



Vocal illness of public-school teachers

Adoecimento vocal no trabalho em professores da rede pública de ensino

Enfermedad vocal de profesores de escuelas públicas

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Abstract

Introduction: The prevalence of vocal changes throughout life is higher among teachers when compared to other professions. **Objective:** To analyze the main causes of problems related to vocal illness among teachers at work. **Methods:** This qualitative study used the methodological orientation of action research with field diary and recording, in a school. Thirteen seminars were held with teachers, with online and in-person meetings and an average of 08 to 10 participants. The analysis of the information produced was based on the theoretical framework of Content Analysis. **Results:** There was a higher occurrence of female teachers. Their ages ranged from 30 to 65 years, with a predominance of married marital status, completed higher education, and with training time between 12 and 40 years. Six thematic axes were identified that reflect vocal illness caused by work, with the high rate of stress and inadequate conditions of the work environment being discussed in this study. Stress associated with biological and personal aspects and environmental conditions at school, contributes to the development of vocal problems. Teachers also face a shortage of material resources and precarious working conditions. Teachers experience a process of alienation in the exercise of their profession, but this reality of exploitation is not always transformed. **Conclusion:** The main causes of vocal illness at work are: high levels of stress, lack of care related to the voice, excessive vocal strain, lack of professional appreciation and inadequate working conditions.

Keywords: Voice; Voice disorders; Teachers; Work; Worker's health.

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Resumo

Introdução: A prevalência de alteração vocal ao longo da vida é maior entre os professores quando comparado com outras profissões. **Objetivo:** Analisar as principais causas dos problemas relacionados ao adoecimento vocal dos professores no trabalho. **Métodos:** Estudo de natureza qualitativa, que utilizou a orientação metodológica da pesquisa-ação com registro de diário de campo e gravação, numa escola. Foram realizados 13 seminários com os professores, com encontros online e presenciais e média de 08 a 10 participantes. A análise das informações produzidas se fundamentou no referencial teórico da Análise de Conteúdo. **Resultados:** Houve maior ocorrência de professores do gênero feminino. A idade variou entre 30 e 65 anos, predominância de estado civil casada, formação com nível superior completo, com tempo de formação entre 12 a 40 anos. Identificou-se 06 eixos temáticos que refletem o adoecimento vocal ocasionado pelo trabalho, sendo discutidos neste estudo o alto índice de estresse e condições inadequadas do ambiente de trabalho. O estresse, associado aos aspectos biológicos, pessoais e às condições ambientais da escola auxiliam o desencadeamento de problemas vocais. Os professores contam também com a escassez dos recursos materiais e condições precárias do ambiente de trabalho. Os docentes vivem o processo de alienação no exercício de sua profissão, nem sempre transformando essa realidade de exploração. **Conclusão:** As principais causas do adoecimento vocal no trabalho são: alto índice de estresse, ausência de cuidados relacionados à voz, esforço excessivo da voz, ausência de valorização profissional e condições inadequadas do ambiente de trabalho.

Palavras-chave: Voz; Distúrbios da voz; Docentes; Trabalho; Saúde do trabalhador.

Resumen

Introducción: La prevalencia de cambios vocales a lo largo de la vida es mayor entre los docentes en comparación con otras profesiones. **Objetivo:** Analizar las principales causas de los problemas relacionados con las enfermedades vocales de los docentes en el trabajo. **Métodos:** Estudio cualitativo, que utilizó la orientación metodológica de la investigación-acción con registro y registro de diarios de campo, en una escuela. Se realizaron 13 seminarios con docentes, con encuentros online y presenciales y un promedio de 8 a 10 participantes. El análisis de la información producida se basó en el marco teórico del Análisis de Contenido. **Resultados:** Hubo mayor presencia de profesoras. La edad osciló entre 30 y 65 años, predominantemente casada, estudios superiores completos, con tiempo de formación entre 12 y 40 años. Se identificaron seis ejes temáticos que reflejan enfermedades vocales provocadas por el trabajo, siendo discutidos en este estudio el alto nivel de estrés y las condiciones inadecuadas del ambiente de trabajo. El estrés, asociado a aspectos biológicos, personales y a las condiciones ambientales del colegio, ayuda a desencadenar problemas vocales. Los docentes también se enfrentan a una escasez de recursos materiales y a condiciones ambientales de trabajo precarias. Los docentes viven el proceso de alienación en el ejercicio de su profesión, no siempre transformando esta realidad de explotación. **Conclusión:** Las principales causas de enfermedades vocales en el trabajo son: altos niveles de estrés, falta de cuidados relacionados con la voz, tensión excesiva de la voz, falta de apreciación profesional y condiciones inadecuadas del ambiente laboral.

Palabras clave: Voz; Trastornos de la voz; Docentes; Trabajo; Salud del trabajador.

Introduction

In 2017, Brazil had more than 2.2 million teachers working in basic education. Of this total, 79.3% were working in public schools¹. This category represents professionals with the highest demand for using their voice as their main working tool, making teachers particularly susceptible to Work-Related Voice Disorders (DVRT)^{1,2}.

The prevalence of vocal alterations throughout life is higher among teachers when compared to other professions. In a study conducted in Brazil, 63% of teachers reported having experienced a vocal problem, while the percentage among non-teacher groups was 35.8%³. Similar results were found in research conducted in the United States, with a prevalence of 57.7% among the teacher group and only 28.8% in the non-teacher group⁴.

DVRT (Distúrbio Vocal Relacionado ao Trabalho) refers to any form of vocal deviation related to professional activity that diminishes, compromises, or impedes the workers performance or communication, with or without organic alteration of the larynx¹. This condition can have vocal, emotional, and socioeconomic impacts, leading to temporary or permanent absences and potentially jeopardizing the worker's livelihood⁵. The onset of this disorder is multifactorial, often associated with organizational and environmental work factors, as well as individual factors of the teacher¹.

Among the environmental factors, high noise levels, inadequate school acoustics, poor cleaning standards, and insufficient classroom ventilation are highlighted, all linked to the architectural structure of the premises. Factors related to the organization of teaching work include long working hours, a stressful work pace, and an excessive number of students in the classroom. Additionally, individual predisposing factors include allergies, respiratory tract infections, sex, and age⁶.

As a population with a high prevalence of vocal alterations, speech therapists have conducted research with teachers to better understand these changes. Most of the studies carried out were observational cross-sectional studies, predominantly using a quantitative approach, and featuring descriptive and inferential statistical analyses in their results. These studies primarily investigated clinical aspects such as correlation/association, self-perception, and vocal symptomatology, sig-

nificantly contributing to the situational diagnosis of this reality⁷.

However, they failed to consider a broader view of teacher vocal illness in the workplace, with the potential to implement concrete practices that could transform that environment⁶. In this context, action research emerges as a methodological proposal that aims to identify collective problems, jointly, and propose the search for improvements and solutions for all participants involved in the process.

Given this, there is a clear need to develop research that includes a more systemic perspective on teacher vocal illness, addressing the social, cultural, historical, and political aspects involved in the process of illness. Thus, the objective of the present study is to understand the main causes of vocal illness-related problems in teachers' work⁸.

Methods

This study was approved by the Research Ethics Committee (CEP) of Universidade de Ciências da Saúde de Alagoas – UNCISAL, under opinion no. 4.463.847, in accordance with Resolution No. 466/2012/CNS, which regulates research involving human subjects.

The research took place in a Primary School in the municipality of Maceió- AL. It is noteworthy that the district in which the school is located has 52.73% coverage in primary healthcare, with difficulties in residents access to education, reflected in a score of 0.520 in the Municipal Human Development Index (IDHM) for education. This score points to the socioeconomic indicators of the municipality, highlighting a situation of social vulnerability in this city⁹.

This is a qualitative study that utilizes the methodological approach of action research, as it is designed as a research strategy with a dual purpose: the transformation of the investigated reality and the production of knowledge. In this study, both researchers and participants representing the situation are involved cooperatively, with the participation of those involved in the problem being of utmost importance.

The planning of action research is flexible, and its phases are adapted according to the dynamics and discussions that take place within the group. Information is generated through seminars (meetings), which aim to examine, discuss, and make

decisions regarding the investigation process. In this way, the seminar centralizes all the collected information and discusses its possible interpretations. From the processed set of information, the seminar will produce material, which partially corresponds to theoretical nature (conceptual analysis) and partly to the empirical nature (survey, analysis of the situation)¹⁰.

The seminars were organized according to the four stages presented in the theory: exploration phase, main phase, action phase, and evaluation phase. These meetings aimed to progress from recognizing and problematizing the theme to strategically planning the actions to be developed by the researchers and participants⁸.

In this research, 13 seminars were held with the teaching staff of the school, starting in March 2021 and concluding in December 2022, to achieve all the objectives proposed in the action research, as described in Table 1. Due to the social isolation caused by the COVID-19 pandemic, the first seven seminars were conducted remotely via the Google Meet platform. With the change in health and safety protocols, from the eighth seminar onwards, the meetings were held in person, as schools were permitted to reopen with protective measures in place to control the spread of the coronavirus. During this phase, guidelines related to the objectives and stages of the study were provided, along with the electronic data collection form and the Informed Consent Form (ICF).

It is important to note that during the research, there was also a strike by the municipal education staff for 36 days, as well as a period of heavy rain that caused flooding in several parts of the city, with the school being used as a temporary shelter for residents of surrounding neighborhoods. These events resulted in interruptions to the field research.

The issues discussed in each seminar were carefully analyzed by the researchers and informed of the topics to be addressed in the following seminar. Below is a detailed description of the seminars conducted in this action research.

In the first seminar, a welcoming session was held for all the school staff, marking the return to in-person classes during the ongoing pandemic and implementing the hybrid system for school activities. Following this, a speech was delivered by a psychologist invited by the researcher to reflect on the new work scenario that teachers were facing.

For this session, various images were used to represent the school environment and the current situation, including daily activities of teachers, children playing, parties, meetings, social relationships within the school, online classes, changes in the national context, sick individuals, digital accessibility, the effects of the pandemic on people's health, particularly on teachers, reflecting on how this situation impacts health. After this initial speech, several teachers shared their thoughts and reflections in response to the psychologist's talk.

Finally, the researcher presented the action research proposal (theme, objectives, and methodological approach), addressed any questions, and scheduled a new seminar with the teachers who expressed interest in participating.

In the second seminar, each teacher made an individual presentation, and the researcher explained again the path of the research to be conducted, the reasons for choosing this theme, the understanding of vocal issues in that context, and the identification of the group's expectations for the journey they were about to undertake. This seminar was led by the researcher and used slides and a video depicting the routine and activities within a school environment as resources. The teachers raised several questions about how these collective sessions would unfold, as well as the duration of the research in the school.

Additionally, the group's initial expectations were mainly focused on the implementation of training programs with vocal exercises and techniques during the seminars, linking the vocal illness solely to a lack of knowledge about vocal health.

The third seminar continued with the discussion initiated about the relationship between work and vocal illness, where the teachers reflected on the following points: What do you understand about the voice? What is this voice to you? How do you use your voice? Where do you use your voice? At home or only at work? These questions led to the creation of a collective panel with the reflections of each teacher.

There was a longer break between the third and fourth seminars due to the July school holidays. The teachers requested that the meetings be scheduled only after the return to classes so they could rest and spend time with their families.

In the fourth seminar, the panel created with all the ideas and reflections from the group was revisited. New questions were brought to the group for

discussion, including: How did your voice change with remote teaching? Was there a change in your voice with the return to in-person classes? Did the use of masks cause any vocal impact? What are the causes of vocal illness? What steps do you take in your routine to preserve vocal health? What do you think could be done to improve your overall and vocal health in your daily routine and work process?

In the fifth seminar, the individual presentation within the group was resumed to strengthen the bond between peers and further facilitate the research process. For this, each teacher was asked to bring an object that represented them and explain why they chose it. Among the objects brought were sneakers, a photograph, a hoe, a pet (cat), sunglasses, a suitcase, and a rosary. This activity extended into the sixth seminar due to the meaningful dimension it took on within the group, becoming a moment of sharing, exchanging experiences, and learning about each person's life stories and what led them to pursue a teaching career.

As a result of this dynamic, one of the teachers wrote a poem during the session and shared it with the group.

In the seventh seminar, the discussion on the theme (vocal illness and work) continued, using the classic national song "Cidadão," performed by Zé Ramalho and written by Lúcio Barbosa. After the song, the following questions were discussed: What do you think of the lyrics of this song? What feelings did this song bring to you? Is there any relation between the song and your daily life? And with the teaching profession?

Subsequently, the discussion and exploration of the theme continued through images. To conclude, a relaxation activity was conducted by the researcher, involving breathing exercises and sound emission, with the aim of focusing on the person behind the voice, rather than the voice of the person.

It was also announced that, considering the return of in-person school activities in the municipality, the following seminar would also be in-person. Thus, the eighth seminar marked the first in-person meeting.

The eighth seminar was dedicated to a moment of welcoming the return to in-person meetings, as the group of teachers requested a space to focus on their health. For this purpose, a holistic therapist was invited to lead a workshop entitled "Laughter Yoga."

The ninth and tenth seminars continued the exploration of the theme, consistently revisiting the discussions from previous meetings. This resulted in the creation of a thematic panel with all the main causes identified by the group regarding vocal illness, reflecting on whether these were rooted in individual and/or collective issues.

It is noteworthy that the teachers found it very challenging to identify the causes that triggered their vocal problems. They responded quickly, but their responses often highlighted collective causes, without being able to recognize in themselves the responsibility for the problem or even its resolution.

In the 11th and 12th seminars, the researcher revisited the causes of vocal illness to collectively define strategies and actions to address the problems prioritized by the group. Subsequently, the proposed actions were analyzed for their feasibility, effectiveness, and the participants' ability to implement them.

Between the 11th and 12th seminars, the municipal education staff went on strike, which lasted for 36 days. The movement demanded better working conditions, and a salary increase. The strike ended when the teachers received a 10% salary increase, paid in two instalments, 6% in August and 4% in December. During this period, the teachers requested that no group meetings be held.

During planning and action implementation sessions, teachers consistently expressed dissatisfaction with the working conditions provided. However, despite their dissatisfaction, they did not propose solutions in which they saw themselves as agents of change in this local reality, continually blaming the management (municipal, state, federal) for the situation.

The final seminar (13th) aimed to collectively assess the development of actions carried out by the teachers and their impact, based on the monitoring conducted throughout the entire implementation process, thus concluding the action research cycle.

The completion of the seminars does not signify that the process has ended but merely indicates the closure of the cycle related to the production of the study. However, despite the researcher's availability, the participants chose not to continue the activities after the completion of the initially proposed stages of this research.

Table 1. Summary of seminars held with teachers

| Meeting | Mmeeting modality | Meeting duration | Number of participants | Theme |
|---------|-------------------|------------------|------------------------|---|
| 1 | Remote | 1h | 20 | - Welcoming the group to return to classes, discussing concerns and fears. - Presentation of the research proposal to the group. |
| 2 | Remote | 1h30 | 11 | - Beginning of the situational diagnosis regarding the relationship between work and illness |
| 3 | Remote | 1h10 | 09 | - Continuation of situational diagnosis |
| 4 | Remote | 1h25 | 10 | - Continuation of the situational diagnosis - Problematization of the theme |
| 5 | Remote | 1h20 | 10 | - Sharing the life stories of each teacher - Discussion of the topic |
| 6 | Remote | 1h15 | 10 | - Sharing the life stories of each teacher - Discussion of the topic |
| 7 | Remote | 1h10 | 09 | - Problematization about the theme |
| 8 | In person | 02h | 20 | - Laughter Yoga |
| 9 | In person | 1h20 | 09 | - Problematization about the theme |
| 10 | In person | 1h15 | 09 | - Problematization about the theme |
| 11 | In person | 01h30 | 08 | - Beginning of strategic planning NOTE: Immediately after this meeting, the municipal education workers' strike began |
| 12 | In person | 08 | 1h10 | - Continuation of strategic planning |
| 13 | In person | 10 | 1h30 | - Evaluation of the implementation process - Finalization of the researcher's intervention in the field |

At the end of each seminar, the researcher recorded all relevant information, observations, and reflections regarding the team's work in a field diary. The use of a diary is a technique commonly employed in qualitative research, allowing the participant to organize their ideas and perceptions, initial impressions, express feelings and reflections, as well as serving as a "strategy for collectivizing experiences and analyses" of the diarists-researchers involved in the study¹¹.

Additionally, it is important to note that all meetings (both online and in-person) were recorded, with the participants' consent, to facilitate the transcription of statements and data analysis.

In the final meeting, the questionnaire entitled Vocal Production Condition – Teacher (CPV-P)¹² was also applied, which consists of questions divided into the following dimensions: sociodemographic aspects (interviewee identification, functional situation), aspects of teaching work (characteristics of the school environment and organization of teaching work), vocal aspects (vocal use, habits, and lifestyle), and vocal symptoms through the Voice Disorder Screening Index (IDTV)¹³.

Regarding the study participants, the number of teachers ranged from eight to twenty, all of whom had completed higher education and specialization, with weekly working hours ranging from 8 to 50 hours, most of them having been hired through the Municipal Department of Education. To preserve the participants' identities and the confidentiality of the information, the subjects were identified by the letter P (participant), followed by a number.

The analysis of the information produced during the seminars was based on the theoretical framework of Content Analysis, which comprises three phases: (1) pre-analysis, (2) material exploration, and (3) processing of results, inference, and interpretation.

The first phase involved organizing the material to be analyzed and systematizing the data produced during the meetings. For this, all the seminars were transcribed, followed by a floating reading to become familiar with the material¹⁴.

The second phase consisted of categorizing the obtained data. At this stage, the definition of the categories was classified, highlighting the constitutive elements of a meaningful analogy in the research, i.e., the categories. Thus, categorical analysis in-

volves breaking down and subsequently grouping or regrouping the units of text registration¹⁴.

The third phase refers to the processing of results, inference, and interpretation, aiming to search for the meaning of messages. This is the space dedicated to intuition, reflective and critical analysis¹⁴.

Based on the teachers' participation, transcription of their statements, and repeated readings, the information was grouped into six thematic axes derived from the discussion on the relationship between work and vocal illness, as presented in Figure 1.



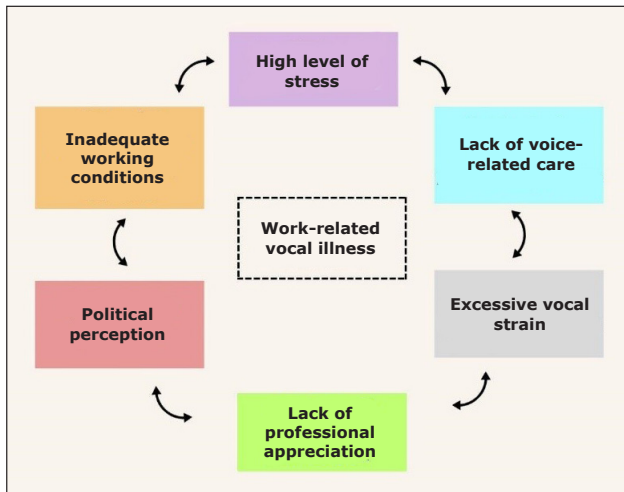
Source: authors data

Figure 1. Thematic axes of action research

Results

The testimonies and discussions held among the teachers participating in this study, during the

seminars, were organized into six thematic axes that represent the main causes of work-related vocal illness, as shown in the graphic representation in Figure 2.



Source: authors data

Figure 2. Causes of work-related vocal disorders

Regarding the preliminary characterization of the participants based on the questionnaire filled out at the last meeting, it was identified that there was a higher occurrence of female teachers. The ages ranged from 30 to 65 years, with a predominance of married individuals, a completed higher educa-

tion qualification, with years of experience ranging from 12 to 40 years, and the majority working exclusively at this school.

For this study, we will discuss the following thematic categories: high-stress levels and inadequate working conditions.

High Stress Levels

This theme emerged after teachers mentioned at various points that vocal illness caused by work is not only due to physical and environmental factors but also emotional issues. They recognized a direct link between stress and symptoms such as hoarseness or even voice loss, demonstrating that work-related stress is directly related to changes in the voice, as observed in the following statements:

P1: *"It's the emotional aspect that mainly causes the problem because the voice even disappears."*

P2: *"If I'm stressed, my voice becomes hoarse."*

P3: *"With stress, I lose my voice right away, but you try to brush it off, count to ten. Because if not, you'll get sick quickly."*

Participant P4 addresses another factor impacting the high-stress levels in her teaching profession, which is the multiple roles women play in contemporary society. As women enter the workforce, they maintain their roles as wives, mothers, and homemakers while also assuming professional responsibilities, splitting their time between domestic tasks and their work, as mentioned in the following:

P4: *"Women always have a longer workday, right? And when you add the profession to it... it's exhausting and very stressful."*

P5 agreed with this view, adding: *"It's even more challenging to be a teacher and a woman. It's complicated to manage everything... very stressful."*

The overload of daily activities combined with work overload reduces rest time, and consequently increases stress, as stated by P3:

"I only work both shifts just to support myself... so I hardly have any time for leisure or fun... just stress."

During the COVID-19 pandemic, this overload became even more evident, as remote work was adopted to continue the school year's activities. Thus, teachers had to familiarize themselves with the virtual environment, adapting their homes to carry out this work, in addition to their existing domestic tasks. P8 elaborates on this:

"Today, during the pandemic, life gets mixed up... you run to the kitchen with a bunch of lesson books... students don't have good access to lessons... At home, everything is so mixed up... I'm connected

all day... It's a huge stress... I think in a face-to-face school setting, it gets a little better..."

P6 reinforces the previous discussion by highlighting that the teaching workload is often insufficient to carry out all the necessary activities within the school, requiring teachers to extend their working hours into the domestic sphere:

"A major stress in the profession is that we take work home. It's horrible because the home environment should be a place of rest and family care..."

In addition, P7 pointed out that, nowadays, the teaching role is broad, requiring teachers to perform various tasks at school, ranging from pedagogical to emotional roles:

"Today, we have to play the role of the family. Many times, with underprivileged students, the teacher ends up taking on multiple roles, and that is exhausting..."

Participant P8 added:

"Guys... I haven't slept properly for a while, a lot of stress. At night, I go to sleep and think about the school problems and the families I attend to and try to help..."

According to another participant, a factor that overburdens the teacher's role in the classroom, and is a significant pedagogical challenge, is the presence of students with different learning levels within the same class. This context requires teachers to develop distinct lesson plans to meet the individual needs of each student, increasing stress levels, as stated by P9:

"Our class has many students, and they are all at different levels... one can read, one doesn't even know the alphabet... it's exhausting... very stressful..."

In this category, it is evident that stress leads to vocal problems among teachers, being triggered by various issues, from work overload to the multiple roles assumed by female teachers in contemporary society.

Inadequate Working Conditions

Viewing the teacher as a worker entail problematizing their workplace and how certain condi-

tions and organization of that environment impact vocal health. This is evident in the following statements from P10, P3, and P11, who identify unfavorable environmental conditions in schools, such as high noise levels, elevated temperatures, and insufficient ventilation, which harm the physical and mental health of teachers and contribute to the onset of vocal problems.

P10: "We've gotten used to the noise of the fan and still use our voices like this, choosing between straining or feeling hot."

P3: "We are going through a situation where our gym is unfit for physical activity. There have even been accidents there... so during break, the children can't go there. They end up staying in front of the classroom... With the noise, we have to close the door, and then we end up raising our voices to compete with them."

P11: "The only way is for us to manage by shouting since we don't have the means."

Linked to these inadequate conditions, teachers constantly face a lack of pedagogical resources, with a shortage of materials that compromise lesson planning, as observed in the statements of P1 and P2.

P1: "Here we don't even have the right to teach with quality, having to create and invent because the necessary materials are lacking to develop your activity..."

P2: "I need materials to implement the ideas I learned in the SEMED training."

P5: "(...) we don't even have the most basic materials... (...) we have to make do with scrap materials. Imagine having a microphone? (...)"

Given this reality, many times teachers purchase materials with their own money to put their projects into practice and engage students, as seen in P5's statement: "... Here we buy materials to work with."

Participant P8 referred to another important point, highlighting the multifactorial causes of vocal illness that stem from their work context, ranging from personal care to environmental and organizational conditions.

"It doesn't help to have a good diet, take care of your voice, if the environment is inadequate and we have to work in more than one school."

Teachers' Perception of Resolving the Identified Problems → High Stress Levels and Inadequate Working Conditions

During discussions on how the group of teachers could collectively seek strategies to minimize or resolve the problems identified in the situational diagnosis, it became clear that teachers do not see themselves as agents capable of transforming the reality in which they are inserted. Instead, they tend to blame external parties, such as the government (municipal, state, and federal) for the difficulties faced in the school environment, the lack of investment in education, and the salary scale being below what the category should receive, as seen in the following statements:

P7: "To improve working conditions, there needs to be more public policies that value and invest money in education."

P12: "If the government officials provided a salary sufficient for us to work only one shift, so we could take care of ourselves in the other hours... that would be ideal, and we wouldn't be so tired and stressed."

P6: "If the Department of Education wanted, if the mayor wanted if the governor wanted, or whoever... there would be a law to take care of the teachers and improve our conditions. But they don't want to know about that."

Alongside this externalization of responsibility for the problems in the education sector, teachers fail to view the union movement as an organization that represents the group of education workers, as indicated by the statements from P2 and P5.

P2: "Today I came to the conclusion that... (...)... A strike to demand better conditions doesn't work... they don't care... they don't care. Whether the class is united or divided, they don't care, they don't even respect us... we can stop... stay six months without classes and nothing will happen... then we make up for it and that's it."

P5: "Really, the strike... collective mobilization is the best way for us to ensure change, but we're tired, so we accept it without mobilizing."

Amidst this context of teacher dissatisfaction with the current reality they live in, and without being able to identify individual or collective strategies within their group, they claim that they

prefer to accept the condition they are in, even if they often disagree with the reality. This can be seen in the following statements:

P1: "When I look at it like this, I think the following... you submit yourself to certain types of work out of necessity. I accept the inadequate conditions of the school because I need to."

P9: "This online system, where the teacher is faced with a screen showing 3 students, knowing there are 25 students in the class... it generates anxiety in you. Then, you go to the meeting and the principal says you must mark attendance for students who aren't there. Then I realize that you simply have to accept it and that's it."

Finally, the teaching profession feels undervalued, not only due to the salary issue, which they believe does not reflect the complexity of their profession but also because they do not feel recognized by society as a relevant profession.

P10: "I enjoy what I do... we face some difficulties... I think we should be more recognized (financially, it's very good), but I'm talking about being recognized by people. Even when you say that your child got into university and chose pedagogy (people make that face). They don't value the teaching profession, which shapes all other professions."

On the other hand, according to P8, having better working conditions is the key factor to feeling valued:

P8: "I don't think the salary is bad... I think our working conditions are bad... we don't have the materials we need."

Discussion

Based on the statements and remarks of the teachers, it is evident that there is a variety of factors that lead to vocal illness. Among workers, teachers are exposed to numerous sources of pressure arising from working conditions, which, combined with high levels of stress, compromise their health.

It is important to note that teaching has been considered a high-risk profession by the International Labour Organization (ILO) since 1981 because teachers are the second most affected professional category worldwide by occupational diseases¹⁵.

The workload overload and exhaustion to which teachers are subjected in the course of their work make them more vulnerable to the onset of stress-related disorders, such as Burnout Syndrome (BS). This syndrome is characterized as an emotional disorder with symptoms of exhaustion and stress resulting from a taxing work situation¹⁶.

Stress, combined with biological, personal, and environmental factors in the school setting, contributes to the onset of vocal problems. However, these factors alone are not sufficient to cause this disorder. Thus, voice disorders are characterized by a generalized and complex causality, which is neither objective nor linear⁵.

The vocal disorder caused by emotional factors such as stress is known as functional dysphonia, presenting various symptoms such as effort when speaking, hoarseness, aphonia, and voice breaks, among others. Psychological variables, such as stress, directly affect an individual's communication patterns, impacting their usual speaking style⁶, as observed in the teachers' statements. Furthermore, the study highlights the loss of functionality in this worker, putting at risk their career and survival as an educator due to the link between their stress and vocal illness⁷.

In addition to the stress previously mentioned, women entering the labor market have accumulated various roles, as their work has been combined with domestic tasks, demanding an intense double or even triple work shift. When analyzing the statements, it becomes clear how the demands of teachers' professional sphere extend beyond the school environment, reaching into the family sphere.

Thus, the high demands placed by schools, combined with the repetitive and exhausting routine of household chores, childcare, and other private life responsibilities, result in a scarcity of time for rest or leisure. Since fulfilling the set of school requirements often necessitates work during non-day hours, including weekends, this leads to conflicts that may result in both psychological and physical illness¹⁷.

Teachers begin to feel a constant professional indebtedness, as continuing to work beyond the formal working hours creates an irregular wake-sleep cycle, leading to partial sleep deprivation and negatively impacting their job performance. It is important to highlight that, in addition to affecting the individual's cognitive process, sleep also interferes with the voice¹⁸. The lack of rest results in less

energy for the body, and since vocal production is a highly energy-consuming activity, sleep deficiency can lead to vocal difficulties, causing the voice to wake up hoarser, more fatigued, and weaker¹⁹.

As observed in the statements, this workload overload for teachers became even more evident during the COVID-19 pandemic, as remote teaching, conducted from home offices, was the alternative to maintaining classes. This shift required new teaching skills and methods to adapt to this new context.

In a study conducted with 15,654 teachers from public education networks in Brazil, 82.4% stated that the number of hours dedicated to preparing non-face-to-face lessons increased during the pandemic, showing that they required a greater workload in remote teaching²⁰.

Furthermore, performing school tasks at home not only impacts on the workload and health but also leads to a blurring of the boundaries between professional and personal identity, as activities overlap in all the environments in which teachers work.

In turn, by observing the statements, the teachers claim that they take on roles with students that they do not consider to be their own, but rather those belonging to the family domain, which intensifies the overload of teaching work¹⁸.

The lack of involvement from students' families in the management of school activities—whether regarding encouragement to study or addressing poor behavior—has been reported. In a study conducted with primary education teachers in Minas Gerais, they stated that this negligent attitude from families towards the children's school life is often a result of family disintegration, which in turn impacts student learning. In this context, teachers end up performing duties that are not their responsibility, leading to overload and conflict²¹.

This set of activities, which echoes in the physical, vocal, and mental fatigue of the teacher, leads to a decline in the overall functioning of the individual, reducing their ability to propose solutions to problems. Working under pressure ultimately hinders the development of self-protection tools for health²².

Given this teaching reality, it is essential to characterize the risks present in the school environment to propose actions that will foster a healthy environment, enabling teachers to perform their profession effectively. According to the partici-

pants' statements, the multifactorial nature of their work environment poses a risk for the development of vocal disorders.

Working in a noisy environment with high temperatures or in contact with irritative chemicals requires greater effort to concentrate, and consequently, the longer the workday, the greater the vocal strain⁵.

Moreover, the presence of noise is linked to a greater intensity of voice use, resulting in a sonic competition that generates vocal strain and overload of the vocal apparatus, which in turn causes vocal alterations. This association between noise and voice is widely described in the literature²³.

It is also worth noting that the school where the research was conducted is located in a hot climate, highlighting the need for an appropriate temperature for both teaching activities and student learning. In a study conducted with primary school teachers, they reported greater complaints regarding uncomfortable temperatures. This lack of thermal comfort is a recurring issue among this professional category, with heat being one of the major stressors in the school environment²³.

In addition to the already mentioned poor working conditions, teachers must contend with the scarcity of material resources, as reflected in the discussions from the seminars held. The lack of pedagogical resources represents a stressor, as it hinders teachers from successfully carrying out their work²¹. Furthermore, the inability to implement school planning due to the lack of ideal conditions for its execution causes distress among teachers, as they are constantly held accountable¹⁸.

Thus, it becomes apparent that education encompasses specificities that contribute to the prevarication of teaching work, often rendering the struggles and realities of this professional class invisible. The intensification of teaching activities and responsibilities, combined with low wages, are factors that further exacerbate this precariousness²⁴.

Considering the discussions and proposals for planning changes to this reality, it is evident that teachers experience a process of alienation in the practice of their profession. Although they propose the creation of public policies aimed at education as a strategy to change their current situation, it is asserted that public policies in the era of globalization further undermine the teaching profession. These policies lead to changes in working conditions, including increased administrative demands,

which contribute to political weakening through the absence of a collective struggle for their rights²⁵.

In this context, teachers adopt one of two positions: they either resist or give up. Many ultimately become complacent, perpetuating the system in which they are embedded and accepting the conditions imposed upon them. They fail to identify themselves as professionals and citizens capable of acting as transformative agents in the face of changes brought about by educational public policies²⁵.

Workers do not always succeed in transforming the exploitative reality in which they are immersed. Currently, both teachers and students are being shaped to serve the demands of the labor market and capital, functioning as a group that neither teaches nor learns to be critical or to think independently. This results in an alienation of teaching work, devoid of reflection on its purpose and practice²⁶.

Linked to this, although salary increases are not the sole determinant of valuing this professional category, they serve as a form of recognition. Teachers often need to take on multiple work shifts to increase their income, which frequently leads to health problems for these professionals. This intense workload, beyond the school environment, contributes to the progressive devaluation of the teaching profession in society when compared to other professional categories²⁷.

Teachers become part of a “socially undervalued class,” yet they must recognize the significance of their role in society and strive to regain this recognition²⁸. Organizing collectively through unions to (re)claim this social recognition, as well as engaging in a continuous struggle to seek improvements in their professional practice, was not identified as an effective plan by the participants of this research.

Some aspects of trade unionism in the country are analyzed, highlighting that, in recent years, there has been a loss of credibility among most of the population regarding institutions representing collective interests (the unions), which often fail to prioritize the primary desires of a class. Unions need to reinvent themselves to attract new members so that this movement can work effectively for workers’ interests.

The study presented certain limitations in proposing interventions to address the issue of work-related vocal illness. Despite the critical reflection that occurred during the research process,

no changes in attitudes, proposals, or collective decision-making were identified among the group of teachers to implement new practices within that work context.

Conclusion

The primary causes of vocal illness in the workplace were categorized into thematic axes: high-stress levels, lack of vocal care, excessive vocal strain, lack of professional recognition, political perception, and inadequate working conditions.

High levels of stress stem from emotional challenges, the multiple roles women fulfil in contemporary society, and the overload of teaching responsibilities. Meanwhile, inadequate working conditions arise from excessive noise levels, elevated temperatures, insufficient ventilation, and a lack of pedagogical resources.

It is noteworthy that action research is a methodology that facilitates critical and collective dialogue, enabling the identification and examination of vulnerabilities related to the reality of vocal illness among teachers.

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