



VOCAL SYMPTOMS AND COMPLAINTS RELATED TO THE WORK OF PUBLIC SCHOOL TEACHERS

SINTOMAS VOCAIS E QUEIXAS ASSOCIADAS AO TRABALHO DE PROFESSORES EM ESCOLAS PÚBLICAS

SÍNTOMAS VOCALES Y QUEJAS RELACIONADAS CON EL TRABAJO DE PROFESOR DE ESCUELAS PÚBLICAS

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RESUMO

Objetivo: identificar a prevalência de sintomas vocais e outras queixas associadas à atividade de professores em escolas públicas. **Método:** trata-se de um estudo descritivo realizado no período de agosto de 2018 a julho de 2019, em três escolas públicas de ensino fundamental, na cidade de Maceió/AL. Os professores responderam a um questionário com a identificação da idade, sexo, carga horária, sobre a voz e outras queixas associadas ao trabalho do professor e sobre o ambiente escolar. **Resultados:** a amostra por conveniência foi de 81 participantes. Com predominância do sexo feminino (86,5%), carga horária semanal de 40h (43,20%) e tempo de profissão de 11 a 20 anos. Evidenciou uma alta porcentagem de professores com alterações vocais (79,51%), sendo mais comuns: falha e dor ao falar e rouquidão; 24,69% nunca buscou ajuda especializada. Dos fatores ambientais a poeira foi o mais citado (81,48%). **Conclusão:** apesar do alto número de educadores com disfonia, foi baixa a procura por tratamento, acredita-se que ocorra adaptação à situação, por meio de ajustes vocais negativos, havendo negligência dos sintomas. Assim, são necessárias ações de promoção à saúde vocal, que resultem na conscientização do problema e melhora da voz do docente, com consequente melhora no ensino e menos falta ao trabalho.

Palavras-chave: Docentes; Cordas Vocais; Sintomas.

ABSTRACT

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Objective: to identify the prevalence of vocal symptoms and other complaints associated with the activity of teachers in public schools. **Method:** it is a descriptive study carried out from August 2018 to July 2019, in three public elementary schools, in the city of Maceió / AL. The teachers answered a questionnaire with the identification of age, sex, time shifts, about the voice and other complaints associated with the teacher's work and about the school environment. **Results:** the convenience sample was 81 participants, with a predominance of females (86.5%), a weekly workload of 40 hours (43.20%) and time in the profession from 11 to 20 years. It showed a high percentage of teachers with vocal disorders (79.51%), being more common: failure and pain when speaking and hoarseness; 24.69% never sought specialized help. Of the environmental factors, dust was the most cited (81.48%). **Conclusion:** despite the high number of educators with dysphonia, the demand for treatment was low; it is believed that adaptation to the situation occurs, through negative vocal adjustments, with neglect of symptoms. Thus, actions to promote vocal health are necessary, which result in awareness of the problem and improvement of the teacher's voice, with consequent improvement in teaching and less absence from work.

Keywords: Teachers; Vocal Chords; Symptoms.

RESUMEN

Objetivo: identificar la prevalencia de síntomas vocales y otras quejas asociadas con la actividad de los docentes en las escuelas públicas. **Método:** este es un estudio descriptivo realizado entre agosto de 2018 y julio de 2019, en tres escuelas primarias públicas, en la ciudad de Maceió / AL. Los maestros respondieron un cuestionario con la identificación de edad, sexo, carga horaria, sobre la voz y otras quejas asociadas con el trabajo del maestro y sobre el entorno escolar. **Resultados:** la muestra de conveniencia fue de 81 participantes. Con predominio de mujeres (86.5%), carga de trabajo semanal de 40 horas (43.20%) y tiempo de profesión entre 11 y 20 años. Mostró un alto porcentaje de docentes con trastornos vocales (79.51%), siendo más común: falla y dolor al hablar y ronquera; 24,69% nunca buscó ayuda especializada. De los factores ambientales, el polvo fue el más citado (81.48%). **Conclusión:** a pesar del alto número de educadores con disfonía, la demanda de tratamiento era baja, se cree que la adaptación a la situación ocurre, a través de ajustes vocales negativos, con negligencia de los síntomas. Por lo tanto, las acciones para promover la salud vocal son necesarias, lo que resulta en crear conciencia sobre el problema y mejorar la voz del maestro, con la consiguiente mejora en la enseñanza y menos ausencia en el trabajo.

Palabras clave: Docentes; Cuerdas Vocales; Síntomas.

INTRODUCTION

Good communication between the teacher and the student is an essential element for success in the learning process, since it guarantees the passage of knowledge in the most faithful way possible. Thus, it is known that changes in the teacher's voice can compromise teaching-learning relationships, since understanding the message can be difficult.¹

Dysphonia can be defined as any difficulty in vocal emission that prevents the natural production of the voice.² Research has revealed that teachers are the category most susceptible to the appearance of dysphonia, when compared to

other categories of voice professionals.²⁻³ Thus, the fact that the teacher is part of an important risk group for the development of voice disorders is supported.⁴⁻⁵

The most common voice disorders in teachers are: hoarseness, throat clearing, persistent cough, vocal fatigue, dry throat, and difficulty in projecting the voice, pain when speaking and variation in vocal emission.³

There is a predominance of vocal involvement in females.⁶⁻⁸ A study⁹ showed that 78% of teachers away from the classroom in the State of Rio de Janeiro had a workload equal to or greater than 40 hours per week. In a survey conducted in Alagoas⁷, it is highlighted that, of the 1390 dismissals caused by various causes, among public servants in the State of Alagoas in 2009, 749 were of teachers.

A survey, carried out in 2016, with teachers in Paraíba found that around 87.6% of teachers in the State had vocal disorders, and that such illnesses cause them anguish and anxiety problems.⁸

Thus, this research aims to present the frequency of voice symptoms and other complaints associated with the teacher's work in public schools, promoting a discussion that involves the risk factors of the school environment, in order to subsidize the actions to improve the vocal health of these professionals.

MÉTODO

This is a descriptive study, carried out in 2019, in three public elementary schools in Maceió (AL), in a convenience sample consisting of 81 teachers, distributed as follows: 70 (86.50%) were female and 11 (13.50%) were male; aged 24 to 63 years (mean 42.4 years).

Teachers who were deviated from teaching were excluded from the research, either for health reasons or for other specific reasons. Those who were exercising their normal activities were included.

The teachers were previously informed about the research and signed the Free and Informed Consent Term (FICT), which was previously approved by the Research Ethics Committee (REC) of the Federal University of Alagoas (UFAL) (CAAE: 06337518.9.0000.5013), seeking respect and ethics in research with human beings.

The participants answered a questionnaire prepared by the researchers with objective questions, containing: age, sex, hours in the classroom, time in the profession, voice symptoms, and other complaints associated with teacher

activity, medical consultation with an otorhinolaryngologist or speech therapist, performing voice exercises.

The data obtained by the questionnaire were tabulated in the Microsoft Office Excel 2010 program, entered twice to minimize the occurrence of errors. These were analyzed using the Epi Info 7 program, version 7.2.3. Descriptive statistical analysis of all variables was performed.

RESULTADOS

Table 1 shows the data related to teachers.

Table 1. Distribution of Teachers in Relation to Sex, Weekly Workload and Teaching Time.

Variable	Category	n	%
Sex	Female	70	86.50 %
	Male	11	13.50 %
Work load	20h	24	29.62%
	30h	08	09.87%
	40h	35	43.20%
	50h	06	07.40%
	60h	08	09.87%
Time	Up to 10 years	14	17.28%
	From 11-20 years	36	44.44%
	From 21-30 years	25	30.86%
	From 31-40 years	06	07.40%
	More than 40 years	00	0.000%

A high prevalence of vocal symptoms was observed in the teachers interviewed, the most common being: failure to speak, pain or burning when speaking, hoarseness and throat clearing. This can be seen in table 2, which represents the prevalence of vocal symptoms found; each teacher may have more than one symptom.

Table 2. Prevalence of Vocal Symptoms.

Vocal symptoms	n	%
Cracks in voice	39	48.14%
Pain or burning when speaking	34	41.97%
Hoarseness	32	39.50%
Throat clearing	30	37.03%
Effort when speaking	24	29.62%
Cough	24	29.62%
Loss of voice	21	25.92%
Lump	12	14.81%
Choking	07	08.64%
Absence of symptoms	05	06.17%

The complaints associated with work at school were also observed in table 3.

Table 3. Distribution of Complaints Submitted by Teachers.

Symptoms	n	%
Rhinitis	60	74.07%
Anxiety	56	69.13%
Insomnia	42	51.85%
Esophageal reflux	29	35.08%
Depression	09	11.11%
None	07	08.60%

Regarding clinical follow-up with the voice specialist, it is shown in table 4.

Table 4. Monitoring of Teachers by Specialist and Personal Voice Care.

Voice specialists	Number	%
Otorhinolaryngology (ORL)	37	45.67%
Speech Therapy	12	14.81%
ORL + Speech Therapy	12	14.81%
None	20	24.69%
Practice voice exercises	07	08.75%
Use of an instrument to save the voice	14	17.28%

Certain environmental factors that influence vocal health appeared in large numbers in table 5.

Table 5. Environmental Factors that Influence Vocal Health

Environmental factor	Number	%
Dust	66	81.48%
Fan	55	67.90%
Unpleasant odors	21	25.92%
Mold	20	24.69%
Air conditioning	09	11.11%
Others	03	03.70%
None	03	03.70%

Other factors were also mentioned by the interviewees, in smaller numbers, such as: bad acoustics, a lot of noise coming from the street and noise from the students themselves.

DISCUSSÃO

The teachers of the elementary schools in question are an important risk group for the appearance and maintenance of dysphonia, given the percentage of professionals with complaints of some type of vocal injury, as also in the literature.⁴⁻⁵ The female gender profile of the sample is in agreement with the literature data.¹⁰

Related to the workload, this study brings a predominance of 40 hours per week (43.20%), with 70.38% of teachers having a workload of 30 to 60 hours, which is considerably longer than the found in another study,⁸ which evidenced the predominance of the ten to 20 hour workload, followed by 20 to 30 hours, and only then 30 to 40 hours. However, when comparing the data found, with the literature,^{1,9} brings a similar sample, teachers who work in more than one school and for more than one shift, there was, therefore, an agreement between weekly workloads.

This high percentage of hours is worrying, and favors abstinence from work. When compared to the literature⁹, it shows 78% of teachers away from the classroom with a workload equal to or greater than 40 hours per week. In one

study, voice disorders are, along with musculoskeletal disorders, and are the main causes of absence from teachers' work.¹¹

A high frequency of vocal symptoms was observed (79.51%), the most frequent being: failure to speak, pain or burning when speaking, hoarseness and throat clearing (Table 2). When comparing with the most recent literature, with researches carried out¹²⁻¹³ values in agreement with this study are observed; 74.7% and 86.89%, respectively.

It is noteworthy that only five of the 81 respondents did not present any type of vocal complaint, it was also observed that they have less than ten years in the classroom. Studies show that the occurrence of significant changes in the voice is directly proportional to the teaching time and the number of hours/class per week^{1,8}

It is believed that this difference in the incidence of vocal disorders is related to the high presence of unhealthy working conditions in the sample studied, as referenced in table 5, as well as, with the small number of teachers approached by the research. A study corroborates this fact; where, 90.6% of the teachers participating in the research stated that the physical structure of their work environment was bad or very bad.¹

Vocal changes often cause teachers to be forced to change their methodologies in the classroom, adding ways to teach that have less impact on the voice, such as the use of projector and video devices.¹⁴

It is believed that the low adherence to these alternative teaching methodologies and treatment with voice professionals, in the long run, as found in this study, is probably justified, with the fact that chronic contact with an altered voice leads the professional to adapt to that situation, through inadequate vocal adjustments, such as speaking with intense intensity with effort, which increases the risk of dysphonia.¹⁴ At the first moment when the vocal alteration occurs, there is no functional limitation to the use of the voice, only a drop in its quality, which leads to the naturalization of the pathology, generating a failure in the interpretation of dysphonia, as being a disease of origin occupational.¹⁴

There seems to be a belief that vocal problems are inherent in the teacher's activity. Thus, professionals are unconsciously influenced to neglect symptoms that may appear. This is supported by a study carried out,¹⁵ in which, the researchers identified work permits, due to the dysphonia associated with the

anatomical and functional changes of the larynx, granted to professionals from different areas of use of the voice. It was seen that while 33.3% of bank employees and 16.7% of radio and TV professionals considered their problems to be of occupational origin, only 6.4% of teachers made this assignment.¹⁵

In addition, it must be emphasized that the excessive workload, low wages and the procedure to obtain assistance with a specialized professional by the Unified Health System (UHS) are important contributors to this scenario of low search for treatment.

In this study, stress symptoms were found, such as anxiety (49.12%), insomnia (36.84%) and depression (7.9%). This high frequency of mental disorders in teaching professionals, is in accordance with one study,⁶ which shows that in Alagoas, in 2009, 8,249 state civil servants were removed, 1,668 (20.2%) of them due to mental and behavioral disorders, with teachers being the leading category of these removals.

The large number of complaints related to anxiety, depression and insomnia is believed to be the result of a number of factors, including: inadequate work infrastructure, high weekly workloads with little rest, personality of the individual and particularities of life. Thus, it is known that such conditions are contributing factors for the prevalence of voice disorders in educators, and for the drop in their work performance.¹

The sound competition in the voice professional's daily life, whether by fans, bad acoustics or noise, causes a decrease in the auditory return for the professional, which forces him to raise his tone, generating a greater vocal effort.⁶

The issue of dusty classrooms is also an important contributing factor to such injuries, since: allergic rhinitis is a predisposing and aggravating factor for voice disorders, and its main cause is the inhalation of allergens,¹⁶ such as dust and mites. One study¹⁴ observed a significant association between self-reported vocal disorders and rhinitis.

It is noted that the inadequate work environments contribute to the appearance and worsening of the symptoms, since only three of the 81 teachers interviewed said they did not have injurious factors in their classrooms. The factors most cited by the interviewees were: dust and fans that compete with the voice, something that is simple to minimize. The excessive use of the voice in

inappropriate working conditions is an important factor in trauma to the vocal folds.³

It is evident that such disturbances cause damage, not only in the personal and social spheres, but also compromise their professional performance, with regard to class control and the accomplishment of pedagogical practices, that take knowledge to the student, and can even lead to leave from work, which implies high financial and social costs.²

CONCLUSION

It is believed that the issue of the teacher's vocal health needs to be discussed not only with them, but with the people who are in charge of the workplace, since these have the power to make adjustments in the physical and social environment in which the educator lives. There is a need for collective awareness regarding the perception of dysphonia, as a problem of occupational origin that needs to be addressed, and that cannot be naturalized, as occurs commonly in this class.

In addition, it is essential to implement actions to promote vocal health that teach teachers to have an adequate preparation for the use of their work instrument, the voice, with the teaching of practical exercises that can be inserted in their routines, as well as the discussion about habits that help and hinder the vocal health process. Such actions must begin during the period of teacher education and extend throughout their career.

It is understood that public schools, such as those in question in this study, live in a reality in which it is often difficult to significantly interfere, due to the political and social issues involved.

However, it is clear that, even if it is not possible to improve the acoustic and physical conditions of the work environment at all, or to change the salaries received by teachers; investment in simple actions like: lectures, rounds of conversation with invited specialists and workshops on voice care and the health of the teacher, would already be of great value for the improvement of the current scenario.

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