職業用聲者的嗓音保健是否有必要性?

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Outline

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2. PICO Analysis
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Introduction

- The voice is of fundamental importance for effective communication.
- Teachers, singers, actors, religious people, politicians, secretaries, lawyers, prosecutors, judges, health professionals, salespeople, street vendors, community workers, ceremonialists, broadcasters, journalists, teleoperators, among others, use their voice professionally.
- Work-related voice disorder (WRVD) being included in the category of occupational diseases, the importance of prevention and health care measures is increasing.

●Seven core categories of action:

- Vocal health monitoring measures
- Vocal health education
- Direct vocal interventions
- Voice assessment
- Laryngological examination
- Referrals to an otorhinolaryngologist or individual speech therapy
- Workers’ perception of the proposed actions

PICO Analysis

P：Professional voice users.

I：Voice care and prevention .

C：No voice care and prevention .

O：Improved voice problems .

V	Population studied
V	Intervention given
V	Comparator chosen
v	Outcomes measured

是	v
不明確	
否	

REVIEW ARTICLE

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Health actions and occupational vocal conservation: how are they being implemented?

Ações de saúde e conservação vocal ocupacional: como estão sendo implementadas?

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Methods

- The bibliographic search was conducted between June and September 2020.
- On the CAPES Periódicos platform.
- Using the following terms on the Medical Subject Headings:
- “saúde do trabalhador” and “voz”.

Results

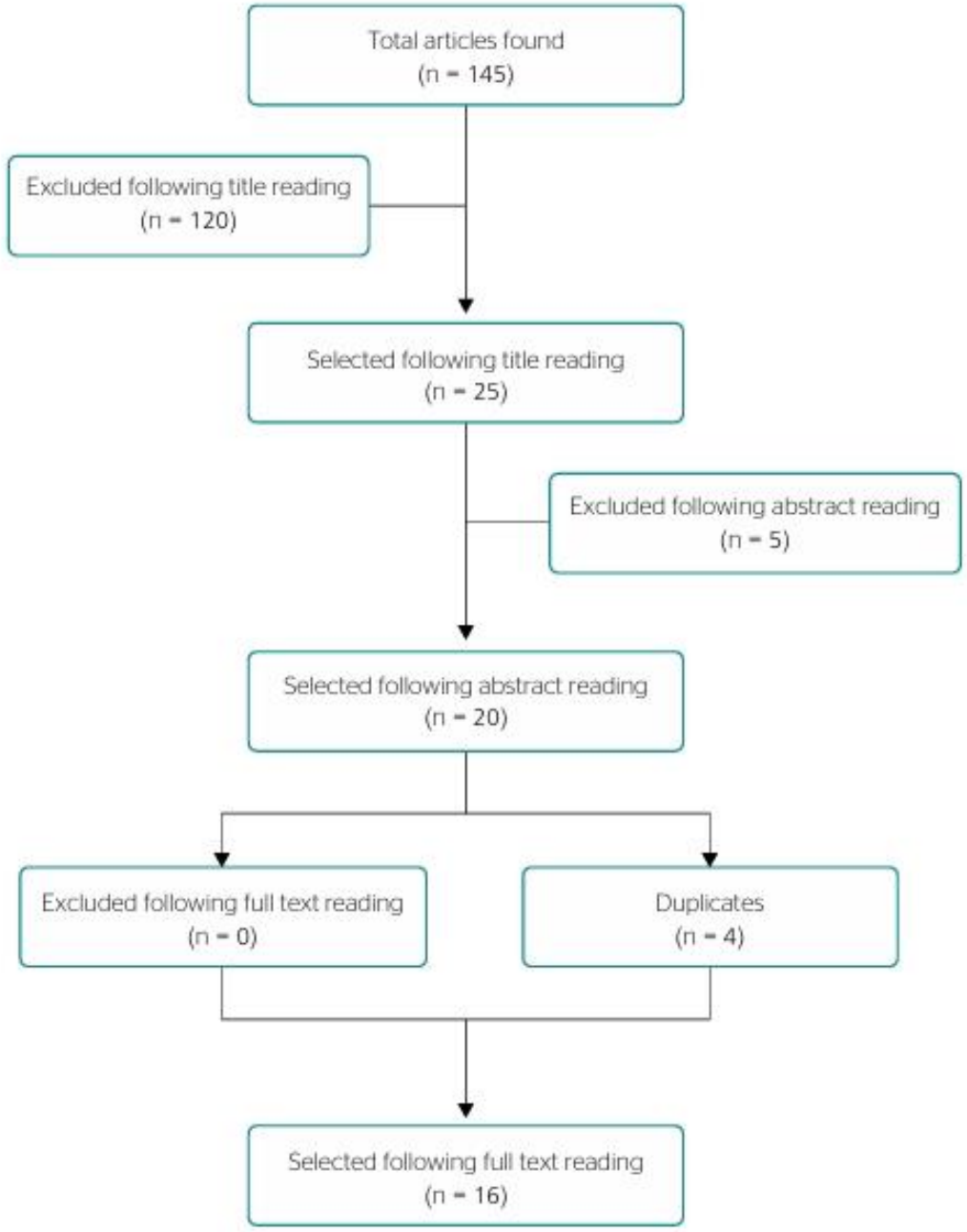

Figure 1. Flowchart of selection criteria for the review.

Results

Table 1. Studies included in this review

Author	Place of publication	Year	Journal	Study design	Sample size	Audience	Main findings
Santana et al.[21]	São Paulo, Brazil	2012	*Jornal da Sociedade Brasileira de Fonoaudiologia*	Literature review	32	Teachers	Identifying the risk factors associated with vocal disorders in teachers, transforming working conditions and guaranteeing the quality of care.
Trigueiro et al.[23]	Brazil	2015	*Revista de Pesquisa Cuidado é Fundamental Online*	Experience report	90	Teachers	Group workshops, held weekly and lasting 2 hours each, involving vocal disorders, their impacts, causes, signs, symptoms, and harmful factors; vocal hygiene guidelines, relaxation/breathing exercises; articulation exercises and vocal warm-up and cool-down exercises (before and after class).
Almeida et al.[24]	Universidade de Fortaleza, Brazil	2012	*Revista Brasileira em Promoção da Saúde*	Qualitative action research	12	Teachers	Situational analysis of the teachers (complaints and symptoms); five theoretical-practical bi-weekly meetings lasting 45 minutes, involving vocal hygiene, body awareness, breath control, stretching and relaxation, posture improvement, and vocal warm-up exercises.
Dragone[16]	São Paulo, Brazil	2011	*Revista Centro de Especialização em Fonoaudiologia Clínica*	Experience report	396	Educators: Teachers, nursery workers, recreationists, educational agents, and managers	Introduction of basic and advanced voice groups depending on the presence of signs and symptoms of vocal disorders, with activities geared to the demands of each group; theoretical-practical meetings involving vocal behaviors related to teaching practice, information on vocal production and care, training in basic phonatory tasks to increase vocal endurance and reduce strain; application of a protocol for self-perception of the severity of voice problems and voice interference in professional and social activities; perceptual-auditory assessment of vocal quality (GRBASI scale); speech therapy assessment of the voice; referral of altered cases for otorhinolaryngological assessment; guidance on seeking medical care and referral for individual speech therapy were formally provided when necessary.

Results

Table 1. Continued

Author	Place of publication	Year	Journal	Study design	Sample size	Audience	Main findings
Pereira et al[25]	São Paulo, Brazil	2015	*Revista de Saúde Pública*	Parallel-group, single-blinded, randomized clinical trial	31	Teachers	A protocol for self-assessment of the voice was applied; computerized acoustic analysis of the voice was performed; guidance was given to perform vocal warm-up exercises and breathing training once a day, lasting an average of 13 minutes, before the working day; a post-intervention questionnaire was applied to assess the participants' perception after the actions.
Souza et al[17]	São Paulo, Brazil	2017	*Revista Centro de Especialização em Fonoaudiologia Clínica*	Single-group, single-blinded intervention study	29	Teachers	Survey of working conditions; vocal assessment before and after the intervention; vocal self-assessment; perceptual-auditory speech assessment; daily SOVT exercises with a commercial straw for 4 weeks, in the morning and evening shifts before starting the work shift.
Luchesi et al[18]	São Paulo, Brazil	2012	*Revista Centro de Especialização em Fonoaudiologia Clínica*	Experience report	5	Teachers	Laryngological examination; perceptual-acoustic analysis before and after the interventions; implementation of a vocal improvement program: 12 90-minute weekly meetings covering notions of phonatory anatomy and physiology, vocal health (habits and care); breathing, pneumophonoarticulatory coordination, phonatory strain, articulation, speed and modulation of speech, resonance, vocal projection, verbal and nonverbal expression, vocal warm-up and cool-down.
Luchesi et al[19]	São Paulo, Brazil	2010	*Revista Centro de Especialização em Fonoaudiologia Clínica*	Experience report	26	Teachers	A questionnaire to understand vocal and occupational demands, vocal complaints, and suggestions for action; laryngological examination; preventive-therapeutic group intervention, carried out in 12 90-minute weekly meetings, discussing phonatory anatomy and physiology, vocal health (habits and care); breathing, pneumophonoarticulatory coordination, phonatory strain, articulation, speed and modulation of speech, resonance, vocal projection, verbal and nonverbal expression, vocal warm-up and cool-down.

Results

Table 1. Continued

Author	Place of publication	Year	Journal	Study design	Sample size	Audience	Main findings
Penteado & Ribas[22]	São Paulo, Brazil	2011	*Jornal da Sociedade Brasileira de Fonoaudiologia*	Literature review	NA	Teachers	Educational actions in teachers' vocal health, including vocal behaviors (abuse/bad use) and habits, hygiene/vocal health care, warm-up and cool-down exercises, vocal techniques, anatomy, physiology and vocal production, orofacial motricity, and stomatognathic functions.
Anhaia et al[26]	São Paulo, Brazil	2013	*Audiology - Communication Research*	Literature review	9	Teachers	Review of direct intervention practices, through vocal training, and indirect interventions, through consultancy or education on vocal hygiene and improving the acoustic conditions of the work environment.
Almeida et al[27]	São Paulo, Brazil	2010	*Arquivos Internacionais de Otorrinolaringologia*	Cross-sectional study	328	Teachers	Drafting and validating a self-assessment questionnaire to measure the prevalence of dysphonic syndrome symptoms and determine the characteristics of the population that may be at risk of developing the disease; it can be used by occupational physicians for epidemiological control of the population, and by otorhinolaryngologists to guide the indication of more complex procedures.
Luchesi et al[14]	São Paulo, Brazil	2009	*Saúde e Sociedade*	Qualitative-descriptive case study	25	Teachers	Laryngological examination, preventive-therapeutic intervention in a group, speech therapy assessment before and after participation in the group and interviews; suggestions for action from the teacher's point of view.

Results

Table 1. Continued

Author	Place of publication	Year	Journal	Study design	Sample size	Audience	Main findings
Masson et al.[28]	São Paulo, Brazil	2019	*Revista Communication Disorders, Audiology and Swallowing*	Single-blinded, control group, exploratory quasi-experimental study	18	Teachers	A questionnaire was used to collect sociodemographic data and the worker's functional situation; perceptual and auditory vocal assessment; acoustic analysis of the voice; self-assessment of the degree of vocal discomfort; vocal warm-up before the class, which lasted 13 minutes with a 30-second break after each series of exercises, involving body, neck and vocal tract stretching, rib cage expansion, phonoarticulatory exercises, air direction, mucosal flexibilization and resonance; vocal cool-down after class, which lasted 7 minutes and involved body and neck stretching, expansion of the pharyngeal cavity, reduction of the fundamental frequency, intensity, and laryngeal strain.
Penteado et al.[15]	São Paulo, Brazil	2009	*Revista Centro de Especialização em Fonoaudiologia Clínica*	Experience report	20	Receptionists, telephone operators, secretaries, administrative assistants, nurses, social work staff, and health professionals	Group activities, held in seven 75-minute meetings, introduction of the participants to form the group, survey of the subjects' perceptions of their own voice (vocal image, complaints, needs, and interest in vocal improvement) and demands of professional use of the voice combined with information on aspects of the workplace, conditions and organization; vocal warm-up exercises; survey of professional uses of the voice in work contexts; stimulating the subjects' attention to the use of the professional voice and to vocal quality and its possible impacts on relationships; vocal assessment of the participants and pointing out possibilities for improvement; approach to the theme of vocal health and improvement of vocal and body expression; reflection on the process experienced, indicating the changes realized.
Brasil et al.[13]	Lousada, Portugal	2020	*Revista Ibérica de Sistemas e Tecnologias de Informação*	Applied, methodological study	40	Teachers	An application for a mobile device aimed at promoting vocal health, including tests, tips and guidelines, reports comparing vocal performance, game strategies to motivate use, alerts and reminders to drink water, a tool for capturing environmental noise.
Ribas et al.[20]	São Paulo, Brazil	2014	*Revista Centro de Especialização em Fonoaudiologia Clínica*	Quasi-experimental study	20	Teachers	Survey of vocal complaints through the application of a protocol; voice experience groups, through three monthly meetings, lasting 45 to 50 minutes each, involving vocal production, conditions, and organization of teaching duties.

SOVT = semi-occluded vocal tract exercises; NA= not applicable; GRBASI scale = G - grade, R - roughness, B - breathiness, A - asthenia, S - strain and I - instability.

CASP 問題 1

1. 此篇系統性文獻回顧是否問了一個清楚、明確的問題？

Yes. The review clearly focused on health and vocal conservation actions for occupational voice users, using defined search terms.

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CASP 問題 2

2. 作者是否尋找適當研究型態的文獻？

Yes. The authors included various study designs suitable for an integrative review, such as reviews, case reports, and trials.

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否	

CASP 問題 3

3. 所有重要且相關的研究都被納入？

Yes, for the most part. The authors used a defined database and criteria, resulting in 16 relevant studies.

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CASP 問題 4

4. 作者是否評估所納入文獻的品質？

Partially. Some quality assessments were implied, but not consistently applied across all included studies.

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否	

CASP 問題 5

5. 如果作者將研究結果合併，這樣的合併是否合理？

Yes. Narrative synthesis and categorical grouping of interventions was appropriate given the heterogeneous designs.

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否	

CASP 問題 6

6. 這篇系統性文獻回顧的整體結果為何？

The review concluded that most interventions had a positive effect on vocal quality, awareness, and symptom reduction.

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CASP 問題 7

7. 結果精準嗎？

Some precision exists in RCTs, but overall results are synthesized narratively due to mixed study designs.

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CASP 問題 8

8. 是否所有重要的臨床結果都有被考量到？

Yes. Outcomes included vocal function, user perception, work-related vocal behaviors, and feedback.

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否	

CASP 問題 9

9.付出的傷害和花費換得介入措施所產生的益處是否值得？

Yes. Most interventions are low-cost and low-risk (e.g., group sessions, warm-ups) and bring significant benefits.

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Conclusion

- Occupational vocal health actions improve vocal quality and reduce symptoms.
- Most studies focused on teachers, with a few studies on educators and health care workers, using warm-up routines and vocal education.
- Participants generally reported positive outcomes.
- Future research should include other voice-intensive professions.

Clinical and Educational Implications

- Include voice care in pre-service and in-service training.
- Provide workshops and self-training tools for vocal hygiene.
- Establish interdisciplinary care involving SLPs and ENTs.
- Promote policy integration of voice care into occupational health programs.

Let's Vote!

是否同意:職業用聲者的嗓音保健是否有必要性?

同意 25位	需要更多文獻支持 3位	不同意 0位

Thank you for your attention !