health can be affected,<sup>(28)</sup> considering that people with obsessive-compulsive behavior are more prone to illness and physiological imbalance.<sup>(30)</sup> Such affirmations are corroborated by the association of burnout with the low perception of quality of life in all its dimensions. Other studies have indicated that burnout was associated with a markedly low quality of life affecting all areas of life,<sup>(31,32)</sup> which emphasizes the severity of the condition and the need for prevention and early detection.

The intensification of the teaching work, the need for rest, and the state of physical exhaustion contribute to the professors' tiredness and lack of energy.<sup>(22)</sup> Thus, they are inclined to not enjoy life outside work, not to perceive meaning in their lives, to be dissatisfied with themselves, and with their sleep, physical appearance, and concentration, and their ability to perform daily activities and the ability to work.<sup>(32)</sup> Exhaustion is also associated with negative feelings, such as bad mood, despair, anxiety, and depression.<sup>(33)</sup> Moreover, an exaggerated dedication to the teaching activity can modify the relationships with family and friends, leisure time, and daily life.<sup>(24,32)</sup>

The importance of social relationships in the manifestation of the syndrome has been demonstrated. Incivility conduct in the workplace, expressed by discourteous, condescending, and disrespectful behaviors, most often non-verbal components, has a stronger effect on burnout and is more detrimental to individuals who are more committed to their organizations.<sup>(34)</sup> In contrast, social support received from people at work is essential to avoid burnout, due to the promotion of a friendly climate, and reciprocal support, including among professors.<sup>(35)</sup>

Given the multiple individual, organizational, and social consequences of burnout, it is imperative that the managers of higher education institutions and workers themselves must be aware of the problem, and attempt to promote healthier working environments.

The most important limitation is the cross-sectional design of this study that excludes the determination of cause and effect relationships. All the measures used were self-reported, where responses can be influenced by personal and social values, and there is a tendency for self-denial involved in burnout and workaholism.<sup>(29)</sup>

However, a robust aspect of this study is the extensive recruitment of professors from all public universities that offer graduate-level nursing programs in Brazil. In addition, this study provides important contributions to the analysis of burnout, showing that it is positively associated with workaholism and the poor quality of life of the professors teaching in the graduate-level programs.

## Conclusion

The burnout dimensions were significantly associated with the professors with workaholism and those who had a poor quality of life. Several measures are necessary to prevent teacher burnout to be implemented in the institutions, however this study demonstrates the importance of reducing the workload and time pressure on the teaching profession. It becomes relevant a positive culture of social relationships in the university, as well as programs for stress management, health promotion, and quality of life that must be implemented, that will favor a healthy teaching environment.

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## Collaborations

Galdino MJQ and Haddad MCFL contributed to the design of the project, analysis and interpretation of data, writing of the article, critical review of the intellectual content and final approval of the version to be published. Martins JT, Robazzi MLCC, Pelloso SM e Barreto MFC contributed to the interpretation of the data, relevant critical review of the intellectual content and final approval of the version to be published.

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