

# Speech, Language and Hearing Sciences in the Expanded Family Health Center and Basic Care: a case study on the characterization of the performance in teachers' vocal health

Fonoaudiologia no Núcleo Ampliado de Saúde da Família e Atenção Básica: um estudo de caso sobre a caracterização da atuação na saúde vocal dos professores

La terapia del habla en el núcleo ampliado de la salud familiar y atención básica: un estudio de caso sobre la caracterización del desempeño en la salud vocal del profesor

Wiliane de Souza Martins\* 

José Marcos da Silva\* 

Fabiana de Oliveira Silva Sousa\* 

## Abstract

**Purpose:** characterize the performance of speech therapists in the vocal health of teachers, in the context of Primary Health Care, in a city in the Northeast of Brazil. **Methods:** This is a case study with a qualitative approach. Five professional speech therapists, inserted in the Extended Center of Family Health and Primary Health Care, participated in the research. Data collection was carried out through semi-structured interviews. The data were interpreted by means of the content analysis technique. **Results:** Speech therapy performance in Primary Health Care and teachers' vocal health is characterized. Activities

\* Universidade Federal de Pernambuco – UFPE, Recife, Pernambuco, Brazil.

### Authors' contributions:

WSM: Project concept, data collection, data analysis and interpretation, writing of the text.

JMS: text revision, linguistic revision.

FOSS: supervision, orientation, final approval of the version presented for publication.

**Correspondence email address:** Wiliane de Souza Martins- wilianeifpe@hotmail.com

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carried out by the Centers for Support to Family Health are identified, which favor the recognition of Primary Health Care as a virtuous place for actions to promote health and prevent diseases through actions of surveillance in Worker's Health. The School Health Program is recognized as a potent device for the realization of intersectorial actions for the implementation of the Work-Related Voice Disorders Protocol. **Conclusion:** the activities carried out by speech therapy are characterized by health promotion actions, carried out in a team of different health professions that assume the care over a territory. There are limitations and challenges for the best development of the actions that were intensified by the pandemic of COVID-19. It is important that further studies be carried out to deepen the problematic. Speech therapy is a professional category that contributes to people's health in their places of life and work, making its insertion in the Primary Care of the Unified Health System fundamental.

**Keywords:** Primary Health Care; Speech, Language and Hearing Sciences; Voice Disorders; Occupational Health; Faculty.

### Resumo

**Objetivo:** caracterizar a atuação de profissionais fonoaudiólogos na saúde vocal de professores, no âmbito da Atenção Primária à Saúde, em um município do Nordeste do Brasil. **Métodos:** trata-se de um estudo de caso, com abordagem qualitativa. Participaram da pesquisa cinco profissionais fonoaudiólogas inseridas no Núcleo Ampliado de Saúde da Família e Atenção Básica. A coleta de dados foi realizada a partir de entrevistas semiestruturadas. Os dados foram interpretados por meio da técnica de análise de conteúdo. **Resultados:** caracteriza-se a atuação fonoaudiológica na Atenção Primária em Saúde e saúde vocal de professores. São identificadas atividades realizadas pelos Núcleos de Apoio à Saúde da Família que favorecem o reconhecimento da Atenção Primária em Saúde como local virtuoso para ações de promoção da saúde e prevenção de agravos por meio de ações de Vigilância em Saúde do Trabalhador (a). O Programa Saúde na Escola é reconhecido como potente dispositivo para a realização de ações intersetoriais para a implementação do Protocolo de Distúrbios da Voz Relacionado ao Trabalho. **Conclusão:** as atividades realizadas pela fonoaudiologia se caracterizam por ações de promoção da saúde, realizado em equipe multiprofissional que assume o cuidado sobre um território. Existem limitações e desafios para o melhor desenvolvimento das ações que foram intensificadas pela pandemia de COVID-19. Importa que sejam realizados outros estudos que aprofundem a problemática. A fonoaudiologia é uma categoria profissional que contribui para a saúde das pessoas nos seus locais de vida e trabalho, tornando-se fundamental sua inserção na Atenção Básica do Sistema Único de Saúde.

**Palavras-chave:** Atenção Primária à Saúde; Fonoaudiologia; Distúrbios da Voz; Saúde do Trabalhador; Docentes.

### Resumen

**Objetivo:** caracterizar la actuación de los profesionales fonoaudiólogos en la salud vocal de los profesores, en el ámbito de la Atención Primaria a la Salud, en un municipio del Nordeste de Brasil. **Métodos:** se trata de un estudio de caso, con abordaje cualitativo. Participaron en la investigación cinco profesionales fonoaudiólogos inscritos en el Núcleo Ampliado de Salud de la Familia y Atención Básica. Los datos se recogieron mediante entrevistas semiestruturadas. Los datos se interpretaron mediante la técnica de análisis de contenido. **Resultados:** se caracteriza la actuación fonoaudiológica en la Atención Primaria en Salud y la salud vocal de los profesores. Se han identificado actividades realizadas por los Núcleos de Apoyo a la Salud de la Familia que favorecen el reconocimiento de la Atención Primaria en Salud como un local virtuoso para las acciones de promoción de la salud y la prevención de los daños mediante las acciones de Vigilancia en Salud del Trabajador (a). El Programa de Salud Escolar es reconocido como un poderoso dispositivo para la realización de acciones intersectoriales para la implementación del Protocolo de Trastornos Vocales Relacionados con el Trabajo. **Conclusión:** las actividades realizadas por la fonoaudiología se caracterizan por ser actividades de promoción de la salud, realizadas en equipos multiprofesionales que asumen el cuidado de un territorio. Existen limitaciones y retos para el mejor desarrollo de las acciones que se intensificaron con la pandemia de COVID-19.

Es importante que se realicen más estudios para profundizar en la problemática. La logopedia es una categoría profesional que contribuye a la salud de las personas en sus lugares de vida y trabajo, por lo que su inserción en la Atención Primaria del Sistema Único de Salud es fundamental.

**Palabras clave:** Asistencia Primaria de Salud; Fonoaudiología; Trastornos de la Voz; Salud Laboral; Docentes.

## Introduction

Work can be conceived as a fundamental category of social life. Thus, several authors<sup>1</sup> have addressed the factors that influence and give meaning to work, seen not only as a source of income, but also as an activity that provides personal fulfillment and interpersonal relationships.

Work is an activity that can affect the health condition of individuals, generating illness, especially regarding to the psychosocial perspective<sup>2</sup>.

Workers' health is one of the prerogatives in a Unified Health System. Brazil's Organic Health Law places workers' health at the same level as actions to promote, prevent and recover health<sup>3</sup>.

The National Policy for Workers' Health (PNSTT-SUS) was instituted in 2012, to develop actions aimed at intervening in production-consumption relations and in people's work-health-disease correlations. Thus, PNSTT-SUS advocates for the consensus of specific health indicators, to reduce situations of risk for diseases arising from the work process<sup>4</sup>.

Among the work-related health risks are vocal disorders that affect voice professionals. The highest incidence of dysphonia in voice professionals is in the category of teachers<sup>5</sup>.

Work-related vocal disorders affect teachers who are subject to complications that lead to "teacher malaise"<sup>6</sup>. Prevalence perception of dysphonia among teachers is greater among basic education teachers<sup>7</sup>.

In view of the relevance of Work-Related Voice Disorder, it is necessary to have a comprehensive and organized line of care to meet this population's demands, which must have a Primary Health Care (APS)<sup>8</sup>, a communication center from the Health Care Network (RAS), and a care coordinator and organizer of the actions and services available in the network. The Extended Family Health and Primary Care Center (NASF-AB) is part of APS, and speech therapy practices are included<sup>9</sup>.

The insertion of the speech therapist in public health, specifically in Basic Health Units (UBS),

occurred due to changes in the conception of health, reorganization of services and the health care model<sup>10</sup>. This professional works on the border between the clinical and social fields. Therefore, their work must consider the social equipment present in churches, squares and schools, which represent the teachers' workspace, to promote the health of communication and stimulate the strengthening of social networks<sup>11</sup>.

There is a need to take action to promote health and prevent diseases and injuries in teachers' vocal health, an activity that must be mediated and facilitated by speech therapists in APS<sup>13</sup>.

Speech therapy in APS is still under elaboration and characterization, and further studies and scientific publications are necessary to demonstrate the potentiality of speech therapy, in its several lines of care, for the Unified Health System.

In this context, some of the social equipment present in the territory evaluated are the schools, the teachers' workplaces. These places are essential for carrying out planned interventions to meet the specific demands of teacher's vocal health. A link which brings together health and education activities is the School Health Program (PSE). This is a multi-sector program that considers schools as privileged spaces for health promotion and disease prevention practices, by means of shared actions and co-responsibility for care<sup>12</sup>.

This article presents the results of a research study, which assumed workers' health as a model, and demonstrates the actions that were carried out regarding the vocal health of teachers. In this perspective, it aimed to characterize the performance of speech therapists with respect to the vocal health of teachers within APS, in a city of the Brazilian Northeast.

## Methods

Research was approved by the Research Ethics Committee. All participants signed the Free and Informed Consent Form, accepting to participate as volunteers and authorizing the disclosure of results.

This is a case study with a qualitative approach which counted with the participation of five speech therapists from the Expanded Nucleus of Family Health and Primary Care (NASF-AB), from a city in Northeastern Brazil.

Inclusion criteria were: being speech therapists and resident speech therapist of the NASF-AB of the municipal health department, of both genders, independently from the time duration working in APS.

Data collection was carried out respecting the biosafety rules related to the Covid-19 pandemic, using personal protection equipment and social distance measures recommended by the World Health Organization.

Semi-structured interviews were performed in basic health units where the research participants worked, through a script with questions about the characterization of the NASF-AB performance regarding teachers' vocal health. The interviews were conducted from November 2020 to March 2021, being stored in audio record format for transcription from digital media to written text using Microsoft Word software.

Data was analyzed using the content analysis technique, which consists of a set of communication techniques aimed at describing the content of messages to allow inference of knowledge relative to the conditions of production/reception of these messages<sup>14</sup>.

All discursive data was analyzed following a chronological sequence of pre-analysis, material exploration, treatment and interpretation. Initially, the transcription of recordings was carried out, including the coding of interviewees, in which the speech therapists were represented as "F1" to "F5". Then, validation of the interviews was carried out by listening to recordings and reading transcriptions, by two researchers, as well as successive readings to identify sense nuclei, and thematic categories and subcategories.

The following subcategories of analysis emerged from the thematic content analysis: a) functional characterization; and b) characterization of activities in workers' health developed by speech therapy in APS and teachers' vocal health.

Operational categories for the analysis of functional characterization were: a) age; b) time of work in APS; and c) type of link with the health service. The operational categories to analyze the characterization of the activities in workers' health, developed by speech therapy in APS, as well as teachers' vocal health, were: a) activities carried out by speech therapists in APS; b) NASF-AB demands; c) perception of speech therapists about the role of APS in teachers' vocal health; d) knowledge about the Care Network for Workers' Health; and e) perception of the health needs of municipal teachers (CHART 01).

**Chart 1.** Matrix of analysis categories and operational categories used for analyzing the interviews, 2020.

Analysis category	Operational categories
Functional characterization	Age Time working in Primary Health Care Type of professional relationship
Characterization of activities in workers' health developed by speech therapy in Primary Health Care and vocal health of teachers.	General activities carried out by speech therapists in APS Activities carried out by speech therapists focused on Workers' Health Demands for speech therapy services for NASF-AB Perception of speech therapists about the role of Primary Care in the vocal health of teachers Knowledge about RENAST Improvements of Workers' Health Care services Perception of the health needs of municipal teachers

Legend: APS - Primary Health Care). NASF-AB - Extended Nucleus of Family Health and Primary Care. RENAST - Network for Integral Care in Workers' Health.

## Results

### Functional characterization:

Five female speech therapists who work in NASF- AB participated in the study, having a mean

age of between 22 and 59 years, time of work in APS ranging from one month to ten years, three being resident professionals in family health and two contract speech therapists, as shown in Chart 2.

**Chart 2.** Functional characteristics of speech therapists working in primary health care in a Northeastern Brazilian municipality, 2020.

Interviewed	Age (years)	Time working in Primary Health Care	Type of professional relationship
F1	23	1 month	Family Health Resident
F2	22	8 months	Family Health Resident
F3	59	8 years	Temporary employee
F4	27	1 year and 10 months	Family Health Resident
F5	37	10 years	Temporary employee

Legend: APS - Primary Health Care

### Characterization of activities in worker's health developed by speech therapy in APS and the vocal health of teachers

Chart 3 shows results regarding analysis categories and operational categories of the thematic content of speech therapy activities in APS and the vocal health of teachers.

**Chart 3.** Characterization of activities in workers' health developed by speech therapy in aps and vocal health of teachers, in a Northeastern Brazilian city, 2020.

Analysis category	Operational categories	Textual corpus
General activities carried out by speech therapists in Primary Health Care	<p><b>Technical-pedagogical activities</b> - technical guidance, matrix support, permanent education, health education for community members, promotion and prevention actions, waiting room.</p> <p><b>Assistential activities</b> - activities in therapeutic/operational groups, individual consultations, home visits, intersectorial actions and network articulation.</p> <p><b>Activities in context of Covid-19 pandemic:</b> interruption of groups, PSE and use of information and communication technologies.</p>	<p>[...] <i>Technical guidance, matrix support, continuing education, health education for community members, promotion and prevention actions. These are monthly thematic actions that happen (F2).</i></p> <p>[...] <i>The speech therapist participates in groups; there are several groups that exist in the units that our team cover; participates in shared support meetings, in waiting rooms, which are small talks that occur at the reception of the units. The speech therapist also offers technical orientations that are individual consultations; they do home visits; Yes, the NASF team works in the School Health Program (F5).</i></p> <p>[...] <i>Yes! The CREAS ... I don't know if my answer makes sense... but we get in touch, and depending on the case we have to have a more accurate look and the CREAS does this ... (F2).</i></p> <p>[...] <i>so, then I usually contact the Polyclinic staff and they always contact us back (F3).</i></p> <p>[...] <i>groups are stopped for now. We are resuming little by little. For now, we are doing waiting rooms, but we are not doing health promotion, because everything is stopped (F1).</i></p> <p>[This year was an atypical year. Last year we did health work in schools [...]] (F3).</p>
Activities performed by speech therapists focused on Workers' Health	<p>Campaigns: Voice Day; Educational Activities at Schools - carried out for the school community in the context of the School Health Program. Protocols - Work-Related Voice Disorder Protocol. Workers' Health Surveillance - environmental conditions for safe work such as environmental setting, acoustics of classrooms, environmental noise reduction, vocal hygiene.</p>	<p>[...] <i>Look, it's interesting. I attended little in teachers' vocal health; but we have vocal health in the month of April; we work this issue a lot on Voice Day. I have given lectures on voice care at school with the teachers [...]] (F3).</i></p> <p>[...] <i>No, it never came to me. Now, it is also worth mentioning the DVRT created by the Ministry of Health so that primary care identifies the cases of work-related vocal disorders and there's even a notification form and everything. So, then, I wonder: I've never seen this in the unit, it should be known by the whole team [...]] (F1).</i></p>

Analysis category	Operational categories	Textual corpus
<p>Demands for speech therapy services for the Extended Family Health Center and Primary Care</p>	<p>Predominantly childhood language disorders; post stroke dysphagia; orofacial motor skills; aphasia, Autism, Cerebral Palsy, Zika virus, learning difficulties.</p>	<p>[...] the demands that come in are language, child language, and secondly post-stroke dysphagia. Also aphasia cases. It is always like this: this triad - infant language - deviations, exchanges, delays, dysphagia and aphasia) (F1).</p> <p>[...] we receive many patients with dysphagia. There are cases of bedridden children with cerebral palsy, children with sequels from Zika virus that we have been following. In technical orientations, they are basically cases of children with Autism Spectrum Disorders, language delay, articulation disorders, stuttering, there are many learning difficulties in the municipality, many children (F3).</p> <p>[...] because demand that comes to us is that demand that is repeated due to the limitation of knowledge of health professionals. They simply identify child language as a demand for speech therapy, leaving other very important types of cases without referrals or discussion. We need to change this, showing that we work with different life phases, occupational health, voice. That sort of thing of planting the seed of our profession together with other professionals; I think this would be very important (F1).</p> <p>[...] other professionals don't know our role. They often think that we are only in the language area, and that it's for children (F2).</p>
<p>Perception of Speech Therapists about APS and Teachers' Vocal Health</p>	<p>Situational planning, screening, health promotion practices and prevention of damage to teachers' vocal health, acting on the territory as a whole, permanent education, identification of risks and environmental factors, guidelines for vocal care.</p>	<p>[...] I work a lot in the area of occupational health and this is a gap for me; we work in schools, we work on screening [...] We need to fulfill this role of identifying, and of promoting knowledge as well. Because, for example, that school is part of our territory and we have professionals there who are sick and have phonoaudiological demands, and we need to work in there, we need to promote health and prevent diseases (F1).</p> <p>"Vocal Health of Teachers is essential because we know that APS is the basis of health, it is not basic, it is basis of health, it structures health! So, if in my territory I need to embrace this school in order to promote actions of teachers' vocal health prevention, then it is not a medium complexity action that will do this, it is not a specialized speech therapist who will come and provide this care, it is the more integral NASF's speech therapist who is responsible for providing these orientations" [...] (F2).</p> <p>[...] Teachers' health here is not satisfactory, because we see that there is vocal abuse that is carried out by these teachers, a lack of interest in voice care, things that need to be worked on [...] (F5).</p>
<p>Knowledge about the National Network of Integral Care for Workers' Health</p>	<p>They are unaware of the National Network of Integral Care for Workers' Health. Workers' Health Reference Center. Health Care Networks Incipient knowledge about assistance flow - reference and counter-reference (own services and outsourced services).</p>	<p>[...] I know that we should have learned more about the Health Care Network at the beginning of the residency, and from the search of referrals in practice. We really need to know more about this network we are part of. I still know little, I would like to know more (F2).</p> <p>[Well, I don't know much about it. Last time I had contact with CEREST was when I worked in another municipality that had this service. I consider it extremely important. I don't know how it works here in this municipality (F3).</p>
<p>Improvements in the Workers' Health Care service</p>	<p>Implement National Policy for Workers' Health Implement the welcoming Reception in Workers' Health Promote qualified listening means Implement care modes in Workers' Health Health team focused on preventing work-related illnesses Integral actions between the health and education secretaries for teachers' vocal health activities Greater integration between health and education professionals Extended Center for Family Health and Primary Care as a collaborative team and specialized support in Workers' Health</p>	<p>[...] The issue of having more space for the health of workers, of teachers, to have more space for preventive practices. Other professionals also recognize and identify this process of getting ill, not only speech therapists. Not only dysphonia, but other diseases; we need to think of ways to care for workers; of better care and attention, of qualified listening and welcoming within our unit (F1).</p> <p>[...] So, I think that one of the actions would be to establish agreements between the secretariat of health and the secretariat of education. These secretariats need to establish working groups so that actions are integrated. The School Health Program already exists, but they are still punctual actions that focus on students' health (F2).</p>

Analysis category	Operational categories	Textual corpus
Perception of health needs from municipal teachers	<p>Better infrastructure in schools</p> <p>Minimization of environmental risks - physical, chemical, biological, ergonomic, psychosocial</p> <p>Speech therapy in a multiprofessional team. Collaborative and interdisciplinary work</p> <p>Line of care focused on workers' health in APS</p>	<p>[...] school conditions are poor. This can result in mental and physical illness. The teacher is a category that has been suffering with this, and that we really need to look at them and really broaden our vision (F1).</p> <p>[...] we can give orientation about vocal health, but there is a work overload that needs to be solved with better working conditions, and income. Many of them work in two schools, three schools. How can they seek care? They only seek care when they are already sick, when there is a nodule in the vocal fold or a polyp (F3).</p> <p>[...] there is no point in going to school and saying: "Ah, you need to speak more quietly!" and give orientation, if the classroom doesn't have proper acoustics, if there is noise, if the class has more than 30 students. It is necessary to adapt all of this (F4).</p> <p>[...] The physical structure of the school is not suitable for the proper use of the voice ... I believe that municipal schools are most affected by poor structure conditions, organization, environmental setting, air conditioning. They are classrooms with many students in a small physical space (F2).</p> <p>[...] it is important to listen to speech therapists to propose solutions regarding school structure. Thus, by improving the conditions of the work environment, one can improve vocal performance, promoting health and preventing diseases. The students will also benefit (F3).</p>

## Discussion

### *Activities performed by speech therapists in APS*

#### General activities

It is possible to identify from the analysis of the speeches, that actions of speech therapists in APS are characterized by assistance and technical-pedagogical activities. These demand specialized knowledge from speech therapists to discuss cases and construct a Single Therapeutic Project and a Community Therapeutic Project, through team meetings, as well as the availability of structural support.

The professional speech therapist can contribute in several ways to the health care network, and this range of actions permeate psychosocial clinical issues<sup>15</sup>. Thus, the therapist develops actions in the professional field (speech therapy and its specialties) and in the multi-professional field (collective health), as in the areas of work management and health education, which includes team meetings for technical and pedagogical support and articulation with the health network<sup>16</sup>.

These activities are mentioned by the participants of the research study, when asked about the articulation of APS with specialized care. Moreover, they point to the understanding of a professional activity that focuses on intersectionality and actions in care networks that involve different public policies, such as those of health and education.

COVID-19 represented changes in the acting process of professionals, making the pandemic a determinant to limit even more the vocal health activities in APS. Because of social distance, activities were developed remotely. This corroborates with Oliveira et al.<sup>19</sup>, who identified adjustments in the APS activities to the context of the pandemic, so that teams turned to the main goal of facing COVID-19.

The changes were necessary during the time when there were no vaccines and, therefore, school activities were suspended. Meetings, groups, home visits and consultations became unviable due to risks of infection by the Sarv-Cov-220 coronavirus.

Information and Communication Technologies made it possible to mitigate the damage of the pandemic, and human communication became even more important so that distancing did not mean isolation. The pandemic imposed the need for teams to communicate through digital means, and social networks became spaces for health education activities.

It is important that NASF-AB and PSE elaborate ways to carry out actions for workers' health, aiming at the production of care, especially after the pandemic. Social isolation, death of teachers by COVID-19, and the Home Office routine represent new ways of getting sick from mental suffering, typical of public health emergencies.

### Worker health activities

Regarding workers' health activities developed by speech therapists, specifically the vocal health of teachers in the municipal educational system, we inferred the absence of activities for the promotion of health and prevention of diseases and health problems, for teachers who work at schools in areas covered by primary care.

In this sense, lack of knowledge by family health teams, about this subject and its guiding instruments, has been the main determining factor for the absence of actions aimed at the vocal health of teachers. This contributes to the absence of co-responsibility in health care and the non-implementation of vocal health protocols, such as for example, the Work-Related Voice Disorder protocol - DVRT<sup>8</sup>, which is a protocol of Workers' Health Surveillance (VISAT) for APS.

There is reference to activities carried out for the school community in the context of the School Health Program. This program aims to articulate primary care to the municipal school network, to implement actions to promote, prevent and assist students' health.

There is a need for actions to promote health and prevent diseases and the aggravation of teachers' vocal health. The presence of a speech therapist in teams of the Extended Center for Family Health and Basic Care, is important for the continuous application of activities in APS territories. The physical spaces in schools should be recognized as propitious social spaces to reflect upon healthy environments and appropriate working conditions<sup>13</sup>.

The promotion of health and the prevention of diseases and vocal disorders in teachers, by means of multi or interdisciplinary actions, which consider teachers in their real working conditions, are opportunities for speech therapy practices to be applied also as practices of Workers' Health Surveillance.

It is important to develop guidelines about proper work-environments, acoustics of classrooms, reduction of environmental noise and vocal hygiene, with dynamics, strategies and educational processes that promote the health and prevention of diseases among teachers<sup>17,18</sup>.

The School Health Program is a strategy that is essential for speech therapy practices in APS. It entails a set of actions that favor speech therapy activities on workers' health, specifically that of teachers. But in the context of the Covid-19 pandemic, the need for social distancing imposed

a distance between the family health teams and schools, which had their classes suspended and/or held remotely.

### NASF-AB Demands

The demands that are identified by the family health teams and referred to speech therapists of NASF, can determine the mode of action of these professionals, unless proper planning of interventions is duly organized.

Regarding the main demands for speech therapy in primary health care, it was observed that there is a tendency for health professionals to refer users' demands to the care related to children's language disorders, to dysphagia after a stroke, and to orofacial motor skills. This finding is in line with what the scientific literature has identified. Delayed speech development and phonetic/phonological disorders have been the main demand for the speech therapist's work in APS<sup>16</sup>.

A lack of knowledge about the potentialities of speech therapy work in APS was also reported. There is still a lack of knowledge about work on different life cycles in different healthcare networks and in Health Surveillance<sup>16</sup>.

A study conducted with NASF-AB professionals identified a reductionist perception regarding speech therapy performance in APS<sup>21</sup>. This data points to the importance of interprofessional and interdisciplinary education, that allows several professions working in healthcare teams to understand the fields and specificities of each profession.

Speech therapists working in APS have the challenge of sharing the diversity of possibilities of speech therapy practices and interventions, resisting the "hyper-specialization" mode that leads to reductionism and ignorance by other professionals and the population. In this manner, they will be able to offer other competences and abilities to act in the lines of care and in care networks of the Unified Health System.

### *Perception of speech therapists about the role APS in the vocal health of teachers*

The APS must play a strategic role in vocal health care, guidance, raising of awareness and promotion of health in schools, as well as assume an articulation role with the network of services and intersectoral engagement, to meet the health



needs emanated from the territory and work on the screening and identification of these demands.

From the perspective of intersectoral engagement, the NASF-AB team, through the PSE, should support the health and education teams based on specific problems or demands that arise in school units<sup>12</sup>.

This study found that there are activity initiatives, even if incipient and punctual, such as the International Voice Day Campaigns, that can be taken on by NASF-AB, mobilizing professionals from the health teams in collaboration with schools.

It is inferred that there is speech therapy activity in occupational health in APS, by reports of situational planning, screening, and the critical reflection on the need of NASF-AB to assume practices of health promotion and disease prevention for the school community.

We highlight the role of APS through continuing education, which is a powerful tool to stimulate the empowerment of teachers regarding care of their own voice and to make them autonomous agents and managers of their own health<sup>22</sup>.

Confluent to this perspective, the role of APS involves preventive actions aimed at early identification of risks associated with vocal disorders and voice care guidance. In this scenario, the resolution of health actions is implied in the effective work of the multi-professional team, meeting the health needs of the population<sup>18, 23</sup>.

The non-existence of permanent education actions is related to the perception of speech therapists, that there is negligence from teachers regarding their own vocal health. The speech therapists recognize that there is little or no promotion of vocal health and blame the teachers themselves for the lack of care with their voices. But it is important to emphasize that if there are no actions to promote the health and prevention of vocal disorders, teachers will remain unaware of risk situations for their vocal health<sup>22</sup>.

### *Knowledge about the Workers' Health Care Network*

Regarding the National Network for Integral Care of Worker's Health (RENAST), when asked about their knowledge about the care assistance flow in the municipality, they showed incipient knowledge. The also expressed lack of knowledge about the availability of these specialized workers' health services.

This lack of knowledge could be due to several reasons, among them because professionals do not analyze of the municipality, lack of planning and management of work processes, the flow being undefined, and because of the fragmentation of the reference and counter-reference system between public and outsourced services<sup>24</sup>.

As a suggestion to improve this scenario, we suggest permanent education actions with players involved in this care assistance flow (workers from different care networks and managers) and the formulation of strategies to bring together professionals who work in the health services network.

### *Improvements in the Worker's Health Care service*

Regarding the improvements to be adopted in the workers' health care service, there is a consensus that all professionals working in APS should know about workers' health and should put into practice the principles, guidelines, and strategies contained in PNSTT-SUS, emphasizing practices of health promotion, health care, and the surveillance of workers' health.

It is up to the municipal health managers to manage workers' health actions and services, and APS is responsible for making them operational<sup>4</sup>.

For Costa et al.<sup>23</sup> resoluteness can be achieved through a welcoming service, and through the co-responsibility of the teams in health care.

Furthermore, another important difficulty at times is to implement protocols that guide the coordinated development of actions in health and education<sup>25</sup>. In this sense, the participants indicate potential paths for greater integration, to overcome the weaknesses of the worker's health care based on intersectionality.

The construction of intersectionality in workers' health faces challenges in relation to practices and knowledge, having few proposals for the integration between the technicians in this field and the managers and workers in general<sup>26</sup>.

Articulation is fundamental for the effectiveness of the intersectoral actions, and the participation of workers produces favorable effects in this process<sup>27</sup>.

The APS must assume workers' health from the perspective of the work as a structuring element of life. People are in their respective territories living and working. This means getting sick and dying according to their ways of life and of work.

It is important that reception at APS begins with the fundamental question: What do you work with? What do you do to earn a living? Once these questions are answered, the teams will know why this user gets sick, what are risk situations to which he/she is being exposed, and which promotion, prevention, and care measures should be part of this person's Individual Therapeutic Project.

The NASF-AB is the device that allows APS teams to assume this perspective through the structuring and by strengthening inter-professionalism.

### *Perception of the health needs of municipal teachers*

Teachers' health needs were able to be identified in the interviews: weak infrastructure of schools, inadequate ventilation conditions, presence of noise influencing vocal health and the teaching-learning process, overcrowded classrooms, and work overload.

Work overload can result in physical and mental exhaustion. It interferes with the capacity for self-care and the effectiveness of orientations, especially when it depends on structural conditions of the work environment.

The condition of the teacher's work environment should be a quality indicator of teaching and of the education as a whole. It is important to ensure the adequate physical and functional structure of schools, with well-equipped, ventilated classrooms that provide a healthy setting for educational functions<sup>28</sup>.

There were statements of concern about the school infrastructure and teachers' vocal health throughout the interviews.

There are more cases of self-reported vocal alteration and worse working conditions from public school teachers than from private school teachers<sup>29</sup>. Teachers perceive alteration in vocal production related to conditions and determinants of the work environment (noise exposure), but also from organic conditions, such as allergies and concerning respiratory disorders<sup>30</sup>.

It is important to emphasize the importance of articulated action from the responsible sectors in this process, working in an intersectoral and engaged manner to solve the health needs of teachers.

Although there is a vast literature showing high rates of vocal disorders in teachers, aside from studies stressing the importance of the actions of speech therapists in APS regarding the care of teachers'

vocal health, other studies have identified that lines of care for workers' health are still needed, to promote health, prevent disease, and articulate with health networks through intersectoral engagement.

### **Conclusion**

This research study characterized the speech-language therapy actions in the context of APS for workers' health, specifically regarding the vocal health of teachers in a city in the Brazilian Northeast. It identified practices, proposals for the promotion of health and prevention of diseases among teachers.

The participants recognized the importance of the National Policy for Workers' Health in APS, considering the organization of care according to life phases. It is important to emphasize the importance of interprofessionalism, interdisciplinarity, potentiation of the School Health Program, creation of Intersectoral Commission of Workers' Health, development of risk maps for the vocal health of teachers and the development of PTS considering information about the work of APS users.

Speech therapy has developed knowledge and techniques that are applicable to health promotion and prevention of diseases, that have in primary care a virtuous scenario of opportunities for carrying out the principles of integrality and equity. It is important to highlight these possibilities to the family health teams.

Possibilities of analysis and discussion on this theme continue to arise. The results of the present study do not allow for generalizations. However, the findings contribute to the discussion about the activities of speech therapy in family health, primary care and workers' health, demonstrating the importance of this professional category for the Unified Health System.

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