



# Voice, monotony, and autonomy in teachers' work setting

## Voz, monotonia e autonomia no ambiente de trabalho de professores

## Voz, monotonía y autonomía en el entorno laboral docente

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### Abstract

**Introduction:** the relationship between voice and work is the subject of constant study. There is still no investigation into the relationship between monotony and autonomy and vocal complaints. **Objective:** to investigate the relationship between monotony and autonomy in the workplace with the emergence of vocal complaints among teachers. **Method:** exploratory, qualitative and descriptive study, carried out through a focus group considering the novelty of the study theme. Ten teachers screened in a previous study with suspected voice disorders using the Voice Disorder Screening Index, who indicated a perception of monotony and lack of autonomy in the work environment using the Teacher Vocal Production Conditions instrument were invited to participate. Seven teachers accepted and two focus groups were conducted. Triggering questions about monotony and autonomy in the workplace were asked. After content analysis, four main categories and subcategories of analysis were created. **Results:** participants discussed issues related to broken expectations about work, frustrations, routine and daily challenges. Considerations about the voice were related to repetitive use for long periods and an environment with unfavorable acoustics. Complaints such as hoarseness and low vocal projection were cited. **Conclusion:** monotony in the work environment was perceived as something repetitive and the relationship with the emergence

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Received: 09/03/2024

Accepted: 30/05/2024



of vocal complaints may be related to situations of intense and constant use of the voice. The lack of autonomy seems to cause monotony and, consequently, demotivation, frustration with one's career and illness, including voice disorders.

**Keywords:** Faculty; Voice; Voice Disorders; Occupational Health; Working Conditions; Mental Health.

### Resumo

**Introdução:** a relação entre voz e trabalho é objeto de estudo constante. Ainda não há investigação sobre a relação de monotonia e autonomia com queixas vocais. **Objetivo:** investigar a relação entre a monotonia e a autonomia no ambiente de trabalho com o surgimento de queixas vocais entre professores. **Método:** estudo exploratório, qualitativo e descritivo, realizado a partir de grupo focal considerando o ineditismo da temática do estudo. Dez professores triados em estudo anterior com suspeita de distúrbio de voz pelo Índice de Triagem de Distúrbio de Voz, que indicaram percepção de monotonia e falta de autonomia no ambiente de trabalho por meio do instrumento Condições de Produção Vocal de Professores foram convidados a participar. Sete professores aceitaram e foram conduzidos dois grupos focais. Perguntas disparadoras sobre monotonia e autonomia no ambiente de trabalho foram feitas. Após análise de conteúdo, foram criadas quatro categorias principais e subcategorias de análise. **Resultados:** os participantes debateram questões relacionadas à quebra de expectativas sobre o trabalho, frustrações, rotina e desafios diários. Considerações sobre a voz estavam relacionadas ao uso repetitivo e por longos períodos e ambiente com acústica desfavorável. Queixas como rouquidão e baixa projeção vocal foram citadas. **Conclusão:** monotonia no ambiente de trabalho foi percebida como algo repetitivo e as relações com o surgimento de queixas vocais podem estar relacionadas a situações de uso da voz de forma intensa e constante. A falta de autonomia parece ocasionar a monotonia e, conseqüentemente, desmotivação, frustração com a carreira e adoecimento, dentre eles, o distúrbio de voz.

**Palavras-chave:** Docentes; Voz; Distúrbios da Voz; Saúde Ocupacional; Condições de Trabalho; Saúde Mental.

### Resumen

**Introducción:** la relación entre voz y trabajo es objeto de constante estudio. Todavía no se ha investigado la relación entre monotónia, autonomía y quejas vocales. **Objetivo:** investigar la relación entre monotónia y autonomía en el lugar de trabajo con la aparición de quejas vocales entre docentes. **Método:** estudio exploratorio, cualitativo y descriptivo, realizado a través de un grupo focal considerando la novedad del tema de estudio. Se invitó a participar a diez docentes evaluados en un estudio previo con sospecha de trastornos de la voz mediante el Voice Disorder Screening Index, que indicaron una percepción de monotónia y falta de autonomía en el ambiente de trabajo utilizando el instrumento Teacher Vocal Production Conditions. Siete profesores aceptaron y se realizaron dos grupos focales. Se formularon preguntas desencadenantes sobre la monotónia y la autonomía en el lugar de trabajo. Luego del análisis de contenido, se crearon cuatro categorías y subcategorías principales de análisis. **Resultados:** los participantes discutieron cuestiones relacionadas con expectativas rotas sobre el trabajo, frustraciones, rutina y desafíos diarios. Las consideraciones sobre la voz estuvieron relacionadas con el uso repetitivo por períodos prolongados y un ambiente con acústica desfavorable. Se citaron quejas como ronquera y baja proyección vocal. **Conclusión:** la monotónia en el ambiente laboral fue percibida como algo repetitivo y la relación con la aparición de quejas vocales puede estar relacionada con situaciones de uso intenso y constante de la voz. La falta de autonomía parece provocar monotónia y, en consecuencia, desmotivación, frustración con la propia carrera y enfermedades, incluidos trastornos de la voz.

**Palabras clave:** Docentes; Voz; Trastornos de la Voz; Salud Laboral; Condiciones de Trabajo; Salud Mental.

## Introduction

The voice is essential to various occupations, such as singers, religious leaders, television hosts, and teachers. Approximately one third of workers consider the voice a main tool of their trade – these are named occupational voice users<sup>1</sup>.

Occupational voice disorders (OVD) have been present in everyday work and studied by health professionals (e.g., otorhinolaryngologists and speech-language-hearing therapists) for a long time. However, the Brazilian Ministry of Health only recognized OVD in 2018 and included it in the list of occupational diseases in 2020<sup>2</sup>. However, this list was revoked following its publication and several entities fought to maintain the progress made with the publication of the list of diseases. Recently, through Ordinance GM/MS n° 1,999, of November 27, 2023, the list was once again updated, including, once again, vocal disorders of occupational origin in the list of work-related diseases, which represents an advance in this area<sup>3</sup>.

According to the OVD Protocol, risk factors associated with the use of the voice – e.g., environmental (noise and inadequate ventilation) and organizational working conditions (long workdays without breaks for resting) – are aggravators that may trigger the condition<sup>2</sup>.

Even before the publication of the said document, various studies researching OVD have approached teachers. One third of 6,510 teachers in the 2019 study by Santos<sup>4</sup> reported limitations at work due to voice disorders. A recent meta-analysis pointed out that being a teacher increases the odds of OVD diagnosed with auditory-perceptual judgment and laryngeal examination<sup>5</sup>.

Some studies emphasize the risk factors present in teachers' work settings (especially the noise inside and outside the classroom) and work organization (e.g., violence and excessive work)<sup>6</sup>.

However, some conditions and aspects that are part of their work organization, such as their autonomy and monotony at work, have not yet been addressed in publications on the topic.

Previous studies interviewed teachers, some of whom reported their perception of autonomy and monotony in teaching, which raised the interest to relate such aspects to the development of voice problems in educators<sup>7</sup>.

Hence, this study innovates by bringing up yet another element that may be related to the com-

plexity of voice disorders in teachers. It aimed to investigate the relationship between monotony and autonomy at work and the onset of voice complaints in teachers.

## Method

This descriptive qualitative exploratory study was approved by the Research Ethics Committee of Universidade Estadual de Campinas under number 4.429.443. All participants were informed about the study procedures and signed an informed consent form.

The first study stage was the focus group meeting. This qualitative data collection method is based on dialogue and collective construction based on the participants' experience and aims to collect hypotheses on the topic from the group's perspective<sup>8</sup>. Using this method is justified by the lack of previous literature reporting the relationship between voice disorders and the organizational aspects addressed in this research – i.e., teachers' autonomy and monotony in the work setting<sup>9</sup>.

Ten municipal schoolteachers from the city of Campinas were invited to make up the focus group. They had been previously screened with the Voice Disorder Screening Index (ITDV, in Portuguese) due to the suspicion of voice disorders and reported the perception of monotonous work when answering the Voice Production Condition – Teachers (CPV-P, in Portuguese)<sup>10,11</sup>. Seven of them accepted the invitation and comprised the total research sample. The subject inclusion criteria were participation in the previous study<sup>7</sup> and the availability in the schedule to participate in the present one.

Because of the COVID-19 pandemic, the group met via video conferences in March 2021. They were divided into two groups, and each meeting lasted 60 minutes. The research authors mediated all meetings. Upon the participants' consent, the content of the meetings was recorded and fully transcribed. At the beginning of the conference, participants were informed that the theme would be monotony and autonomy, considering their previous responses to the previously applied protocol.

The following triggering questions were used: “*What makes you interpret your work as monotonous or non-monotonous?*”, “*What makes you interpret your work setting as favorable or not to the workers' autonomy?*”, and “*Do you consider*

that the variables (monotony and autonomy) are related to voice complaints? Why?”. As leaders of the focus group, the team of researchers guided and mediated the discussion amongst the participants.

Their statements were analyzed with thematic-categorical content analysis. According to Minayo (2001), this technique makes it possible to “discover core ideas present in communication, whose presence or frequency has a significance to the analytical objective in question”. The content of the interviews was organized into categories and analyzed, and its repetitions were observed and presented in the Results.

In the first analysis phase, the corpus was prepared with the transcription of the participant’s statements – which used the Transcribe website, controlling the video play speed, and making it easier to write down the statements and ascribe them to the subjects. In the second phase, the col-

lected material was explored by transcript reading, starting to form the analysis categories based on the most cited topics. Lastly, all collected statements were categorized, and their core ideas were compared with findings in the literature. All these stages were carried out together by the study authors.

To conceal the research subjects’ identities, interviewees were identified as SX, in which X varied from 1 to 7 for each participating teacher. The study sample had four women and three men, aged 39 to 55 years. They had been teaching for a mean of 18 years, with a minimum of 10 and a maximum of 34 years of experience, all of them in early childhood and/or elementary school.

Chart 1 presents information on the participants and group subdivision, constituted according to their common availability to participate in the study.

**Chart 1.** Characterization of the sample

Group 1	Group 2
S1, female, 44 years old, teaches in kindergarten and elementary school	S5, female, 53 years old, teaches in kindergarten and elementary school
S2, male, 39 years old, teaches in elementary school since 2009	S6, female, 43 years old, teaches in middle school (8th and 9th grades)
S3, male, 55 years old, with a bachelor’s degree in physical education, has been teaching in elementary school for more than 30 years	S7, female, 41 years old, education coordinator with experience as a teacher
S4, male, 39 years old, with a bachelor’s degree in physical education, teaches in an elementary school	

Two participants had other occupations besides teaching that required them to use their voices: S3 was a lawyer, and S4 was a singer. S7 was not teaching at the time of the study; she was in an administrative position, instead (education coordinator). Given the positive response to the previous study and the inclusion criteria, teaching

and historical experience obtained by the screening, she remained in this study.

Excerpts of the collected statements were selected to exemplify each analysis category and subcategory, along with the subject’s identification. The categories and subcategories are described in Chart 2.

**Chart 2.** Analysis categories and subcategories defined based on the transcriptions of the focus group

Categories	Subcategories
Monotony	<ul style="list-style-type: none"> <li>• Definitions</li> <li>• Subjectivity</li> </ul>
Autonomy	<ul style="list-style-type: none"> <li>• Definitions</li> <li>• Subjectivity</li> <li>• Self-criticism</li> </ul>
Work	<ul style="list-style-type: none"> <li>• Expectations</li> <li>• Frustrations</li> <li>• Gender</li> <li>• Barriers and facilitators</li> <li>• Routine and non-routine</li> <li>• Work organization</li> </ul>
Work-voice relationship	No subcategory

## Results

The results encompass representative statements, which illustrate the categories and subcategories shown in Chart 2.

### Category: Monotony

#### Definitions

Both groups were invited to try to define what monotony is, without researching any source, such as dictionaries or the Internet.

*“The image of monotonous that occurs to me is that of someone dragging their feet, you know? Something they can't manage to do because it's too heavy, too difficult; it just doesn't flow; it's something monotonous.” S6*

*“Monotony is related to a boring, stressful, exhausting routine, so, I thought of it in this sense.” S7*

#### Subjectivity

Some participants expanded their explanations on how they viewed routine.

*“I think it's a set of situations that leads to certain moments in which we feel monotonous or act monotonously.” S3*

*“Our occupation isn't monotonous, but it has monotonous activities – I don't know if activities would be the word. As I teach small children, I'll have monotonous activities, which doesn't mean that the whole day is monotonous or that the occupation is monotonous.” S5*

### Category: Autonomy

#### Definitions

As with monotony, the teachers were asked to define what autonomy is.

*“Autonomy is when you're confident that you can change something; ‘I can change this or that without getting in trouble’, or ‘I'll not do it this way, I'll do it that way, and I know I can, I'm positive about it’.” S5*

#### Subjectivity

When they were asked to define the terms, some participants spoke further on the subjectivity of the concept.

*“We have autonomy; there are the content and the goals, which we must follow, there is a framework that outlines our work to some extent, but we give it our touch.” S3*

#### Self-criticism

In the attempt to define autonomy, S4 made a self-criticism to which the other participants agreed.

*“I should make a self-criticism, I criticize myself because sometimes I don't use my autonomy; instead, I get into the routine and reinforce the monotony. For instance, I could take my students to read beneath a tree, which would be autonomous, it would break the routine. But then I think, “Wow, I'll have to take the whole class, go down the stairs and through the hallways; some will run ahead, and they may even fall”; so, I get discouraged and stick to the routine. We also contribute a little to the routine.” S2*

### Category: Work

#### Expectations

G1 addressed frustrated expectations in the teaching career. The teachers with bachelor's degrees in physical education stated that their training was faulty in that it did not consider classroom reality, which may have led to frustration. On the other hand, S1, with a degree in education, had the opposite opinion.

*"Since we left college, we try to put into practice the things we learned and find out that things are not exactly as they said; we have to construct ourselves as teachers, it's a frustration that I have."* S4

*"That's what I studied for, so I already figured what the routine would be like; maybe that's why. It wasn't much of a surprise to me, I already imagined what awaited me."* S1

#### Frustrations

G1 also reported their career frustrations regarding monotony at the workplace. S4 pointed out other activities that, like school, take much of his daily time (in his case, riding his bicycle) but do not frustrate him, although they do not provide any income. Hence, he continues in his teaching occupation, despite the frustration.

*"I'm not frustrated at all when I'm on my bike. I do it because I like it; I ride it for 4, 5, or 6 hours, it doesn't matter for how long, but I go on because I'm not frustrated. In school, though, I get very frustrated. [...] I either teach and earn my pay or do something I enjoy without making any money, although it's easier for me"* S4

#### Routine and non-routine

Both groups stated that repetitive tasks for long periods of their teaching career, at the same place, and following the same system, schedules, rules, and content makes daily work monotonous.

*"[...] it is routine, the same thing every day, a school routine that is often inflexible, which depends on various situations."* S7

#### Gender

G1 hypothesized a possible relationship between gender and work. They pointed out that monotony is present at work for both men and women, but that some occupations (such as teaching) are seen as "female occupations". G2, which

only had women, did not mention gender issues in their meeting.

*"I remember a classmate that wanted to study Education when we were getting prepared to take college admission exams, and everyone questioned him, 'What? You're studying Education?'. [...] 'You have to be an engineer', 'You have to be a doctor', 'you have to be a lawyer'; if he didn't go for any of these, he would not get any social support."* S3

#### Barriers and facilitators

Both groups reported various barriers, such as violence, difficulties related to the school architecture, and the voice itself, besides the students' lack of interest.

*"There's a specific aspect there, physical education classes take place in an arena, so the acoustics are awful. [...] It's a lot of noise, I can't teach when they're doing any physical activity unless they all stop and look at me; they even have to read lips to understand me."* S6

*"For example, I've worked in this school for 29 years, but it doesn't have a physical education facility [...] We used to work in the woods next to the school, but now gangs and militia have taken over the place. I don't have working conditions inside the school, no room; perhaps an outdoor space for the classes; but there's also the issue of physical education teachers' physical fatigue."* S3

The teachers also stated that the interaction with students and the energy exchanged with them refreshes the monotony, making daily work easier.

*"I think the school is, despite the rules, the regularity, everything always much the same, I think each child, each person we interact with brings new energy, right? So, it's no longer monotonous. So, in school, as there's this great exchange between teachers and each student, whom each time brings something new to us, it's no longer monotonous, that's what I think."* S1

#### Work organization

The structure of the school organization, always with the same schedules, rules, and topics, makes the day at school monotonous for teachers. References to the schedule and routine were recurrent in both meetings.



*"Even though they're different children over the years, sometimes different teachers and schools, the system is the same, you get in and leave at a certain time, the same number of classes, the same content. As time goes by, it ends up getting monotonous, very boring and repetitive, indeed." S4*

### Category: work-voice relationship

The groups were encouraged to try to relate everything that had been discussed about the work routine to their development of voice complaints. Both stated that repeated activities in combination with factors such as voice projection and excessive workloads lead to voice problems.

*"In my case, I think I have a low voice, and to give orders, commands, explain, read something to a classroom with 30 (students) I need to speak louder than I usually do, and my voice gets tired. So, in that case, it has to do with the routine, right? [...] I say, "Hey, guys", "quiet", "here", "pay attention". In this specific sense, I have to work with a louder voice than I usually speak. That's when I think I begin to feel my voice tired, and that has to do with monotony, right?" S2*

*"I thought about when I worked a double shift, in two schools, and had to save my voice not to wear it out, otherwise I wouldn't make it to the end of the day, I'd be too tired. [...] For example, on Friday, I was so tired I couldn't talk to the people I wanted to after work; that's the bad part." S1*

## Discussion

Voice disorders are known to be multifactorial and can be related to individual, environmental, and work organization characteristics. All study participants were screened due to the suspicion of voice disorders and reported the perception of monotonous work in their occupation. So far, no other studies have been found relating monotony at work to the development of voice disorders.

Monotony can be defined as a "lack of variety", and the participants' definitions agree with the formal one, with additional practical examples from daily work, such as the regular schedule to enter and leave school and the didactic content taught in the classroom. At the same time, participants mentioned other daily leisure activities that are repetitive (same place, same duration, same action) but are not seen as monotonous and do not cause the frustration experienced in teaching.

The participants' perception of the relationship between voice and monotony at work was demonstrated in repetitive activities, such as constantly calling students' attention. This demands an intense use of the voice, which is known to be a causal factor of voice disorder<sup>14</sup>. Reflections about these activities indicate that they are related to the little importance given to the teacher's occupation, as society and students give them little recognition, besides situations of violence at school. Previous studies have mentioned these factors<sup>15-17</sup>. The participants' statements indicate that the work setting must be favorable to an adequate use of the voice, minimizing these workers' exposure to voice disorders. It can be also hypothesized that doing monotonous activities may lead to fatigue, tension, and deteriorating mental health, causing the onset of voice complaints and, consequently, voice disorders.

The analysis of the participants' statements about what they understand as autonomy and how it is related to their work showed that a lack of autonomy can lead to monotony. Situations related to work organization, such as the difficulty in innovating activities either because they had to follow a pattern or had operational issues, usually make participants feel non-autonomous and state that it leads to perceived monotony.

The literature has also described organizational work factors and interpersonal relationships as important factors that cause or maintain voice disorders<sup>18</sup>. Autonomy and the resulting monotony are examples of such factors and seem to integrate the complex aspects involving the onset of voice disorders.

Workers do not get sick for a single reason; rather, it is due to multiple factors, and may often have simultaneous psychic and physical causes<sup>19</sup>.

Two participants were physical education teachers, which may have enhanced the perception of monotony in the study group. Our hypothesis for this perception is that physical education teachers who are outside the school as a workplace often have a more dynamic routine, with variations of sports, training and environments (gyms, training complexes, outdoor activities, rehabilitation centers and others), while in the school environment, activities are often limited to the classroom and court - if this space is available, since some institutions do not have the proper infrastructure.



Doing activities that require their voices in outdoor spaces (such as sports fields) or with poor acoustics (such as arenas) contribute to the appearance of voice complaints. Moreover, one of these participants reported frustration with his career as an elementary school teacher. These reports reveal a combination of unfavorable environmental factors and subjective personal issues<sup>20</sup>.

School architecture is an extensively studied topic around the world and it is known that inadequacy in the architectural project related to the environment can lead to a series of barriers and health complaints, including vocal and auditory complaints, difficulty in mobility in the environment, among others<sup>21</sup>. In the speech of participants S3 and S6 these situations are evident. Thus, this factor is added in the construction of the complexity of what is experienced as a monotony and lack of autonomy in the school environment.

One participant was performing administrative functions at the time of the focal group, which can differentiate the vocal demands of these participants at that time, however, their lines indicated the perception of the school routine as something “stiffened”.

Teachers in this study pointed out various conditions that compromise their health, such as violence in school, lack of breaks to rest, family problems, and inadequate classroom acoustics, which reflects the complexity of the issue and the consideration of various aspects that cause them to get sick.

The work of speech-language-hearing therapists in occupational health aims to analyze working conditions, focusing beyond the occupational setting. They must also understand teachers' everyday lives outside their work, analyzing their wishes, anguishes, frustrations, and experiences. Working in health organizations, the speech-language-hearing therapists can participate in the search of how organizational and environmental issues may be contributing to the appearance of complaints related to communication in local workers and acting on this issue, through the proposition of simple actions that may be resolved in the school itself or more complex, which may require actions of the municipal departments of education, for example<sup>21</sup>.

Like every study, ours also has limitations. Although participants answered the questionnaire that identified the perception of monotony and lack of autonomy in developing their professions before

the pandemic, the focal group took place during the pandemic period, which directly affected many work organizations, in particular, in particular, of the professions linked to teaching. This fact may have favored the increase in the perception of the difficulties cited by the participants at the time of the research.

## Conclusion

Participants understand monotony as something repetitive, and its relationship with voice complaints may be related to situations when the voice is used intensely and constantly in their teaching routine. The lack of autonomy seems to be a factor that may cause monotony and, consequently, discouragement, frustration with the career, and sickness, including voice disorders.

Including these aspects of work organization (not much investigated before) in the assessment of teaching as an occupation may help perceive factors that contribute to the onset and continuity of voice problems.

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