

Educative processes in the vocal health of teachers: a literature review of Brazilian studies in Speech-Language Pathology and Audiology

Processos educativos em saúde vocal do professor: análise da literatura da Fonoaudiologia brasileira

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ABSTRACT

This literature review analyzes the educative processes of vocal health actions aimed at teachers discussed in Speech-Language Pathology and Audiology literature produced in Brazil. Our corpus consisted of 63 studies on collective intervention published between 1994 and 2008. The analysis emphasizes the distribution of publications over time; the characterization of the type of educative process (unilateral or dialogic, democratic, participatory and problema-based); the themes/content addressed; the form of development (precise or procedural); and the organization of actions (individually centered or expanded towards working issues). It was observed that 74% of the actions were developed in processes, such as courses, workshops or voice training. The average length of each meeting ranged from 20 minutes to four hours. Seventy nine percent of the educative strategies employed were characterized as unilateral and inconsistent with proposals based on healthcare promotion. The most common themes and topics were: vocal habits/behaviors and vocal hygiene/health (71%); warming up and cooling down, vocal exercises and techniques (50%); anatomy and physiology of vocal production and oral sensorimotor system (44%); vocal parameters (23%); work environment (22%), and use of voice, communication and expression (20%). The focus of the educative process is the individual (100%) and it is generally conducted without considering work conditions, health and quality of life. Work environment aspects were contemplated in only 17% of the publications, teachers' work organization, in 6%, and school community, in 1%. It was identified the need for organization and revision of forms of development, dynamics, strategies, themes and contents, type and focus of the educative process of public healthcare actions aiming at teachers' vocal health, according to the perspective of health promotion.

Keywords: Voice; Voice training; Health education; Health promotion; Public health; Occupational health; Faculty

INTRODUCTION

The teacher's voice has been a prioritized object in the Brazilian Speech-Language Pathology and Audiology research during the last years when compared to the interest involving the workers of other professional categories⁽¹⁻³⁾.

Until the year 2004, the Brazilian production referring to the voice of the teachers consisted of 283 works; in 2005, 80 more works were added; in 2007, 207 more, and in 2008, it

totaled, approximately, 500 publications, most of which are references to proceedings of conferences, journals, monographs and dissertations, results of researches in post-graduation courses^(1,2).

The results of a bibliographic review on the voice of the teachers in the Brazilian Speech-Language Pathology and Audiology⁽³⁾, in which 307 publications were analyzed, have shown that most of the studies (61%) deal with the assessment of the vocal profile, the teachers' vocal problem and the increasing number of complaints and vocal symptoms; 24% deal with the voice in the teacher's work and 14% deal with prevention programs. Besides that, 8% of the works have a theoretical-bibliographic character and only 2.3% refer to intervention.

An analysis of the themes of the articles on voice of four journals of the Speech-Language Pathology and Audiology literature produced in Brazil⁽⁴⁾ has shown that the highest percentage (57.5%) refers to the studies of the clinical procedure (evaluation and therapy); followed by the voice of the professional (32.6%); therapeutic process (12.9%) and healthcare

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promotion/prevention of vocal alterations (4.5%). The study concludes that the production/publication of the knowledge concerning healthcare promotion and prevention of vocal alterations is still insufficient in Speech-Language Pathology and Audiology Sciences.

An extensive review of the Brazilian publications referring to the teacher's voice (500 publications)⁽⁵⁾ has shown that 86% of the works deal with the evaluations and, among them, only 14% deal with the effects of programs or interventions; only 6.2% are in the category *descriptive of speech-language pathology intervention* in teachers and 9.2% in the *evaluation of the effect of vocal health programs*.

In the international literature there are publications referring to teacher's collective actions, focusing prevention and therapeutic intervention. In general the studies are aimed at teachers with voice alteration and intend to investigate the effects and efficiency of therapeutic approaches such as vocal hygiene and vocal function, resonance, respiration and amplification exercises, dealt with in an isolated or combined form⁽⁶⁻¹²⁾.

As for the Brazilian legislation regarding the teachers' vocal health, it is verified that the laws are few and that the proposals, in general, recommend treatment to the teachers that present vocal alteration and the implementation of annual theoretical-practical courses with speech-language-pathologists⁽¹³⁾. However, aspects such as the development character and the educative process of the intervention actions are not defined.

The objective of this article is to analyze the educative processes of teacher's collective vocal health actions described in Speech-Language Pathology and Audiology literature. The study is oriented by the following perspective of analysis: the distribution of the publications throughout the time; the identification and characterization of the type of educative process; the categorization of the main focuses and themes/contents addressed; the form of development and the organization of the actions.

LITERATURE REVIEW

The literature presents few studies on the effects and impacts of interventions in teacher's vocal health.

Teachers who were evaluated one year after the end of a speech-language pathology course on vocal health showed elaboration of learning process from the experience with subjects related to teacher's vocal health issues, but there was a reduction in the practice of to realize exercises and to take care the voice. It was concluded that time and strategies are needed to enable the learning of the contents mentioned, with policies of teacher's continued education, compatible with the procedural and continuous development of teaching⁽¹⁴⁾.

The evaluation of the impact of a vocal improvement course in the prevention and maintenance of the teachers' vocal health, after 11 months of its ending, concluded that there was valorization of vocal warming up and of orientations for vocal hygiene in the classroom and that the duration time, of 32 hours, was insufficient to fix new concepts⁽¹⁵⁾.

The impact of voice training groups, in the teachers' perceptions, was evaluated and it was concluded that such groups are important social spaces for the development of

voice perception, vocal image valorization, teaching expressivity and health promotion, regarding the discussion and the reflection on the associations of health, work and quality of life in the school⁽¹⁶⁾.

Teachers were analyzed in relation to the types of voice, complaints, laryngeal symptoms and vocal habits, before and after their participation in a voice training group, and the results assured the importance of the procedural intervention that enabled the reflection and changes in the relations between work and health⁽¹⁷⁾.

The evaluation of a vocal health program developed with teachers of the Waldorf School⁽¹⁸⁾ showed that it promoted observation, exchange of experience, reflection and dialog among the participants and it was concluded that the action had success in increasing the teachers' perception and awareness regarding the factors that help or to injury the vocal health.

There are no researches that investigate the educative processes implied in the collective intervention actions in teachers' vocal health.

In this perspective, this article refers to a bibliographic review of the works that refer to the educative processes of vocal health actions aimed at teachers discussed in Speech-Language Pathology and Audiology literature produced in Brazil in 2008.

Four important studies⁽¹⁻⁴⁾ have directed the work of bibliographic search. National and international scientific journals, books, proceedings of conferences of the Brazilian Society of Speech-Language Pathology and Audiology were also searched, as well as the virtual libraries and sites of search of scientific articles available on the Internet and in Speech-Language Pathology and Audiology post-graduation programs and the catalogs of dissertations and theses of PUC-SP.

It was left out of the study the researches of merely theoretical-bibliographical character; the epidemiological surveys, the researches directed to the evaluation of the voice and teachers' vocal profile, the ones referring to individual and/or collective interventions of clinical-therapeutic-rehabilitating character (carried out with teachers with symptoms of vocal alteration or dysphonia) as well as the ones limited to the objective of surveying the prevalence of disorders, alterations, complaints, symptoms and habits and that did not present experiences of educative interventions.

Thus, 63 publications were identified, in the period between 1994 and 2008, representing the corpus of this study.

A preliminary analysis, of quantitative order, studied the distribution of the publications throughout the period. The results are organized by periods of three years (Table 1).

Table 1. Studies on the interventions and collective actions in teachers' vocal health, considering the period of publishing

Period of publication	n	%
1994-1996	3	4.76
1997-1999	3	4.76
2000-2002	14	22.22
2003-2005	12	19
2006-2008	31	49.20
Total (1994-2008)	63	100

Table 2. Form of development (precise or procedural) and quantity of meetings held in the educative actions

Precise		Procedural							
		n				%			
		47				74.6			
		Number of meetings							
Up to 2 meetings		3 to 5		6 to 8		10 to 13		Non-defined	
n	%	n	%	n	%	n	%	n	%
6	25	17	36	5	10	5	10	20	42

A further investigation, of qualitative character, analyzes the educative process and implies the identification and characterization of the forms of development of the actions, the type of educative process and categorization of the main focuses and themes/contents addressed.

Regarding the forms of development, it was tried to identify if the educative action was developed in a precise form, here understood as constituted by only one event or up to two encounters; or if in a procedural form, counting on three or more, without limits for the number of meetings (Table 2).

As for the type of educative process, it was tried to identify if it is characterized by being a “one-way” process (unilateral) or dialogic, democratic, participatory and problem-based (Table 3).

Table 3. Classification of the studies according to the type of educative process

Type of educative process			
One-way		Dialogic, participatory and problem-based	
n	%	n	%
50	79.36	13	20.63

The themes and contents predominantly addressed in the actions were listed and categorized (Table 4).

A further analysis of the focus of the educative processes tried to identify the perspective from which actions are organized: individually centered or expanded towards working

Table 4. Main themes and contents dealt with in the educative actions and their occurrence by periods

Themes/contents	Occurrence		Distribution by period
	Total N°	% total	
Vocal behavior (abuse/misuse) and habits, vocal hygiene/vocal health	45	71.42	1994-1996: 3 1997-1999: 2 2000-2002: 13 2003-2005: 8 2006-2008: 19
Vocal warming up and cooling down. Exercises and techniques	32	50.79	1994-1996: 1 1997-1999: 2 2000-2002: 8 2003-2005: 5 2006-2008: 15
Anatomy, physiology and vocal production. Oral sensorimotor system and phonoarticulatory organs	28	44.44	1994-1996: 3 1997-1999: 1 2000-2002: 7 2003-2005: 4 2006-2008: 12
Vocal parameters (respiration, resonance, pneumophonic coordination, articulation, pitch, loudness)	15	23.80	1994-1996: 1 1997-1999: 1 2000-2002: 6 2003-2005: 1 2006-2008: 6
Work environment/noise/occupational risks	14	22.22	1994-1996: 0 1997-1999: 0 2000-2002: 0 2003-2005: 3 2006-2008: 11
Professional use of voice/language/communication/expressivity	13	20.63	1994-1996: 0 1997-1999: 1 2000-2002: 2 2003-2005: 2 2006-2008: 8

Table 5. Distribution of the studies according to the focus of the educative process and levels of teachers' and school community's implication and involvement

Individual		Expanded for conditions and organization of the teaching work							
		n				%			
		21				33			
Levels of implications and involvement									
Teaching-learning strategies		Work environment		Work organization		School and community involvement			
n	%	n	%	n	%	n	%	n	%
63	100	17	27	11	17.43	4	6.34	1	1.58

issues, being the last one categorized at levels that express increasing manifestations of the involvement: of teachers, of the community (school and surroundings) and of the implications and changes (Table 5), which are:

- 1) Implications in the teaching-learning strategies: kind of class – expository or active-participatory, pedagogical strategy, options and conditions of use of resources and support materials;
- 2) Specific implications in the work environment: classrooms, furniture, acoustics, noise, cleanness;
- 3) Implications in the general organization of the work: adaptations of rules, norms, routine and school functioning, class schedules, intervals and other school activities, relations of the teaching staff and the other employees;
- 4) Implications in the elaboration, implementation and achievement of events, projects and policies in the school, community and society, in an articulated form.

DISCUSSION

Until the year 2000 there were very few publications directed to interventions and public healthcare actions aiming at teachers' vocal health and from this year on there was a significant increase; half of the publications were produced in the last three years. Thus, confirming the studies which show that until 2006 the publications on intervention represented only 2.3% of the literature about the teachers' voice⁽³⁾ and that, in the Brazilian journals of Speech-Language Pathology, the articles of reflexive order or of health promotion practices/vocal alteration prevention are the ones that appear in smaller number^(4,5).

It is verified that most of the actions have been carried out in a procedural form, with three or more meetings, generally weekly, characterized by groups constituted under the proposals of courses, workshops or voice training. The actions of procedural character are valorized as pertinent to the proposals of health promotion^(19,20).

Several works only claim to develop workshops, courses and voice training, without making explicit the quantity of meetings carried out.

Among the ones that present details concerning their form of development, it is verified that actions of up to five meetings and a smaller number between six and thirteen meetings prevail. In this roll there is voice training, pointed out, in the literature, by the importance of health promotion in the school⁽¹⁶⁾.

It is important to point out that the studies refer to actions with important variations in the length of each meeting, ranging from twenty minutes to four hours.

The lack of a national legislation, as well as of a public policy that regulates and guides the public healthcare actions aimed at teachers' vocal health, together with a still precarious literature directed to the general investigation of the educative processes in vocal health, combined with the diversity of the conditions, at local level, for the development of the actions can partly explain such differences. This confirms the need for a research to organize and guide the educative actions.

Actions in educative processes of unilateral character prevail, based on the process of traditional teaching (traditional approach of education) in which a verticalized relation is established, in which the professional is the agent of the educative process that prioritizes the diffusion of information, contents and knowledge, the exposition, the explanation and application of techniques, exercises and practices originated from technical/scientific hegemonic (not always contextualized) knowledge to be incorporated and applied by the participants. Generally, it has cognitive and behavioral focus⁽¹⁹⁻²¹⁾. Such actions have been criticized in studies of health promotion in Speech-Language Pathology and Audiology^(19,20).

On the other hand, in the educative processes of dialogic, democratic, participatory, problem-based and transforming characteristics based on the proposals of the educator Paulo Freire, the professional (speech pathologist) and the subjects (teachers) interact in an active way, becoming agents and subjects of the educative action in a process of reflection, discussion and of mutual construction of knowledge⁽¹⁹⁾. It is valorized, here, the subjectivity, the stories and ways of life, the knowledge, beliefs and cultural experiences, the ways the subjects perceive, interpret, signify and train their voice, their relation with work and with the health-illness process and quality of living, at the same time in which it is possible to express opinions, feelings, ideas, fortifying the commitment of the subject as social being, producer of culture and of transformations^(19,21).

Therefore, the results show the necessity of the speech pathologist to rethink, review and reformulate the dynamics, strategies and educative processes through which the public healthcare actions aiming at teachers' vocal health are developed.

The themes and contents referring to vocal behavior (abuse/misuse) and habits, hygiene/health care, warming up and cooling down, vocal exercises and techniques, anatomy and physiology of vocal production, oral sensorimotor system

and stomach functions predominate in the educative actions in teachers' vocal health.

Without belittling the relevance of the themes and contents addressed, it is necessary to consider that the educative actions with emphasis on the anatomy and physiology of phonation, on the rationalization and on the self-control of the vocal production and on the execution of exercises do not hide the tendency to blame the individual for the vocal health-pathology process. That is, the focus of the educative actions has to be expanded taking into consideration subjective, social, contextual, environmental, cultural, political and historic aspects and processes of the subjects, communities and professional categories⁽¹⁹⁾.

The analysis of the distribution of the themes and contents, throughout the time, shows that the contents of "*work environment/noise/occupational risks*" and "*professional use of voice/language/communication/expressivity*" appear in the most recent studies, from 2006. This may signal the tendency to change paradigms, in the perspective of a wider conception of health and health-pathology process, which considers the uses of voice in everyday life and work and in the relations with the conditions and quality of life⁽¹⁹⁻²³⁾. However, such change seems to be taking place very slowly

Studies of the general literature on the teachers voice⁽⁴⁾ show that the researches focused on the work environment and conditions took place only from 2000. A survey of the legislation on teachers' vocal health⁽¹³⁾ has shown that the work environment was mentioned in three documents only.

Previous researches⁽³⁾ demonstrated that until 2006 only 3.2% of the literature dealt with the spoken voice of the teachers and an analysis of the Brazilian journals of Speech-Language Pathology on the production of knowledge in the voice area⁽⁴⁾ did not identify articles that dealt with the aspects related to expressivity, which have been pushed forward more recently⁽⁵⁾.

All the studies analyzed focused the individual in their educative processes (which, in most of them, was the only focus). This shows a more restricted and centered on the individual perspective, with practices that deal, a priori, with vocal and body exercising, ways of life, habits, voice care (or lack of) and vocal behavior (abuse and misuse), generally conducted without considering work conditions, health and quality of life.

That is, the focus is on the subject and his practices and not on the context that causes the vocal problem⁽²⁴⁾; making it possible to underlie the idea that teaching dysphonia is caused by vocal abuse. In this sense, it is observed the process of blaming the subject and hiding its relation with work, aspects already identified and pointed out in previous studies⁽²⁵⁾. The teacher may, mistakenly, be held responsible for his vocal alteration, for having yelled, talked a lot, smoked or broken any other rule of vocal hygiene and for not taking care of his voice as he should. Thus, setting precedents for regulatory focus on habits and behavior referring to the way of life, which attributes to the subject the responsibility for his vocal health-pathology process – a problem already pointed out and criticized in the literature^(22,24,25).

It is necessary to pay attention to the fact that the present tendency is that health education is to go far beyond simply informing or trying to change behavior; a health educative

process encompasses the formation for active citizenship, with the development of capacities and abilities so that people can participate actively in the definition of their needs and of transforming actions of the social reality, get to negotiate and deploy their proposals to achieve the health goals, and search for improvements in the quality of life in the work environment and beyond it⁽²⁶⁾. And, of course, educative processes, thus, defined, hardly come into effect, satisfactorily, in precise educative actions, they demand a procedural form of development.

In only one-third of the studies the individual focus was shared with aspects of the processes, of work conditions, environment and organization, and then prevail the "teaching-learning strategies" whose implications and changes are the teachers' dependence and responsibility (though in some cases they depend on articulations and decisions made collectively in the school). Authors⁽²⁴⁾ call the attention to the fact that the simple prescription of active pedagogical practices is not enough to prevent vocal problems; this could result in putting the blame on the ones who cannot implement the necessary didactic changes. Again the individual focus expresses the traditional tendencies of the intervention centered in the teacher and, thus, it is limited and insufficient.

It is interesting to point out that, in spite of several publications that subsidize reflection on the relations involving work conditions, environment and organization and teachers' health^(16,27-36), the educative actions in vocal health structured from such assumptions still are rare. The results are alarming, now that some authors⁽²⁵⁾ claim that there is a limit to the efficiency of the speech therapy action without the transformation of the work conditions and organization.

In this sense, other authors⁽³¹⁾ have already assured that the speech pathology approach in the teachers' vocal health promotion area is not ready to deal with the risks of vocal pathology in the school and classroom context; and that the present situation would only be different when there was adjustment of the speech pathology interventions to help the teacher in his work situation. Thus, the integration of health, voice and work would only be possible through the necessary link between Speech-Language Pathology and the fields of knowledge of Education, of Ergonomics and of Public Health.

It is also observed that the national experiences do not present action involving vocal amplification, pointed out in the international literature as an option to improve and facilitate the vocal production of the teacher^(11,12,29).

In the perspective of health promotion, it is necessary to re-examine the vocal health intervenient and determining factors and identify the directions necessary to face the challenges. It is necessary to try to know the working teacher as an integral subject, from his singularity and the specificities of his professional category, as well as from the perceptions he has of his voice/ vocal health and of the relations he establishes with it in his everyday context, as a social and working subject. It is necessary to consider the aspects of interaction, subjectivity and quality of life, together with work conditions and organization, in the context of work process and activity, with the unexpected, the adaptations, regulations, resources, results and satisfaction with the work.

There is the need for advancements, review and reformu-

lation of the forms of development, of the organization, of the number of meetings, of the length, of the workload, of the dynamics, of the strategies, of the themes and contents, as well as of the type and focus of the educative process on which are based the vocal healthcare actions aimed at teachers' vocal health, from an expanded view of the health-pathology process and comprehension of the relations involving health, work and quality of life, in the perspective of health promotion and of the construction of healthy public policies.

FINAL CONSIDERATIONS

Most of the educative actions aimed at teachers' vocal health have been carried out in a procedural and group or collective form; however, with enormous variations regarding the length, workload and number of meetings.

The type of the predominant educative process is unilateral,

traditional; generally, directed by an individually centered perspective, limited and restricted of the teachers' health-illness process, inconsistent with proposals based on health promotion.

The contents and themes prioritized in the educative actions involve, in general, vocal habits/behavior and vocal hygiene/vocal health, vocal exercises and contents about anatomy and physiology of voice production. The few works that contemplate the themes related to the teacher's working conditions and organization do not usually go past the issues related to the teaching-learning strategies and do not involve the school community.

There is the need for advancements, review and reformulation of the speech-language pathologists and hearing actions in teachers' vocal health, in the perspective of health promotion and of the construction of healthy public policies.

RESUMO

Este artigo de revisão analisa os processos educativos das ações coletivas de saúde vocal do professor descritas na literatura fonoaudiológica brasileira. O material de análise foi constituído por 63 publicações referentes a intervenções de caráter coletivo, no período entre 1994 e 2008. A análise focaliza a distribuição das publicações ao longo do tempo; a caracterização do tipo de processo educativo (unilateral ou dialógico, democrático, participante e problematizador); os temas/conteúdos abordados; a forma de desenvolvimento (pontual ou processual); e a organização das ações (centrada no indivíduo ou ampliada para as questões do trabalho). Nota-se que 74% das ações foram desenvolvidas de maneira processual, como cursos, oficinas ou vivências de voz, sendo que o tempo de duração de cada encontro variou entre 20 minutos e quatro horas. O caráter de 79% das estratégias educativas é unilateral, incompatível com propostas orientadas pela perspectiva da promoção da saúde. Prevaleram os temas e conteúdos: hábitos/comportamentos vocais e cuidados de higiene/saúde vocal (71%); aquecimento e desaquecimento, exercícios e técnicas vocais (50%); anatomia e fisiologia da produção vocal e SSMO (44%); parâmetros vocais (23%); ambiente de trabalho (22%) e uso da voz, comunicação e expressividade (20%). O foco do processo educativo recaiu sobre o indivíduo (100%), em geral de maneira desarticulada das condições de trabalho, saúde e qualidade de vida. Aspectos do ambiente de trabalho foram contemplados em apenas 17%; a organização do trabalho docente em 6% e a comunidade escolar em 1%. Há necessidade de organização e revisão das formas de desenvolvimento, dinâmicas, estratégias, temas e conteúdos, tipo e foco do processo educativo das ações coletivas em saúde vocal docente, na perspectiva da promoção da saúde.

Descritores: Voz; Treinamento da voz; Educação em saúde; Promoção da saúde; Saúde pública; Saúde do trabalhador; Docentes

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