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Burnout and Long-term Sickness Absence From the Teaching Function: A Cohort Study

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ABSTRACT

Background: The present objective was to verify whether burnout (emotional exhaustion [EE], depersonalization [DP] and low professional efficacy [PE]) is a risk factor for long-term sickness absence (L TSA; ≥ 30 consecutive days) from the teaching role.

Methods: This was a prospective cohort study with two years of follow-up that investigated 509 elementary and high-school teachers. Burnout was identified by Maslach Burnout Inventory. Poisson regression with robust variance was used to adjust for possible confounders.

Results: The incidence of L TSA was 9.4%. High EE levels were associated with L TSA in the crude analysis, but the association lost statistical significance after adjustments (for sex, age, perception of work-life balance, general self-rated health, chronic pain and depression). High DP levels were associated with this outcome, even after all adjustments (relative risk = 1.80; 95% confidence interval: 1.05–3.09). Low PE levels were not related to L TSA.

Conclusion: The results reinforce the need to improve teachers' work conditions to reduce burnout, particularly DP, and its consequences.

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1. Introduction

Burnout is a psychological syndrome that arises as a response to prolonged chronic stressors at work. According to the psychosocial perspective, burnout is characterized by three symptomatological dimensions: (a) emotional exhaustion (EE), verified by the presence of intense emotional and/or physical exhaustion; (b) depersonalization (DP) or cynicism, evidenced by dehumanization, emotional insensitivity or affective hardening and (c) reduced professional efficacy (PE), identified by feelings of ineffectiveness and lack of involvement at work [1].

Structural factors related to work, such as work overload, high psychological demands, insufficient social support and low control over the work process, increase the probability of burnout among workers [1,2]. Burnout can cause several deleterious effects on

workers' health and lives. A recent systematic review of prospective studies showed that job burnout can lead to physical, psychological and occupational consequences, such as future cardiovascular diseases, musculoskeletal disorders, chronic pain, depression, hospitalization for mental and behavioural disorders and absenteeism [3].

In Brazil, the work and structural conditions in the elementary and higher education system contribute to psychological distress among teachers [4,5]. A multicentre study that included 34 countries from all continents [6] identified that teachers in Brazil teach six hours per week longer than the average in other countries. Teaching in Brazil can take place during three periods of the day: morning (from 7:10 to 12:15), afternoon (13:00 to 18:15) and evening (19:00 to 23:00). Therefore, some teachers engage in long working hours and may work all three shifts to increase their income. These adverse working conditions may compromise

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teachers' psychological and physiological health [7] and lead to burnout.

In addition, factors such as conflict with students or parents of students, exposure to violence in the school environment, an excessive number of students in the classroom and poor school infrastructure have been found to be associated with burnout in Brazilian teachers [8]. Given this unfavourable context, teachers may become ill. In some cases, they may be reassigned to fulfil another function within the school if they present health problems that interfere with their professional performance in the classroom [9], or they may even abandon the profession because of illness.

Longitudinal studies investigating the temporal relationship between burnout and absenteeism due to health problems are scarce, and all of them have been conducted in developed countries. We found studies conducted in the Netherlands [10], Denmark [11], Sweden [12] and Finland [13], with workers in small and large companies [10], health and safety sectors [11], civil services (nurses, caregivers, administrative staff) [12] and the forestry industry [13]. In all investigated professional contexts, burnout was a risk factor for being absent from work due to health problems. For instance, a two-fold risk of long-term sickness absence (LTSA; >60 consecutive days) was observed among workers with high levels (>75th percentiles) of both EE and cynicism [10]. Total burnout scores, as measured by the Maslach Burnout Inventory (MBI), increased the risk of long-term (>42 days) sickness absence from work by 54% among Dutch employees [10].

We found only one prospective study with teachers in Sweden, where teachers with burnout at baseline were more likely to have changed work or be off duty at follow-up [14]. Notably, no longitudinal study has investigated the possible influence of burnout on absence from work among teachers in the context of a developing country, where the challenges of teaching in an unfavorable socio-economical setting may predispose teachers to be absent from work despite the fear of losing their job in a country with a high unemployment rate. This longitudinal study aimed to fill this research gap by verifying whether burnout (emotional exhaustion, depersonalization and low professional efficacy) is a risk factor for long-term sickness absence (time equal to or greater than 30 consecutive days) from the teaching role.

2. Materials and methods

2.1. Design and place of study

This was a cohort study with data collection at two time points: Time 1 (T1) in 2012–2013 and Time 2 (T2) 24 months later, in 2014–2015. This research was part of a larger study named 'Pro-Master: Health, lifestyle and work of elementary and high-school teachers from the public network in Paraná State', conducted in Londrina, Paraná State, southern Brazil.

2.2. Participants and procedures

At T1, a list with the names of the schools and the number of teachers was made available to the researchers by the Regional Centre for Education. The 20 schools with the highest number of teachers (i.e., with more than 70 teachers) were selected, and all teachers were invited to participate in the study. The schools were convenience sampled because this approach offered easy access to most of the study population since they were distributed in all regions of the city and because approximately 70% of the eligible teachers worked in these schools. Moreover, a high proportion of teachers working in these selected schools also taught in the smallest schools. As the larger research project (Pro-Master) had several research questions, its sample size was calculated as approximately

1,000 teachers to provide adequate statistical power for all the planned analyses. For the present study, based on previous findings [11], the sample was estimated to be 660 by using the Fleiss continuity correction formula, with a two-sided confidence level of 95%, a power of 80%, a ratio of those unexposed and exposed to burnout is 3:1 (75th percentile), and percentages of those unexposed and exposed to burnout with LTSA from work is 7% and 15%, respectively. At this stage, the inclusion criterion was being a teacher responsible for any discipline in elementary or high-school education.

The instruments for collecting data were developed by the research team and consisted of a form to annotate data collected through face-to-face interviews and a self-report questionnaire. The questionnaire contained more sensitive questions and scales for health assessment, including those measuring burnout, for which it has been recommended to obtain the individual's self-report directly via the instrument. Prior to the data collection, a pilot study was conducted with 82 teachers in a nearby city to evaluate the clarity of the questions and to refine the instruments.

Data collection in each school lasted for 21 days. In addition, visits to each school were performed 15 and 30 days after the end of the data collection to contact teachers who were on leave during those 21 days. Teachers who were on leave and did not return to work until 30 days after the end of the school data collection, those who were not located after the fifth attempt and those who refused to participate in the research were considered losses. Data were collected between August 2012 and June 2013 by trained researchers. At T1, 1,126 teachers were considered eligible for the study. We interviewed 978 teachers (response rate of 86.9%); however, 47 did not fully complete the MBI, resulting in a total sample of 931 teachers.

T2 occurred 24 months after T1, with data collected from September 2014 to April 2015. Although data collection was scheduled to occur until June 2015, it had to be stopped in April 2015 due to a massive teacher strike. This strike lasted 44 days between April and June 2015 and involved more than 70,000 teachers in the State of Paraná, of whom more than 90% joined the strike. The procedures adopted for data collection were similar to those at T1. Teachers who had been transferred to another school or reassigned to another role (i.e., fulfilling other functions at the school because they were no longer able to teach, either because of a physical or a psychological problem) were contacted at the new workplace. If the teachers had been assigned to another role aside from teaching, they were contacted by telephone to schedule an interview. A search for teachers who were on leave during T2 was conducted to minimize the healthy worker bias [15] and to identify teachers who no longer worked as teachers due to health problems.

At T2, among the 931 teachers who were followed up from T1, 509 teachers were re-interviewed (response rate of 54.7%), with a mean time of 24.9 months after the first interview (minimum of 23.0 and maximum of 27.0 months). Through a unique identifying number, the data collected at T1 and T2 for the same teacher were linked in the database.

Regarding losses to follow-up, 366 teachers were not contacted due to the teacher strike, 17 teachers refused, 38 were not located after five attempts, and one had died.

An informed consent form was signed by the participants in both stages prior to data collection. The research was approved by the Research Ethics Committee of the State University of Londrina.

2.3. Dependent variable (collected at T2)

2.3.1. LTSA from the teaching role

LTSA was defined as being away from work due to a health problem for a period equal to or greater than 30 consecutive days. This definition included teachers on medical leave, who had been functionally reassigned to another role, who had retired or who had

abandoned the profession due to illness. This information was provided by the teacher during the interview in regard to the 12 months prior to T2 to minimize recall bias. The number of days away from work and the medical diagnoses behind this absence from work due to illness were also reported by the teachers. The diagnoses were then grouped by the research team according to the chapters of the International Classification of Diseases, tenth revision.

In the literature, there is no consensus on which cutoff to use for defining LTSA in longitudinal studies about burnout. We found cutoffs of two weeks [11], 28 days [16], 42 days [10] and 60 days [12]. The 30-day cutoff point was chosen in this study because of the frequency distribution of this variable in our sample, as it corresponded to the 85th percentile of the distribution, which discriminated 15% of teachers with the longest absence period away from work. This cutoff point was also approximately one week longer than the average number of days for which teachers were absent from the classroom due to illness (24 days).

2.4. Independent variables (collected at T1)

2.4.1. Burnout

The Maslach Burnout Inventory - Human Services Survey (MBI-HSS) was used to investigate burnout levels. The MBI-HSS is a self-administered questionnaire with 22 questions that evaluates three symptomatological dimensions: emotional exhaustion (EE; nine items), depersonalization (DP; five items) and professional efficacy (PE; eight items). This scale has been validated with Brazilian teachers [17], with response options on a Likert scale ranging from 1 (never) to 5 (daily). For the present study, a license was obtained from Mind Garden, Inc. (www.mindgarden.com/117-maslach-burnout-inventory), which owns the copyright for reproduction and application of the MBI™ scale.

For each participant, the sum of points for each burnout dimension was calculated. Studies have used different criteria to determine high levels of burnout based on MBI scores. For instance, MBI scores have been analysed as continuous variables, by using specific cutoff values or specific percentiles of the sample's frequency distribution (e.g., the 80th or 75th percentiles) or by combining high levels of exhaustion-cynicism [3]. Given that scholars [18] have recommended that only nation-specific derived cutoff values be used, and given that no such validated cutoffs have been determined in Brazil, we employed percentiles to differentiate high levels of burnout, in line with previous studies [11,12,19]. Therefore, scores above the 75th percentile for EE (≥ 32 points) and DP (≥ 13 points) or below the 25th percentile for PE (≤ 26 points) were considered to indicate high levels of burnout. These dimensions were analysed separately, considering that each can express distinct contextual characteristics [20].

2.4.2. Sociodemographic and occupational characteristics

The sociodemographic variables analysed were sex, age and marital status (with or without a partner). The occupational variables were hours worked per week, employment bonds (permanent, temporary), number of work shifts per day (up to two shifts of work, three shifts of work), perception of work-life balance (excellent/good, bad/fair), interpersonal relationships at school (optimal, non-optimal) and physical or psychological violence (such as insults, threats, humiliations) suffered by the teacher at school in the 12 months prior to the research at T1 (yes, no). Teachers who responded that they had a good/excellent relationship with principals, co-workers and students were considered to have an "optimal interpersonal relationship" at school (versus non-optimal).

2.4.3. Health characteristics

The teachers classified their general health as good (excellent/very good/good) or bad (bad/very bad). Health habits, such as

drinking alcoholic beverages (one day a week or less versus two to seven days in a week) and physical activity practise (yes or no), were also reported by the teachers. Sleep quality was assessed with the following question: "During the last month, how would you rate the quality of your sleep?" The answers were categorized as good (very good/good) or bad (bad/very bad). The teachers were asked about the presence of chronic pain (lasting for more than six months). The answers could be yes or no. Depression was established by the teacher's report of a medical diagnosis (yes, no).

2.5. Data processing, validation and analysis

The data were double-entered into the Epi Info® 3.5.4 software for the detection of typos. The Statistical Package for Social Sciences (SPSS) 19.0 software was used for data analysis. We compared respondents and non-respondents. No significant differences were detected for most of the variables, except for the number of shifts of work per day, with a higher proportion of those with up to two shifts among the non-respondents at the T2.

In the bivariate analyses, the chi-square test or Fisher's exact test was used for categorical variables; the t-test was used for quantitative variables. Associations of worse levels of burnout with LTSA from the teaching role were analysed by Poisson regression models with robust error variance to estimate the relative risks (RRs) and their 95% confidence intervals (CIs) [21].

The selection of potential confounders was based on a literature review for factors that could influence both burnout levels and the outcome. Inclusion of confounders in the adjusted model was based on statistical criteria, with those with p-values < 0.20 in the bivariate analysis entered into the regression model. Interactions were tested among the symptomatologic dimensions of burnout and the sociodemographic, occupational and health variables.

3. Results

Participants in the cohort study ($n = 509$) were predominantly women (66.4%). The mean age was 41.9 years, with a standard deviation (SD) of 9.8, with ages ranging from 19 to 67 years. The average number of hours worked in a week was 38.0 hours, SD 11.4. Most teachers had permanent employment (73.3%), worked up to two shifts per day (80.0%), reported excellent/good balance between their personal and professional lives (74.3%), and had optimal interpersonal relationships with superiors, coworkers and students (80.4%); however, the majority also reported having been the victim of some type of violence in the school environment (72.7%). Regarding health conditions, the majority classified their general health as good (96.1%) and reported good sleep quality (73.3%), absence of chronic pain (56.4%) and no medical diagnosis of depression (85.3%) (Table 1).

The incidence of LTSA from the teaching role was 9.4%. Higher EE and DP levels, older age, poor self-rated general health and depression were significantly associated with LTSA (Table 1).

The analysis of the internal consistency by Cronbach's alpha identified good reliability for the dimensions of EE ($\alpha = 0.907$), DP ($\alpha = 0.722$) and PE ($\alpha = 0.825$). Table 2 shows a significant longitudinal association between LTSA and high levels of both EE ($p = 0.05$) and DP ($p = 0.02$) in the model without adjustments.

In the adjusted Poisson regression model (Table 2), the association between high levels of EE and LTSA lost statistical significance after adjustments for sociodemographic factors (mainly due to the influence of age) and occupational and health characteristics. However, teachers with high DP levels had a higher risk of LTSA than the others did, regardless of sex, age, perception of work-life balance, self-rated health, chronic pain and depression – RR = 1.80 (95% CI: 1.05–3.09, $p = 0.03$). No statistically significant interactions were found in the models used.

Table 1
Sociodemographic, occupational and health characteristics of teachers according to the incidence of long-term sickness absence from the teaching role

Variables	Total (n = 509)		LTSA (n = 48)				p
			Yes		No		
Emotional exhaustion (EE), mean (SD)	26.7	(7.9)	30.5	(7.5)	26.3	(7.9)	0.001
High levels of EE							
Yes	151	(29.7)	20	(13.2)	131	(86.8)	0.05
No	358	(70.3)	28	(7.8)	330	(92.2)	
Depersonalization (DP), mean (SD)	10.7	(4.0)	12.0	(4.8)	10.6	(3.9)	0.02
High levels of DP							
Yes	159	(31.2)	22	(13.8)	137	(86.2)	0.02
No	350	(68.8)	26	(7.4)	324	(92.6)	
Professional efficacy (PE), mean (SD)	29.4	(5.6)	28.2	(5.6)	29.5	(5.6)	0.12
Low levels of PE							
Yes	153	(30.1)	17	(11.1)	136	(88.9)	0.39
No	356	(69.9)	31	(8.7)	325	(91.3)	
Age, mean (SD)	41.9	(9.8)	44.9	(10.2)	41.6	(9.7)	0.03
Sex, n (%)							
Female	338	(66.4)	37	(10.9)	301	(89.1)	0.10
Male	171	(33.6)	11	(6.4)	160	(93.6)	
Marital status, n (%)*							
With partner	309	(60.9)	27	(8.7)	282	(91.3)	0.48
Without partner	198	(39.1)	21	(10.6)	177	(89.4)	
Hours worked per week, mean (SD)	38.0	(11.4)	37.4	(11.4)	38.1	(11.5)	0.69
Employment bond, n (%)							
Permanent	373	(73.3)	37	(9.9)	336	(90.1)	0.53
Temporary	136	(26.7)	11	(8.1)	125	(91.9)	
Work shifts/day, n (%)							
1 or 2 shifts	407	(80.0)	37	(9.1)	370	(90.9)	0.60
3 shifts	102	(20.0)	11	(10.8)	91	(89.2)	
Perception of work-life balance, n (%)							
Excellent/good	378	(74.3)	31	(8.2)	347	(91.8)	0.11
Bad/fair	131	(25.7)	17	(13.0)	114	(87.0)	
Interpersonal relationship, n (%)							
Optimal	409	(80.4)	37	(9.0)	372	(91.0)	0.55
Nonoptimal	100	(19.6)	11	(11.0)	89	(89.0)	
Violence suffered at school, n (%)							
No	139	(27.3)	11	(7.9)	128	(92.1)	0.47
Yes	370	(72.7)	37	(10.0)	333	(90.0)	
Self-perception of general health, n (%)							
Good	489	(96.1)	43	(8.8)	446	(91.2)	0.03
Bad	20	(3.9)	5	(25.0)	15	(75.0)	
Alcohol consumption, n (%)							
One day in a week or less	445	(87.4)	43	(9.7)	402	(90.3)	0.64
Two to seven days in a week	64	(12.6)	5	(7.8)	59	(92.2)	
Physical activity, n (%)							
Yes	257	(50.5)	22	(8.6)	235	(91.4)	0.50
No	252	(49.5)	26	(10.3)	226	(89.7)	
Sleep quality, n (%)							
Good	373	(73.3)	32	(8.6)	341	(91.4)	0.28
Bad	136	(26.7)	16	(11.8)	120	(88.2)	
Chronic pain, n (%)							
No	287	(56.4)	22	(7.7)	265	(92.3)	0.12
Yes	222	(43.6)	26	(11.7)	196	(88.3)	
Depression, n (%)							
No	434	(85.3)	36	(8.3)	398	(91.7)	0.03
Yes	75	(14.7)	12	(16.0)	63	(84.0)	

* Two teachers did not report their marital status.

Among the cases of long-term absence from the teaching role due to health problems (n = 48), 30 teachers resorted to medical leave (62.5%), 11 teachers were reassigned to another role at school (22.9%), six definitively abandoned teaching (12.5%) and one was

compulsorily retired (2.1%). Psychological disorders and musculo-skeletal disorders were the main causes of long-term absence from teaching. The psychological problems most commonly reported by teachers were depression and anxiety disorders (panic syndrome

Table 2
Longitudinal association between burnout and incidence of long-term sickness absence from the teaching role

BURNOUT	Total (n)	N	%	LTSA	
				Unadjusted model RR (95% CI)	Adjusted model RR (95% CI)
High levels of emotional exhaustion					
Yes	151	20	13.2	1.69 (1.01–2.91)*	1.42 (0.83–2.42)
No	358	28	7.8	1	1
High levels of depersonalization					
Yes	159	22	13.8	1.86 (1.09–3.18)*	1.80 (1.05–3.09)*
No	350	26	7.4	1	1
Low levels of professional efficacy					
Yes	153	17	11.1	1.28 (0.73–2.24)	1.27 (0.72–2.24)
No	356	31	8.7	1	1

* $p \leq 0.05$. Adjusted model: adjusted for sex, age, work-life balance, self-rated health, chronic pain and depression.

and generalized anxiety), while thoracic outlet syndrome, carpal tunnel syndrome and knee and hip injury/pain were the main musculoskeletal diseases.

4. Discussion

In this two-year follow-up study, high DP levels (cynicism) were significantly associated with future LTSA, regardless of sex, age, perception of work-life balance, self-rated health, chronic pain and depression. However, the association between EE and this outcome lost statistical significance after adjustment. Low PE was not a risk factor for LTSA.

These findings are in line with those observed in a large study in the Netherlands [10], where DP (cynicism) was a risk factor for sickness absences lasting more than two weeks due to all health problems and mental disorders, whereas EE was a predictor only of absences due to mental illness. In fact, scholars have argued that cynicism may be a more fundamental element of burnout than EE [1,22], as the cynicism-only profile comes closer to the negative endpoint of the continuum between burnout and its positive antithesis, engagement [1]. Therefore, Maslach and Leiter [1] postulated that EE alone cannot be considered a proxy for burnout, as they have observed in recent studies, and suggested that the experience of cynicism may better explain burnout than EE. These arguments have been supported by other studies. For example, one study identified cynicism as the burnout dimension with the most important role in turnover intentions among Canadian nurses; thus, the authors hypothesized that the three dimensions of burnout may exert diverse impacts on different outcomes [23]. Another study showed that cynicism was more frequently associated with indicators of poor health than EE was, considering a wide range of health problems (e.g., levels of stress, anxiety, poor physical health) and a biomarker of pro-inflammatory activity and reduced heart rate variability, an indicator associated with chronic stress and other diseases [24].

The lack of association between the low PE and LTSA has several possible explanations. According to an analysis of the invariance of the MBI scale over time, this specific dimension was the only one for which the scale did not maintain its property of measuring the same attributes [22]. Additionally, PE has been shown to be determined by personality traits, whereas EE and cynicism have been shown to be determined by organizational and individual variables, leading the authors to conclude that PE is a more independent construct than the other two dimensions of burnout [25]. Another possibility is the reduction in the statistical power of the study to detect differences due to losses to follow-up, which may also be the case for the EE dimension.

The incidence of LTSA from work was 9.4%; that is, approximately one in 10 teachers were away from the classroom for at least one month within a one-year interval. Comparisons with other studies are hindered by the lack of consistency in the definition of the long-term absence from work and differences in follow-up time. However, the incidence rate in our sample was only slightly higher than that observed in a 12-month follow-up study (7.5%, considering more than 60 consecutive days of absence) [12].

In the present study, the main causes of LTSA were psychological problems, mainly depression and anxiety disorders. Despite presenting some similar characteristics, such as loss of interest or pleasure, depressed mood, fatigue or loss of energy, decreased concentration and feelings of uselessness, burnout and depression are considered distinct constructs [26]. Researchers believe that burnout is part of a process of developing work-related depression [27]. Although anxiety has not been as thoroughly investigated as depression, a meta-analysis has demonstrated its relationship with burnout [26].

Musculoskeletal disorders were also identified in this study as one of the main reasons for LTSA. Some studies have found a longitudinal association between burnout and musculoskeletal disorders: They identified that workers with high burnout levels presented twice the risk for developing musculoskeletal pain than those without burnout [28,29]. However, elucidating the pathophysiological mechanism between burnout and musculoskeletal problems remains a challenge for researchers. It is believed that high mental load and work demands can increase muscle tension and decrease micropause muscle activity [28].

Absence from work is a substantial problem that represents a great concern for both workers and organizations and has individual, social and economic impacts. Functional reassignment (11 teachers in this study) is another harmful occupational consequence for both the teacher and the educational system. In a qualitative analysis, teachers reassigned to other roles reported uncertainties, fears and exposure to prejudice, with strong stigma and feelings of social exclusion [9], which can further aggravate workers' psychological conditions. Cases of abandonment of the teaching profession due to health problems were also identified in the present study. Low salaries, precarious working conditions, dissatisfaction with the profession and social devaluation have been identified as factors in the abandonment of the teaching profession [30]. The present study presents another possible factor (high DP levels) that may contribute to this problem.

Some limitations of the present study should be highlighted. The sociodemographic, occupational and health variables were self-reported by the teachers. The LTSA was also reported by the teachers; there was no confirmation of the teachers' professional situations and health problems by the schools or through medical

documentation. Thus, the outcome may have been subject to recall bias. Follow-up losses due to the teacher strike during T2 reduced the statistical power of the study to detect certain differences that could have resulted in significance, even though the profiles of the respondents and non-respondents were similar, except for the number of daily shifts worked. The “healthy worker effect” is another type of bias that cannot be disregarded, as those who are healthier tend to remain active in their jobs, leading to a process of progressive selection of healthier workers [15]; therefore, this effect may have attenuated the prospective association between burnout and different outcomes, as those with the highest burnout levels might have already left the profession when the cohort study started. Despite these limitations, the present study provides a scientific contribution through its analysis of the relationship between burnout and teacher health with a prospective design. In addition, the sample size was relatively large, even with the losses related to the teacher strike, and the selected sample presented a sociodemographic profile that was similar to that of Brazilian teachers in general [6]. Moreover, the MBI-HSS scale, regarded as the gold standard for burnout investigations [20], was used in the study and showed good reliability (α Cronbach ≥ 0.722). Finally, the influence of each symptomatological dimension of the syndrome on the incidence of the outcome was analysed.

The results of this study indicate that teachers' mental suffering, expressed by high DP levels, can contribute to LTSA. Thus, it is important to reinforce the recommendations by researchers [4,5] regarding the need to invest in policies to improve schoolteachers' work conditions and promote their well-being. As it is known that DP is more related to both the quality of relationships at work and suitable resources for work performance than to work demands [1], efforts should be directed to address these two aspects by improving organizational climate and providing timely teaching resources, such as opportunities for development and adequate school infrastructure.

Conflicts of interest

None.

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