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Evaluation of stress and Burnout Syndrome in education professionals from a Belo Horizonte public school

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ABSTRACT

Introduction: The socioeconomic and cultural reality of Brazilian society has direct consequences on the public educational system, transmuting its primary function. Educators are subject to demands greater than the possibilities of their training and emotional preparation. They are subjected to a chronic stressful work environment, which can evolve into a degenerative cycle of their health, with the possible development of high levels of stress and/or Burnout Syndrome, having repercussions on individual health, the public health system, and the educational process. **Objective:** To evaluate the mental health of education professionals working in public schools in Belo Horizonte, quantifying the development of clinical and subclinical symptoms of Burnout Syndrome. **Method:** Observational cross-sectional quantitative qualitative research. Data collection used the Burnout Syndrome Preliminary Identification Questionnaire and a profile delimitation form. These instruments were applied to teachers and employees at an important public school in Minas Gerais. **Results:** Of the 45 survey participants, 60% reported negative adjectives when referring to their mental health. 66% of them reported being satisfied with their work environment, and seven professionals said they felt threatened by it. A total of 76% of the sample presents the initial stage or installation of Burnout Syndrome. **Conclusion:** Implementing preventive and therapeutic measures that minimize the consequences of Burnout is urgent for the sake of public health and to guarantee a healthy and productive educational environment.

Keywords: Occupational Stress; Burnout Syndrome; School Teachers

INTRODUCTION

The contemporary socioeconomic and structural reality of public education institutions in Brazil has redefined their role¹. For many students, school no longer represents a space for learning but rather a place for social interactions, meals, or as an alternative to a hostile family and social environment². Additionally, government benefits provided to families have increased student attendance and reduced dropout rates³.

Thus, the school is perceived as unengaging for students as a learning environment², which may elucidate the apathy, indiscipline, disrespect towards the teacher figure, and aggression. This situation is further compounded

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by the commonly inadequate materials and infrastructure of the public education system⁴. Consequently, the demands of this environment are highly diverse and stressful, intensifying the requirements placed upon educators and significantly altering the practices of teaching and administrative roles in schools⁵.

Teachers are exposed daily to these varying realities and expectations from students and their guardians, adding work responsibilities that extend far beyond the primary function of teaching^{6,7}. In a study by Goulart Junior and Lipp⁸, the discomfort associated with this profession is categorized into two groups. The first pertains to factors that directly affect their teaching actions, such as rapid contextual transformations and family influences. The second relates to the lack of pedagogical resources, materials, furnishings, and infrastructure, coupled with the presence of violence within the institution⁸.

These two groups illustrate the transformation that has occurred in the exercise of the profession, resulting in the accountability of educators for demands that exceed their training and emotional preparedness^{9,10}. Consequently, many teachers are subjected to a chronic stress-inducing work environment, which significantly impacts individual health, the public health system, and public education⁴.

Another relevant issue for public education professionals is the devaluation of salaries. This may be one of the triggering factors for mental illnesses, as professionals often feel unappreciated or are compelled to work longer hours to supplement their income^{5,6}. This low self-esteem, coupled with a diminished sense of occupational efficacy, has been negatively correlated with increased stress and symptoms of burnout¹¹. The condition of daily work-related stress and the feeling of devaluation creates a degenerative cycle affecting teachers' health, prompting the International Labour

Organization (ILO) to recognize this profession as at risk for the development of burnout syndrome.

Burnout is a comorbidity particularly associated with caregiving professions that involve direct interaction with individuals, such as teaching¹². This syndrome is related to the continuous exposure of professionals to stressful situations in the workplace, resulting in suffering from physical and emotional exhaustion, which pushes individuals to the limits of their endurance, with significant repercussions on their overall health^{7,13}. Additionally, certain personality traits serve as risk factors for developing burnout syndrome, including excessive commitment, perfectionism, cognitive inflexibility, over-dedication, and excessive empathy¹⁴.

The diagnosis of Burnout Syndrome is clinical, requiring the patient to exhibit all the symptoms of the triad: exhaustion, reduced professional accomplishment/ frustration, and depersonalization/cynicism. There is no consensus regarding the minimum duration for the development of the condition; the diagnosis is made through a qualitative analysis of symptoms¹⁴. In addition to the triad, other symptoms are also common, including gastrointestinal discomfort, muscle tension, fatigue, sleep disturbances, irritability, difficulties in concentration, and impairments in social relationships^{4,14}. Since many of these symptoms can be associated with other psychiatric conditions, such as anxiety or depression, there remains considerable uncertainty among physicians in confirming the diagnosis¹⁴.

Educators are vulnerable to developing the physical and psychological consequences of this syndromic condition, which still has limited visibility as a significant public health disorder that necessitates monitoring and medical treatment⁷.

An important aspect addressed in Pinder's¹⁵ research was the identification that teachers experiencing burnout are at a higher risk of suffering physical aggres-

sion. This was elucidated in the study as a result of potentially hostile and punitive behavior in the classroom, stemming from the physical, emotional, and cognitive exhaustion of the professional¹⁶. In addition to physical violence, teachers are also subjected to verbal violence, which had a prevalence of 71.5% among the teachers surveyed in the study by Ribeiro *et al.* ¹⁷.

Given the importance of education in the development of individuals and society, as well as the fundamental role of education professionals in fostering a positive school environment, preserving the health of these individuals is essential for the effective execution of their work and the quality of education^{10,12}. Thus, attention to the mental health of teachers is not merely an educational issue but rather a public health concern with potential cascading effects, directly impacting the educational processes of numerous children and adolescents. Therefore, this study aimed to evaluate the mental health of education professionals working in the public school system of Belo Horizonte, analyzing in both quantitative and qualitative terms the development of clinical and subclinical symptoms of Burnout Syndrome.

METHOD

Study Design

This is an observational analytical, cross-sectional study, conducted as both quantitative and qualitative, which allowed for the quantification of how many professionals experience stress and/or Burnout Syndrome and to relate this aspect to the working conditions in the public educational system of a school in Belo Horizonte.

Sample

The sampling method was non-probabilistic, based on judgment/intention, seeking individuals who had characteristics predefined by the researchers for sample composition¹⁸.

The sample included teachers who instruct in Basic Education (Elementary, Secondary, and Adult Education), as well as other staff members, such as general service professionals, administrative personnel, directors, vice directors, and supervisors (n=45).

To outline the profile of these employees, the following variables were considered: age, gender, level of academic education, area of expertise, and duration of employment at the institution. Participants were not required to identify themselves, ensuring confidentiality and privacy. Data were collected through a physical questionnaire and via the "Google Forms" platform.

The inclusion criteria for participation in the study were: being 18 years of age or older, having agreed to and signed the Informed Consent Form (ICF), and being a teacher, coordinator, director, or staff member of the educational institution being studied. Exclusion criteria included: having a connection to the institution for less than 12 months, being on medical leave, vacation, or any type of leave during the data collection period, and not meeting the inclusion criteria.

Instruments and Procedures

The application of the questionnaires was primarily conducted by members of a Mental Health Academic League. They had previously participated in a class covering Stress and Burnout Syndrome, as well as an informative training session on the objectives and methods of the research. The physical administration of the questionnaires was carried out during the professionals' work hours, and the responses were sealed in designated envelopes. In addition to this data collection method, a form was created on the Google Forms platform to facilitate the research's reach.

The data collection questionnaire consisted of an instrument and a form, specifically the Preliminary Questionnaire for Identifying Burnout Syndrome and the form for delineating the participants' profiles.

The Preliminary Questionnaire for Identifying Burnout Syndrome was developed and adapted by Chafic Jbeli, inspired by the Maslach Burnout Inventory (MBI). The MBI is a widely used tool for assessing burnout, regardless of the characteristics of workers, their roles, and their profiles. Its construction is based on three dimensions: emotional exhaustion, depersonalization, and personal accomplishment. It aims to evaluate burnout indices according to the scores defined for each dimension. This questionnaire consists of 20 objective questions that respondents must mark with an "X" on a scale from 1 to 5, indicating: 1-never; 2-annually; 3-monthly; 4weekly; and 5-daily. These scores and their respective meanings correspond to the level of quality of life in the work performed by the teacher and their feelings regarding teaching. The scores are obtained by multiplying the number of "X" marks by the number of the corresponding column. Finally, the obtained values are summed, and the results of the scores are analyzed and interpreted to aid in the Burnout Syndrome identification in teachers.

The profile delineation form contains ten personal questions that determine whether the participant meets the inclusion and exclusion criteria for the study, in addition to providing important information for data analysis, conclusions, and discussion of results.

Data Analysis

The numerical treatment of the investigated factors was conducted through the measurement of the units of observation. Data analysis was performed using an exploratory and descriptive model, utilizing visual resources that facilitate a clearer visualization of the collected data. Variables related to time of employment, level of expertise, and position were distinguished. Categorical variables were presented as absolute and relative frequencies, while numerical variables were presented as mean ± standard deviation and/or me-

dian (1st quartile – 3rd quartile). Numerical variables were subjected to the Anderson-Darling normality test, and either the t-test or the Mann-Whitney test was used for potential comparisons of means/medians. The chi-square test was utilized to evaluate possible associations between categorical variables. A significance level of 5% was set, and data were analyzed using R software version 4.0.3.

Knowledge Translation

During the duration of the Academic League, extension practices also occurred at the institution under study. Solidifying the tripod of teaching, research, and extension that constitutes the Leagues, conversation circles involving members, students, teachers, and managers of the institution were held at the end of the analysis and discussion of the collected data. Participation was voluntary, and the results and conclusions of the research were discussed, as well as potential actions for autonomous and institutional intervention to promote the health of the professionals. Observations and key points relevant to the research topic were extracted from these conversation circles, adding to the qualitative nature of the study.

RESULTS

Among the 45 teachers who agreed to participate in the research, 25 (56%) were women and 20 (44%) were men. The maximum age among participants was 67 years, while the minimum age was 31, with a mean age of 47.4 years (Standard Deviation – SD = 9.3 years). Among the sample, 8.8% were over 60 years of age at the time.

Regarding the roles performed, 82.2% worked at the institution as teachers, 2.2% as support teachers, 2.2% as gatekeepers, and 13.3% held administrative positions such as supervision, vice-directorship, and directorship, among others. Fifty-one percent of respondents had worked at the institution for more than

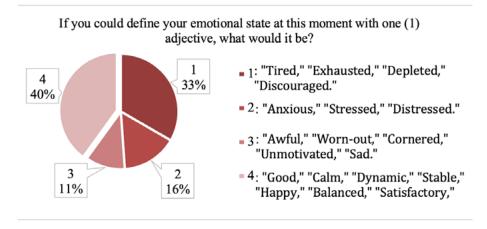
7 years; 22% had worked there between 5 and 7 years; 2% between 3 and 5 years; and 24% between 1 and 3 years. Having less than 1 year of employment at the institution was an exclusion criterion.

Regarding the profile of the respondents, 49% worked exclusively in Secondary Education, 29% solely in Elementary Education, 14% had experience in two educational levels, and 9% were involved in Elementary Education, Secondary Education, and Adult Education. Approximately 44.4% had completed higher education, 37.7% had postgraduate degrees, 13.3% held a Master's degree, and 4.4% had a Doctorate. On average, participants worked 28.2 hours per week (SD = 8.6 hours).

Responses to the open-ended question regarding selfperception of emotional state are described in Figure 1. The responses were categorized into four groups. The first category included adjectives most related to physical exhaustion, the second included those related to psychological exhaustion and the third grouped adjectives described by only one participant each. The fourth category encompassed all adjectives with positive or neutral meanings. When analyzing self-perception of emotional state in conjunction with length of employment at the institution, 54.5% of those who have worked at the school for 1 to 3 years consider themselves tired or anxious; 90% of those who have been there between 5 and 7 years categorized themselves in one of the three groups of negative emotions (1st, 2nd, and 3rd groups); while 47.8% of those who have worked at the school for more than 7 years perceive their emotional state as negatively affected.

Regarding dissatisfaction with the work environment, participants were asked to choose from one of four given options. The results of this analysis are shown in Figure 2 below.

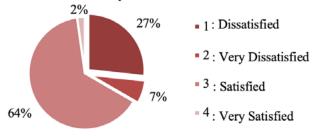
Figure 1. Self-perception of Current Emotional State



Source: The authors

Figure 2. Work Environment Satisfaction Index

Which of the following expressions best defines your feelings about your work environment?



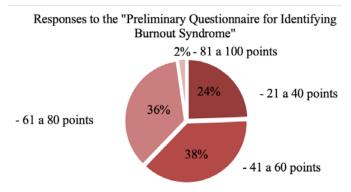
Source: The authors

Of the respondents who have been employed at the institution for 1 to 3 years, only 9.1% reported dissatisfaction with the work environment. This percentage increased with the length of institutional tenure, rising to 50% dissatisfaction among those employed for 5 to 7 years, but decreased again among professionals who have been at the school for over 7 years, with 34.8% reporting dissatisfaction.

When asked, "Do you feel threatened in your work environment?" 84.4% indicated that they do not feel threatened, while 15.6% stated that they do feel threatened.

Regarding the responses on the Preliminary Questionnaire for Identifying Burnout Syndrome, five classifications are made according to the scores obtained: 0 to 20 points: No indication of Burnout Syndrome; 21 to 40 points: Possibility of developing Burnout; 41 to 60 points: Initial phase of Burnout; 61 to 80 points: Burnout begins to set in; 81 to 100 points: You may be in a considerable phase of Burnout. The number of responses in their respective categories is illustrated below in Figure 3, with an average score of 53.4 (SD = 14.9 points).

Figure 3. Classification of Responses to the Preliminary Questionnaire for Identifying Burnout Syndrome



Source: The authors

Starting from the category "41 to 60 points," it is recommended to seek professional help to address symptoms and ensure professional performance and quality of life. Among those who have been at the institution for 1 to 3 years, 54.5% scored 41 or higher, while 90% of those who have been at the institution for 5 to 7 years achieved such a score. Among the group that has worked at the institution for more than 7 years, 78.3% showed altered results on the questionnaire.

DISCUSSION

Of the respondents, 60% used a negatively connoted adjective to describe their current emotional state. In the responses to the Preliminary Questionnaire for Identifying Burnout Syndrome, 76% of the respondents were either in the initial phase or had already developed Burnout. This data indicates that, despite a significant number of participants perceiving their mental health as diminished, there remains a notable quantity that fell into the categories where seeking professional help is recommended but lacked awareness of their condition or knowledge of what Burnout Syndrome entails.

The fact that many workers were still not significantly informed about what Burnout Syndrome is, its symptoms and the available treatments became apparent

during the initial discussions held during the knowledge translation phase, which took place after the collection of the questionnaires.

The knowledge translation phase, during which qualitative analyses of the institution's workers were conducted, occurred on two Saturdays at the end of the academic year 2022. Teachers who voluntarily participated in the discussions were engaged in topics related to their mental health and the challenges or anxieties they face at work. It is important to note that the participants in these discussions were not necessarily the same individuals who answered the questionnaires, as the invitation to participate was extended to all staff members of the institution, and the questionnaire responses were collected anonymously.

In this regard, Burnout Syndrome remains poorly understood by the general public and is infrequently discussed in the literature, particularly from the perspective of legal medicine. The majority of articles stem from studies within the field of psychology, failing to adequately address workers' rights in the context of psychopathology²⁰.

This situation is expected to change in the coming years, as in January 2022, the update to the International Statistical Classification of Diseases and Related Health Problems (ICD) was released, which now includes Burnout Syndrome as an occupational condition in ICD-11, officially establishing the link between work and this illness²³. This change will take effect in Brazil on January 1, 2025, ensuring recognition of pension rights and job security for patients. Furthermore, the new classification adds accountability for companies that do not implement preventive measures and fail to monitor the health and well-being of their employees¹⁴. This update is significant as it secures various rights for workers and enhances the visibility of this psychopathology.

Regarding the factors analyzed by the Questionnaire as potential causes for developing Burnout Syndrome, 66% of respondents reported being satisfied or very satisfied with their work environment, indicating that this is not among the primary influences on their likelihood of developing psychopathologies. This finding corroborates data from the literature, which suggests that other factors are more relevant to the development of psychopathology than the work environment itself.

The duration of employment at the institution emerged as a significant topic concerning the "Satisfaction Index" and responses to the Preliminary Questionnaire for Identifying Burnout Syndrome. The group working at the institution for 5 to 7 years expressed dissatisfaction with the work environment (50%) and was characterized as being in the initial phase or already exhibiting established symptoms of Burnout (90%). While this data is important, it does not allow us to assert a direct relationship between the duration of employment and concerning results in mental health, as the group with more than 7 years of service exhibited milder outcomes, with 34.8% reporting dissatisfaction and 78.3% showing signs of initial or established Burnout.

Furthermore, only 15.5% of respondents reported feeling unsafe in their work environment. This figure is lower than the trend observed in the literature; for example, in a study by Simões and Cardoso (2022), 50.5% of participants reported having experienced physical or verbal aggression in the school environment. This analysis is particularly relevant, as articles in the literature have shown that professionals who feel more insecure in their work environment were predominantly among those exhibiting suggestive symptoms of Burnout Syndrome^{15,16}.

New factors, not previously included in the research and notably absent from the literature, emerged when listening to professionals express their opinions, an-

xieties, and difficulties at work. The primary concern voiced by them was the distress they felt witnessing the challenges faced by their students without being able to intervene effectively. They cited examples of students in need of food or basic school supplies, as well as situations related to the students' mental health, such as anxiety attacks in the classroom and visible signs of self-harm.

This issue was linked by them and by several articles in the literature as a consequence of the COVID-19 pandemic. Significant changes occurred in the patterns and epidemiology of psychiatric disorders due to the pandemic period, a fact that is particularly important in the educational context²². Teachers faced new occupational challenges during the quarantine and after the return to in-person classes, with increased bureaucratic demands and job responsibilities. Additionally, students returned with significant learning deficits, difficulties in maintaining focus and attention, and manifestations of anxiety, depression, and self-harm^{21,22}.

The changes following the COVID-19 pandemic also represent a limitation of the present study, as there is a need for a greater number of manuscripts comparing the characteristics of education workers and students before and after the quarantine period, in addition to meta-analyses that conduct such comparisons of the literature data.

Another limitation of the survey responses was the participation bias, as all professionals in the institution had access to the questionnaire, but only a small portion chose to respond. This may be related to individual personality factors, feelings of insecurity when answering a questionnaire about their workplace, or the physical and emotional exhaustion experienced by the respondents. Moreover, the data may be influenced by the social or cultural tendencies of the indivi-

dual participants, which is a common susceptibility in research that employs questionnaires.

CONCLUSION

The quantitative results highlighted the high prevalence of signs or onset of Burnout Syndrome among public education professionals. In contrast, the qualitative analysis revealed that teachers were struggling to manage and emotionally cope with situations that were outside the scope of their initial training. Thus, there exists a gap in educational policies that would equip and support these professionals in better managing the out-of-class situations directed at them by students.

It is crucial for educational institutions to adopt measures to address this issue, such as emotional training programs and psychological support for education professionals. Additionally, the development of public policies aimed at improving working conditions and increasing salaries is essential, as this could directly enhance the attractiveness of the teaching profession and overall job satisfaction.

In summary, this article underscores the importance of assessing stress and Burnout Syndrome in education professionals, emphasizing the need for recent data, particularly following the pandemic. Moreover, the findings contribute to understanding the factors influencing the mental health of education professionals and incorporate the issues raised by these individuals during the knowledge translation phase. The mental and physical health problems, along with the adverse socioeconomic conditions of students, represent an area that requires further investigation to affirm their significance in the development of Burnout Syndrome.

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THE AUTHORS DECLARE THAT THERE IS NO CONFLICT OF INTERESTS IN RELATION TO THIS ARTICLE.