http://dx.doi.org/10.23925/2176-2724.2018v30i4p688-704

Professional performance and challenges of speech-language pathology and audiology practices in a municipal public healthcare network

Atuação do profissional e desafios da prática fonoaudiológica em rede de saúde pública municipal

Actuación del profesional y desafíos de la práctica fonoaudiológica en red de salud pública municipal

*Larissa Vieira Araújo de Pádua Chiodetto**
*Irani Rodrigues Maldonade**

Abstract

Introduction: The Unique Health System was instituted by the federal constitution; guaranteeing that its services are adapted to the population's health needs, context which inserts the speech-language pathology and audiology therapist. **Objective:** to know and to characterize the work developed and the challenges faced by speech-language pathology and audiology therapists within a large municipal health network of São Paulo's interior. **Methods:** It is a qualitative study, transversal, with basis from the 466/2012 CNS/MS resolution and approved under the number 1.624.754 by the Research Ethics Committee at a public university in São Paulo. The data were collected by a semi-structured questionnaire containing open, essay questions, applied to the speech-language pathology and audiology therapists that work in the Health Department of the city who agreed to participate in the research. The data were analyzed according to repetition and relevance criteria of the Content Analysis. **Results**: The insertion of the speech-language pathology and audiology therapist is significantly higher in secondary care than in any other levels of health care. The distribution of professionals by the territories is irregular in the city. The matriciamento support is developed differently by the speech-language pathology and audiology therapists

*Universidade Estadual de Campinas (UNICAMP), Campinas, SP, Brazil.

Authors' contributions:
LVAPC: conception of study; data collection; writing of the article; critical review
IRM: conception of study; methodology; data collection; writing of the article; guidance.

Correspondence address: Larissa Vieira Araújo de Pádua Chiodetto larissa.chiodetto@gmail.com
Received: 09/01/2018
Accepted: 13/08/2018

by the districts of health of the city and differs from the original proposal. Furthermore, opinions about the city hall's reception of professionals needs, among participants, are quite divergent. **Conclusion:** The service of speech-language pathology and audiology therapist is characterized by unequal distribution of the few existing professionals in the levels of health care in the public health system and work in different ways. Speech-language pathologists and audiologists face challenges related to professional performance, referrals, articulations of network services and performance in matriciamento.

Keywords: Speech-Language Pathology and Audiology; Public Health; Health Management

Resumo

Introdução: O Sistema Único de Saúde foi instituído pela Constituição Federal e garante serviços adaptados para as necessidades de saúde da população, contexto no qual se insere a atuação fonoaudiológica. **Objetivo:** Conhecer e caracterizar o trabalho realizado e os desafios encontrados na atuação dos fonoaudiólogos inseridos na rede de saúde de município de grande porte do interior paulista. **Método:** Trata-se de estudo qualitativo, transversal, com base na resolução 466/2012 CNS/MS e aprovado sob o número 1.624.754 pelo Comitê de Ética em Pesquisa de uma universidade pública do interior paulista. A coleta de dados foi realizada por meio de questionário semiestruturado contendo perguntas abertas, dissertativas, aplicado aos fonoaudiólogos atuantes na secretaria de saúde do referido município que aceitaram participar da pesquisa. Os dados foram analisados, de acordo com os critérios de repetição e relevância da Análise de Conteúdo. **Resultados:** A inserção do fonoaudiólogo é significantemente maior na atenção secundária do que nos outros níveis de atenção à saúde. A distribuição dos profissionais pelos territórios é irregular no município. O matriciamento é desenvolvido diferentemente pelas fonoaudiólogas pelos distritos de saúde do município e difere da proposta original. Em relação ao acolhimento pela prefeitura das necessidades das profissionais, há divergência de opiniões entre os sujeitos participantes. **Conclusão**: O serviço fonoaudiológico caracteriza-se por distribuição desigual dos poucos profissionais existentes nos níveis de atenção à saúde no município e atuam de formas diferentes. Os fonoaudiólogos enfrentam desafios referentes à atuação profissional, aos encaminhamentos, às articulações dos serviços da rede e à atuação em matriciamento.

Palavras-chave: Fonoaudiologia; Saúde Coletiva; Gestão em Saúde.

Resumen

Introducctión: El Sistema Único de Salud fue instaurado por la constitución federal, que garantiza que los servicios se adapten a las necesidades de salud de la población, contexto en el cual se inserta la actuación fonoaudiológica. **Objetivo**: Conocer y caracterizar el trabajo realizado y los desafíos encontrados en la actuación de los fonoaudiólogos insertados en la red de salud de municipio de gran porte del interior paulista. **Método**: Se trata de un estudio cualitativo, transversal, basado en la resolución 466/2012 CNS / MS y aprobado bajo el número 1.624.754 por el Comité de Ética en Investigación de una universidad pública del interior paulista. La recolección de datos fue realizada por medio de un cuestionario semiestructurado que contenía preguntas abiertas, de ensayo, aplicado a los fonoaudiólogos actuantes en la secretaría de salud del referido municipio que aceptaron participar de la investigación. Los datos fueron analizados, de acuerdo con los criterios de repetición y relevancia del Análisis de Contenido. **Resultados:** La inserción del fonoaudiólogo es significativamente mayor en la atención secundaria que en los otros niveles de atención a la salud. La distribución de los profesionales por el territorio es irregular en la ciudad. El matriciamiento es desarrollado diferentemente por las fonoaudiólogas por los distritos de salud del municipio y difiere de la propuesta original. En cuanto a la acogida por la gerencia de las necesidades de las profesionales, hay divergencia de opiniones entre los sujetos participantes. **Conclusión:** El servicio fonoaudiológico se caracteriza por una distribución desigual de los pocos profesionales existentes en los niveles de atención a la salud en el municipio e actúan de formas diferentes. Los fonoaudiólogos enfrentan desafíos referentes a la actuación profesional, a los encaminamientos, a las articulaciones de los servicios de la red, ya la actuación en matriciamento.

Palabras claves: Fonoaudiología; Salud Coletiva; Gestión en Salud

Introduction

The Unified Health System (SUS) was established in 1990, according to the Federal Constitution of 1988, through Law 8080, which was a result of the Brazilian Health Reform, a political process proposed by the society that led to a reorganization of services and health practices[1].

Such constitutional law states that "health is a right of all and a duty of the State, guaranteed through social and economic policies aimed at reducing the risk of disease and other health problems and the universal and equal access to actions and services".

Since it deals with health care for all citizens, the services provided by SUS are tailored according to population demand and follow the expanded health perspective, such as physical, mental and social well-being. That is, the system starts from the concept of health as a phenomenon beyond the biomedical and individual vision. In addition, the system conceives the individuals in a comprehensive approach, considering them as active in their health, which is subject to social and psychological damages that must be addressed by the government, according to what was established in 1990[1].

In this way, it is possible to understand that SUS should be composed of health professionals from a wide range of fields, at all levels of health care. The insertion of Speech-Language Pathology and Audiology in the SUS occurred in this context in the late 1980s.

Currently, the speech-language pathologist and audiologist operates at all levels of care. In primary care, this professional is responsible for working on the Family Health Strategy (FHS) and on the Family Health Support Center (FHSC)[2,3].

The FHSC has a team composed by many different health professions (including speech-language pathology and audiology) that differ from the minimum team of the FHS, but which contribute to increase the efficaciousness in primary care. With respect to the FHSC, the speech-language pathologist and audiologist is managing to act on health promotion and prevention, developing both activities that are common to other health care professionals and specific actions of their own field, such as: identify risk factors that lead to communication disorders and orofacial functions; share the construction of therapeutic projects for users needing expert attention; perform shared care with the family health team; facilitate the social inclusion of users with hearing, physical and intellectual impairments; and promote continuing education for health care and education professionals concerning the different communication disorders[3].

In addition, the speech-language pathologist and audiologist may also work in the mental health field, being able to work in the Psychosocial Attention Center (PSAC) and Coexistence and Cooperative Center. In this area, the speech-language pathologist and audiologist may encourage oral and written communication, social interaction, and language development, among others[4].

Outpatient and specialized activities involve secondary (Specialized Centers and Diagnostic and Therapeutic Support Services) and tertiary (Hospital Care) care levels[5]. In these levels, the speech-language pathologist and audiologist may conduct outpatient care (individually or group), focusing on the resolution of clinical speech-language problems, more specific care during hospitalization, care in hospital bed in wards, or even in urgent and emergency units. At these levels, the speech-language pathologist and audiologist works primarily in fields such as dysphagia (assessment and rehabilitation), audiology (prevention, assessment and rehabilitation), language (prevention, assessment and rehabilitation) and orofacial motor skills (assessment and rehabilitation)[3,6].

Speech-language pathology and audiology has advanced in collective health since the implementation of the SUS. Its growth and its structuring for public care are increasingly more evident in several Brazilian municipalities. This can be evidenced by increasing demand of speech-language pathology and audiology services to society. On the other hand, it is possible to notice that the services provided to the population are scarce. A better preparation and training of the speech-language pathologist and audiologist to deal with issues of collective health and its demands has been required as an attempt to address this problem, since at the beginning of the profession in Brazil, such professional was traditionally used to individual and private clinical work. Somehow, the concern with preventive and collective care on speech-language pathology and audiology can still be considered a recent thing, as well as the profession itself in the country, when compared to medicine, for example. However, the growing work opportunities for speech-language pathologists and audiologists in

the collective health care network have contributed to their inclusion in all levels of health care[7].

It can be concluded that the speech-language pathologist and audiologist has a possibility of acting in the most diverse levels of health care, and that they contribute in interdisciplinary areas with actions aimed at all age groups[3]. Currently, the profession in the SUS is often facing issues related to the organization, management, available resources for health, professional preparation and training to act in collective health, which can affect the quality of professional work. In this context, aiming to identify subsidies for creating strategies that can contribute to the planning and improved solving of the services provided in the speech-language pathology and audiology field of the health network of a large municipality in São Paulo state, this study aimed to know and to detail the work undertaken and the main challenges faced by professionals in their work.

Method

This is a qualitative, cross-sectional, contemporary and non-comparative study. The research was approved by the University Ethics Research Committee under protocol no. 1.624.754. The data were collected from July 2016 to February 2017 by the health department of a large municipality in São Paulo state with the Health Interdisciplinary Residency Program of the University.

Before the development of this research, the project was submitted to and approved by the Secretary of Health of the municipality through the Center for Workers' Education (CETS), and then it was submitted to the Ethics Research Committee of the same University.

After both approvals, the CETS provided a list with the names of speech-language pathologists and audiologists hired by the government and a list of their respective coordinators and workplaces. Then, the research was submitted by e-mail to all coordinators, who worked with a speech-language pathologist and audiologist hired by the municipal health secretariat. This step was required by the CETS, since it shares information on the development of the research to the immediate supervisor of speech-language pathologists and audiologists, as well as showing the approval documents of the research by the municipal health secretariat and by the Ethics Research Committee, in addition to agree the contact to be made with the speech-language pathologists and audiologists who work on the relevant health unit. After the coordinators' responses acknowledging the study, a presentation letter was sent by email to introduce the research to all speech-language pathologists and audiologists, including also the Free and Informed Consent Form (FICF) (refer to Appendix I) and, if the professional accepted to participate, the questionnaire to be completed.

Thus, the data collection was performed through an argumentative questionnaire to speech-language pathologists and audiologists working in a large municipal health network of São Paulo state. Participants could choose between two ways to receive and deliver the FICF and the questionnaire completed to the researchers: by e-mail or through a sealed envelope left at the reception of their health unit. The researcher was responsible for taking and collecting the envelope with the documents. Therefore, participants could decide on how to receive them, according to their convenience or preference.

Then, speech-language pathologists and audiologists working in the municipal health network were invited to participate in the research. The inclusion criteria were: the speech-language pathologist and audiologist should be employed in the municipal health network and should be working in the data collection period. The following were excluded from the sample: individuals who were not employed as speech-language pathologist in the relevant municipal health or those who were retired, in addition to those who have not signed the FICF and/or those who did not agree to participate in the study.

Then, the answers of the participants were analyzed according to the procedures adopted by the Content Analysis. Initially, these responses were read (and reread) in order to know the contents. Then, data were selected and organized based on repetition and relevance criteria emphasized by the meanings of the participants' answers, and later those responses were categorized.[8]. According to this methodology, the repetition criterion is defined as the repetition of collected data, that is, the repetition of meanings, while the relevance involves the highlighting shown by the data, indicating its importance for the scope of the research objectives.

Results

The information contact and workplaces where speech-language pathologists and audiologists work in municipal public health network were provided by the CETS. This mapping is shown in Table 1. However, the mapping did not include the two speech-language pathologists who work in the Service for Assistance to Learning Disabilities (SABIA), hired by the municipal health secretariat. For this reason, the speech-language pathologists who work in the SABIA initiative were not invited to participate in this research.

Chart 1. Mapping of speech-language pathologists and audiologists by number of professionals in their respective workplaces provided by CETS.

Number of speech-language pathologists	Workplace
1	**Worker's Health Reference Center**
1	**Basic Health Unit DIC III**
4	**Polyclinic**
1	**Rehabilitation Reference Center**
1	**Northwest Youth Psychosocial Attention Center**
1	East Home Care Assistance
1	Worker's Health Reference Center
1	Elderly Health Reference Center
1	CAPS i SUL
2	Polyclinic III

Legend: bold text includes locations with a speech-language pathologist and audiologist who agreed to participate in the research

The researcher contact with the speech-language pathologists and audiologists of the municipal health network was conducted by an e-mail message sent to the coordinators of the places where they worked. The e-mail message introduced the survey, as well as the documents that proved the approval by the Research Ethics Committee and the approval of the completion of the study by the health secretary. Five coordinators responded promptly with no need of additional emails. After two weeks of attempts to contact the coordinators, other two coordinators responded favorably to research. Thus, 10 coordinators responded acknowledging the research and enabled the contact with the speech-language pathologists and audiologists. Four health unit coordinators acknowledged the research, however, did not enable the contact of the researcher with the speech-language pathologists and audiologists working in their respective locations. It was possible to get in touch directly with the speech-language pathologists and audiologists assigned in three of these four locations.

After the first contact with the speech-language pathologist and audiologist, the presentation of the research, the FICF and the questionnaire were sent by email. Of the 14 speech-language pathologists and audiologists, 12 acknowledged the research, and six completed the questionnaire.

During the data collection period (from August to December 2016), 13 of the 14 speech-language pathologists and audiologists listed by CETS were active, since one women was on maternity leave. All active speech-language pathologists and audiologists were invited to join the study, however, only 6 (n=6) signed the FICF, authorizing their participation and completed the questionnaire, that is, 46.1% of the speech-language pathologists and audiologists invited to the study joined it.

The results are presented as follows, according to the main topics identified in the responses of participants to the semi-structured questionnaire.

1. Characterization of participants and their inclusion in health care services

1.1 Characterization of the inclusion of speech-language pathologists and audiologists in municipal health units

The fourteen (n=14) speech-language pathologists and audiologists are distributed by the

Chart 2. Inclusion of speech-language pathologists and audiologists in relation to the workplace, main characteristic of the population served and territory covered, according to the municipal Information and Computer Coordination.

Location of inclusion	Number of speech-language pathologists in the location	Main characteristic of the population served	Care level	Territory covered	Number of inhabitants of the area served by the institution
Airport Primary Care Unit and DIC III	1	All age groups	Primary	Southwest	36,429
Home Care Assistance	1	Population in home care hospitalization	Secondary	East/North	459,633
Child/Youth Psychosocial Attention Center	2	Child population	Secondary	Northwest	162,474
Child/Youth Psychosocial Attention Center	1	Child population	Secondary	South	305,481
Specialty ambulatory – Polyclinic II	4	Child population	Secondary	All the municipality	1,135,623
Specialty ambulatory – Polyclinic III	2	Child population	Secondary	All the municipality	1,135,623
Elderly Health Reference Center	1	Fragile Elderly Population	Secondary	All the municipality	1,135,623
Worker's Health Reference Center	2	Adult population with nexus-causal in occupational health	Secondary	All the municipality	1,135,623
Rehabilitation Reference Center	1	Adult and Child Population	Secondary	All the municipality	1,135,623
"Dr. Mario Gatti" Municipal Hospital	1	Adult Population	Tertiary	All the municipality	1,135,623

Source: IBGE (Census 2010, Information Base by Census Sector)

municipal health network in five districts (North, South, Northwest, Southwest and East) in the respective locations and areas shown in Table 2. It should be noted that there are speech-language pathologists and audiologists working in more than one health unit

Considering speech-language pathologists and audiologists who work exclusively with an age group and speech-language pathologists and audiologists who work in all age groups, 12 speech-language pathologists and audiologists work with child and adolescent health, while 7 speech-language pathologists and audiologists work with adult and elderly health. Four (28%) speech-language pathologists and audiologists work exclusively with child and adolescent health, while three (21%) work exclusively with adult and elderly health.

Concerning the time of profession as speech-language pathologists and audiologists of the municipal health network, two (33%) work in the municipal health network for more than 15 years, while all others (66%) are working for less than 5 years.

With respect to the scope of speech-language pathologists and audiologists by level of care, among the locations that provide such assistance, eight (80%) are inserted into the secondary care, while one (10%) is inserted in the primary care and one (10%) is included in the tertiary care.

Concerning the territory covered by a speech-language pathologist and audiologist, six (60%) locations are responsible for a population of 1,135,623 people of the municipality. Three (21%) are alone as speech-language pathologists and audiologists allocated in units that cover the entire municipal population, being two reference centers and a municipal hospital.

1.2 Characterization of the speech-language pathologists and audiologists of the study

All the speech-language pathologists and audiologists were hired through a tender and are female. The employment profile is 36 hours per

week and, on average, they work for 7.3 years in the municipal public health network.

All professionals reported that they do not perform any other work activity in addition to this work on the municipal health network. The individual characterization of speech-language pathologists and audiologists who participated was not individually detailed in order to protect the confidentiality status of their participation.

Two (33%) speech-language pathologists and audiologists included in the study work in more than one health unit. With respect to the time period working in the public health network, four (66%) of the speech-language pathologists and audiologists have been working for less than five years in the municipal network, while two (33%) have been working for more than 15 years. And, in relation to the time period working in the private health network, the participants who mentioned it, worked for 3.75 years on average.

1.3 Characterization concerning the population and work performed by a speech-language pathologist and audiology in their respective workplace(s)

The data relating to the characterization of the population and the work performed by a speech-language pathologist and audiologist in their respective workplace(s) are shown in Table 3. Due to the inclusion of two speech-language pathologists from the same workplace, which is the Polyclinic II, they were identified in this context as a *Speech-Language Pathologist 1* and *2* of this location.

According to the data shown in this table, three (50%) participants reported to perform shared care. Four (66%) speech-language pathologists and audiologists reported to participate in team meetings. In addition, among the speech-language pathologists and audiologists working in secondary and tertiary care, only one (16%) reported to participate in team meetings.

Regarding the population served, 50% of the speech-language pathologists and audiologists who participated in this study with adult health, 83% work with child health. Three (50%) of them work exclusively with child and adolescent health, while two (33%) work only with adult health.

According to Table 3, it can also be noticed that the speech-language pathologist and audiologist performs several actions aimed at the worker's health in several areas in the Worker's Health Reference Center, such as: investigation, health surveillance, epidemiological surveillance and assistance in relation to the health of the worker. However, it is clear that the CEREST is not linked to the Municipal Occupational Health Service of the municipality concerned.

2. The challenges faced by the speech-language pathologist and audiologist in his work

The challenges faced by the speech-language pathologist and audiologist in his work were discussed in questions 9, 12 and 13 with the participants of the study. The topic related to challenges was subdivided into three axes presented below.

2.1 With respect to the professional performance

Some participants itemized their answer to question 12, which refers to the challenges found in the professional performance, while others provided a general answer. Such challenges are expressed as percentages in Chart 1, according to the frequency reported in their answers. The main challenges listed were:

a) Lack of resources in the health network: This includes the absence of certain tests, as the recorded nasolaryngoscopy, MRI with sedation for differential diagnosis.
b) Long stay in waiting list to receive health care.
c) Doctor-centered work processes
d) Hierarchical relationships permeated by micro and macro political interest.
e) Demand exceeding services supplied
f) Lack of encouragement from municipal government to conduct continuing education

2.2 Gaps in relation to referrals

In question 9, each speech-language pathologist and audiologist was asked about the gaps (in the sense of failure and lack) in relation to referrals in his work. The participants' responses are expressed in percentage in Chart 2, being divided into the following categories:

a) Long stay in waiting list: The services available do not cover all areas of speech-language pathology and audiology rehabilitation.

b) Care duplicity: Otolaryngology appointments and audiological tests are usually performed at different locations, what usually leads to the duplication of the same care in another service.

Chart 3. Characterization of work performed by speech-language pathologists and audiologists included in the research for each workplace and target population.

Speech-language pathologist workplace	Work performed	Profile of the population served
Worker's Health Reference Center	• Assistance to workers with complaints of work-related diseases • Work on epidemiological surveillance • Investigation of work accident records reported on RAAT in municipal emergency rooms • Work on sanitary surveillance (inspection of workplaces) • Creation of therapeutic groups addressing the various aspects of work-related diseases, using some therapeutic resources of integrative health for self-care. • Activities related to the speech-language pathology: audiological assessment, assistance on vocal changes and tinnitus complaint.	Adult workers of Campinas and region presenting work-related health complaints.
Basic Health Unit DIC III	• Participation in team meetings • Home visits • Shared care • Therapeutic groups • Educational health actions	Adult and child patients from DIC 3 and CS Airport
Rehabilitation Reference Center	• Physical rehabilitation related to speech-language pathology.	Adult and child patients who need physical rehabilitation, mostly due to neurological involvement.
Child/Youth Psychosocial Attention Center	• Participation in team meetings and external meetings with the network (social welfare, health and education), network articulation, matrix support in health centers, hospitality, ambience, • Shared care with professionals from health centers and specialties • Individual care in mental health • Group care for patients and parents group • Assessment and speech-language pathology therapeutic care in oral and written language and orofacial motor function. • Referrals to specialties, including other speech-language services provided by the municipality.	Children and adolescents from 0-18 years old, who live in the Northwest area, with a suspected or diagnosed mental health disease with severe and persistent disorders.
Polyclinic II (Speech-language pathologist 1)	**Polyclinic II:** • Assessment and speech-language pathology care and guidance.	Children and adolescents with changes in oral and written language.
	South District Health Centers: • Matrix support activities • Participation in the Network and Adolescents Meeting • Assessment of patients on waiting list • Shared care • Participation in team meeting in basic units, planning, guidance, and groups.	
	Mario Gatti Municipal Hospital: • Care in outpatient, inpatient and ICU, with dysphagia as the main demand.	Patients from all over the municipality, admitted to the ward or ICU.
Polyclinic II (Speech-language pathologist 2)	**North District Health Centers:** • Assessment and speech-language pathology care • Case discussion with professionals from primary health units • Participation in team meetings	Children with language changes who live in the South district.
	Polyclinic II: • Assessment and speech-language pathology therapeutic care, mainly in language and orofacial motor function.	

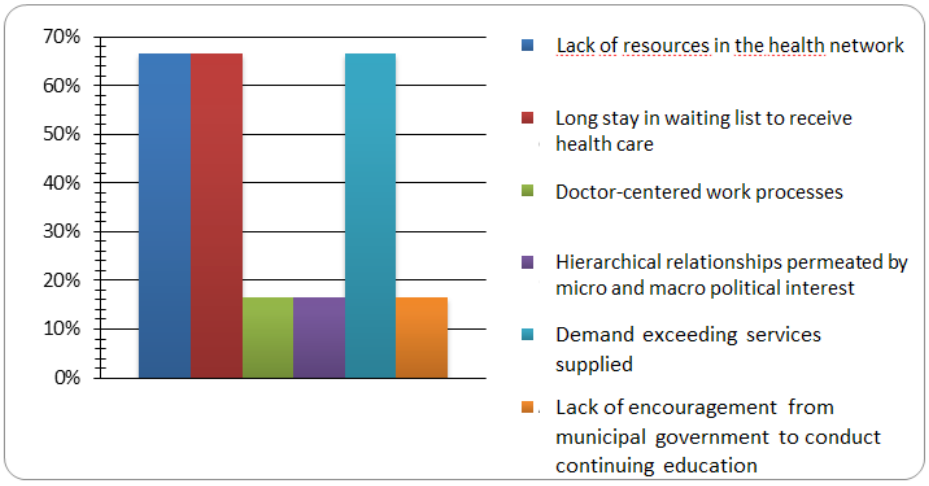

Figure 1. Percentage by challenge listed regarding the work of professionals.

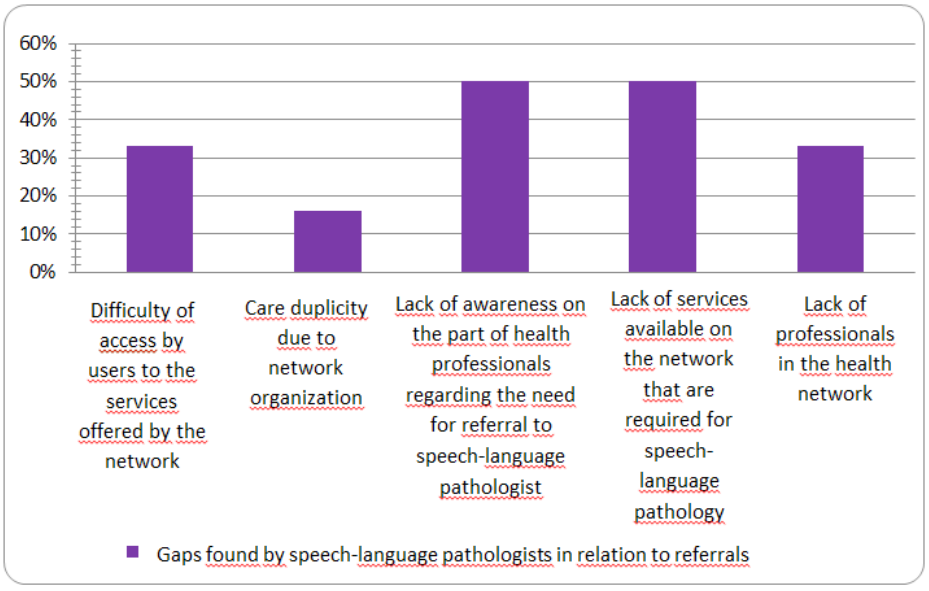

Figure 2. Gaps found by speech-language pathologists and audiologists in relation to referrals.

c) Lack of awareness on the part of health professionals regarding the need for referral to speech-language pathologist and audiology: The professionals responsible for referral do not know speech-language pathology and audiology disorders enough to make the referral for speech-language pathology and audiology, as well as to the appropriate location with a speech-language pathologist and audiologist. This can be exemplified by the following response from Speech-language pathologist 1: *"(...) Few professionals of primary care units suspect that a hearing complaint may be related to the work of the patient, therefore, they do not refer the patient to the CEREST".*

d) Lack of services available on the network that are required for speech-language pathology and audiology: Absence of recorded nasolaryngoscopy test, rehabilitation for global developmental changes, vestibular rehabilitation service, cognitive rehabilitation and specific swallowing test.

e) Lack of professionals in the health network: Lack of speech-language pathologists and audiologists, which increases the waiting lists of referrals.

2.3 Articulation of the speech-language pathologist and audiologist work with the network from the point of view of the professional.

All speech-language pathologists and audiologists (100%) participating understand that they articulate their work with the network. One participant (16%) stated that the network articulation is greatly affected by the interests of the management and by the personal availability of the staff. While other participant (16%) stated that she has been able to achieve the support of the local management to take action. However, all participants (100%) indicate difficulties regarding the articulation of the speech-language pathologist and audiologist work with the network, in addition to those already mentioned, such as: lack of human resources, little workload available for network articulation and lack of definition of a public policy concerning worker's health. These results are shown in Chart 3.

3. Matrix organization

Questions 10 and 11 referred to the matrix organization topic. The analysis of the answers of the participants was organized in three axes, according to the distribution below.

3.1 Characterization of matrix organization, according to the point of view of the professional

With respect to the matrix organization concept, the participants defined it as: support (33%), strategy (33%), device (16%), link between specialization and primary care (16%). All refer to the joint efforts and coordination of knowledge and experience between disciplines, for the preparation of full care approaches to patients. However, only one (16%) participant states that the matrix organization is a way to train health care professionals at various levels of the SUS to identify possible health disorders.

3.2 Experience of professionals in matrix organization

All speech-language pathologists and audiologists who participated in the research reported to perform the matrix organization. Concerning the activities that describe this experience, one participant (16%) reported to work in matrix organization at every care level of the SUS. Three (50%) other participants reported to work in matrix organization only in Primary Care, while two (33%) participants did not specify the care level.

Chart 4 shows the matrix organization actions that speech-language pathologists and audiologists reported to perform expressed in percentages.

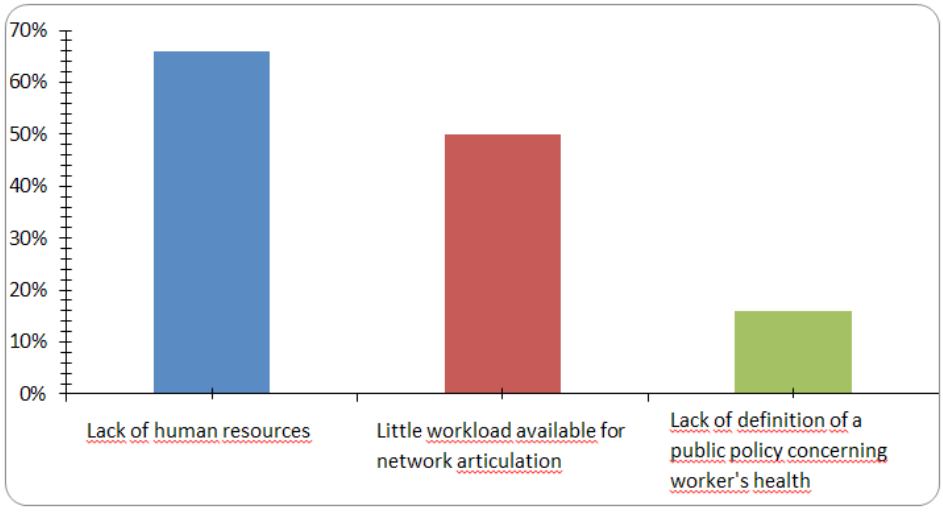

Figure 3. Percentage of speech-language pathologists and audiologists in relation to articulation issues in their work with the network, from their point of view.

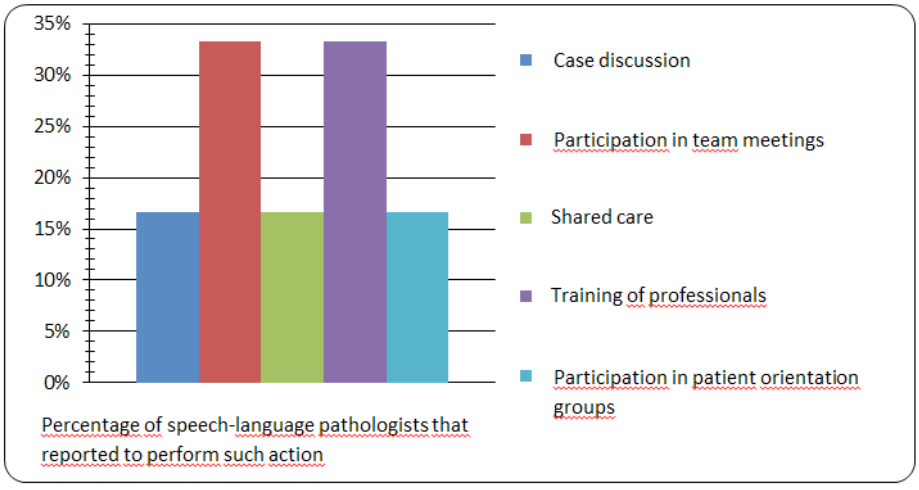

Figure 4. Percentage of speech-language pathologists and audiologists per matrix support activity performed.

3.3 Challenges on the work in matrix organization

Two participants (33%) reported the following challenges on their work in matrix organization: *"Difficulties due to the high turnover of professionals in the UBS and due to the great demand on them"* and *"Actually, I'm not able to work in the matrix organization as much as I would like. We are short of professionals in the workplace, so I am the only speech-language pathologist for the demand of the whole municipality."* Other four participants did not report challenges in their work in matrix organization.

4. Reception of demands of speech-language pathologists and audiologists in relation to their work processes on the part of the municipal health secretariat

The places provided by the network for professionals to verbally express their demands relating to questioning and solving their problems are expressed in percentages in Chart 5.

When asked if these spaces provided them the opportunity "to speak and to be heard", 50% of participates answered positively to this, while 16% answered that they do not have such opportunity. On the other hand, 33% did not answer to it.

Regarding the reception of demands expressed by speech-language pathologists and audiologists, two participants (33%) reported to receive it, while two other participants (33%) responded that they receive it partially or sometimes, and one participant (16%) reported to receive these demands only if the speech space was performed with their own team. There is also another participant (16%) who reported to receive these demands whenever they are related to solving governance of the space.

Finally, the questionnaire asked for a reason to the non-resolution of their demands - on the one hand, three participants (50%) refused to answer to it, while two (33%) answered to the question mentioning the following reasons: *"People who participate in these spaces do not have the governability to hire more speech-language pathologists, for example"* and *"Bureaucratization and priorities overlapping requests related to speech-language pathology and audiology"*.

5. Solutions for improved professional practice according to the participants

Question 18 asked participants to describe what they would like to improve in their professional practice. According to 50% of participants, the most frequent solution to improve professional practice was hiring more professional in the municipal health network, as shown in Chart 6.

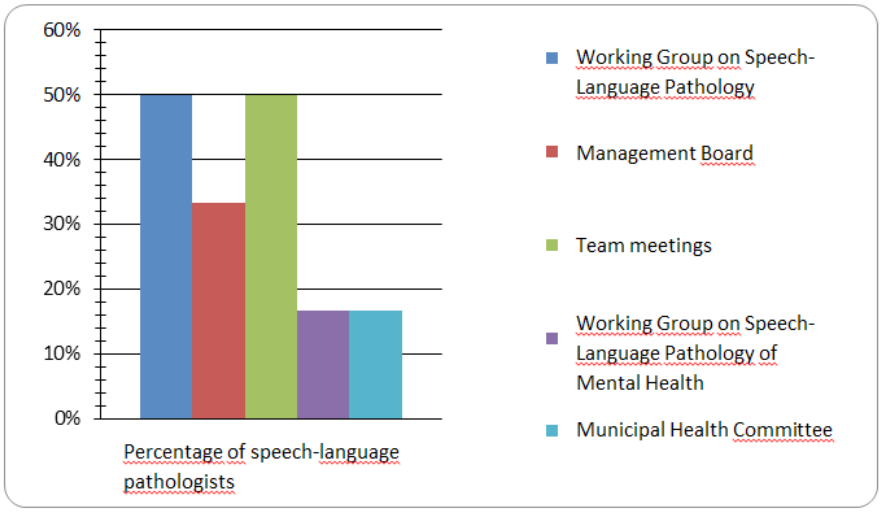

Figure 5. Percentage of speech spaces made available by the municipal government of Campinas, according to speech-language pathologists and audiologists.

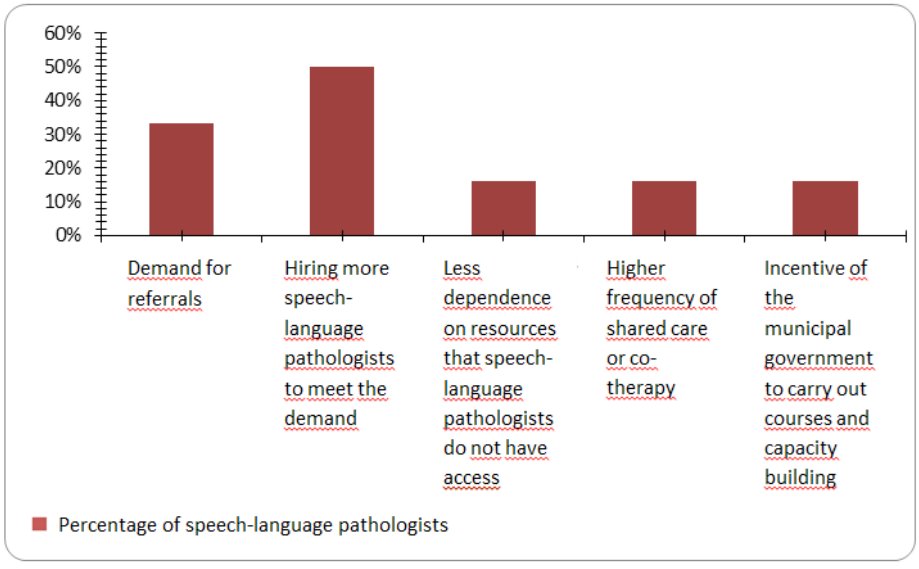

Figure 6. Percentage of speech-language pathologists and audiologists compared to what they would like to change in their professional practice.

6. Considerations of the participants on the study

Three participants did not answer to this topic; of the three participants (50%) who did answer to it, two (33%) of them mentioned the relevance of the study, as shown by the response of the participants: *"In my opinion, this study is absolutely relevant and necessary. There are many challenges that put us to the test every day, but the belief in the power of SUS is what keeps me on this way"* and *"It is an important way to disseminate the work and gaps of the professionals in the network with respect to the speech-language pathology and audiology."* On the other hand, the other participant who answered to it took the opportunity to reinforce the previously mentioned difficulties in relation to their work in the current context of human resources:

"I believe that the decrease in the workforce with the same demand in the service, or even an increased demand, harms the care offered to the population. The staff is overworked and they are not able to get the job done as they would like to. They are not able to work with matrix organization or to have more contact with the network."

The need to increase the number of employees was mentioned as the main factor to the loss of quality care provided to the population, since professionals are overwhelmed and unable to work in the way they would like/need/should. The professionals also mentioned that the low number of speech-language pathologists and audiologists in the health care network has as a consequence the low frequency of matrix organization and little articulation with the network, since professionals are too busy with other more urgent issues, such as the waiting list for their work.

Discussion

Regarding the limitations of this study, there was a low adherence of speech-language pathologists and audiologists in this research. One factor that may have contributed to this may have been the possible difficulty of coordinators in answering to the first e-mail of the researcher. Another factor may be related to the idea that it may be considered a laborious task to complete a questionnaire, as this may take more time and require a lot of information. To try to restrict this variable, a second e-mail was sent to all potential participants for the research, containing guidelines regarding the form filling and reinforcing that the answers could be simple. This e-mail message also explained that the open format of the questionnaire was a way to offer a space to express themselves without restrictions as to their everyday professional experience.

On the subject of distribution and speech-language pathology and audiology supply in the municipal health network, it is possible to notice that there are areas of the city that are covered with a speech-language pathologist and audiologist restricted to particular territory. As shown in Chart 2, it can be noticed that the territories are not covered by the same supply of professionals, such as the East and Northwest districts that have two speech-language pathologists and audiologists that serve the population with the inclusion criteria for admission in Child/Youth Psychosocial Attention Centers; however, there is no speech-language pathologist and audiologist available to serve adult and elderly population.

The speech-language pathology and audiology care to adults that are not in a home care situation, or hospitalized, do not have a health problem that is causally related to work, or do not have a neurological impairment, is only offered by the Primary Care Unit (UBS) in the Southwest district. That is, if the situation is not assignable to reference centers, only a small portion of the adult population of the Southwest district have access to speech-language pathology. The care in the UBS is directed to a restricted territory, in which the main demands of the population assigned only in that territory will be processed[9].

From the results shown in Chart 2, it is possible to notice that the supply of speech-language pathology and audiology care to adult and elderly population is significantly smaller than it is for children and adolescents.

In a way, this fact can have a historical explanation, since the insertion of the speech-language pathology and audiology in the public health system was given by both the Health Department and the Education Department. Thus, the contact of this professional was given in a more targeted way to the needs of the pediatric public at the beginning, which expanded according to the growth of the profession and possibilities for all age groups[10]. However, further adjustments will need to be made in the services provided by the SUS aimed at the increase of elderly in the population.

Thus, the sample of the research composed of six speech-language pathologists and audiologists is compatible with the reality of the municipal network, since most speech-language pathologists and audiologists who participated in the study are allocated in locations that provide speech-language pathology and audiology services for the child and adolescent population other than adult and elderly population, in the same way that it occurs throughout the municipality.

Another factor that should be discussed in relation to the provision of speech-language pathology and audiology care in the municipality is that 80% of these services are concentrated in the secondary care level. Since the constitution of speech-language pathology and audiology as a profession in Brazil, the local trend is that speech-language pathology work starts from the clinical model of

traditional intervention, what makes it difficult to access the primary care[11].

According to a study[6], the presence of a speech-language pathologist and audiologist in the municipal staff assigned to work at the tertiary care level shows that speech-language pathology and audiology still has little insertion in the hospital environment, being a profession that needs to be more disseminated with respect to its possibilities of working in this environment.

The results of this research show that the municipal government has one speech-language pathologist and audiologist in primary care and one in tertiary care, both professionals hired with less than 5 years of experience at municipal work. This is in line with a recent trend of recognition of the speech-language pathologist and audiologist in the municipal health network in less traditional locations, such as hospitals and primary care units[6,11].

With respect to the sample of participants, two (33%) speech-language pathologists and audiologists work in the municipal health network for more than 15 years, while all others (66%) are working for less than 5 years. This factor suggests a recent trend of a small expansion concerning the integration of the speech-language pathologist and audiologist in the public health network. Speech-language pathology and audiology is growing in importance within SUS according to the dissemination of its scope and the growing understanding of the need of this professional in public health[10]. However, we believe that we cannot understand this as the sole determinant of the current context of the integration of speech-language pathology and audiology in the municipal health network. The management has an important role in identifying municipal needs through epidemiological data, health indicators, among others. Thus, it is essential to mobilize the management to understand the current scenario and to identify the municipal need, ensuring the integration and distribution of speech-language pathologist and audiologist in an appropriate manner[12].

The most recurrent challenges found in clinical practice, according to Chart 2 are: high speech-language pathology and audiology demand, that is, services demand exceeding supply, long waiting lists and a shortage of specialized care offers to complete the speech-language pathology and audiology diagnosis. Other studies[7] indicate that the high demand for speech-language pathology and audiology in the public sector is a national reality, and that this demand requires prevention and collective actions in this area. It can be noticed in Chart 2 that there is only one speech-language pathologist and audiologist available to work in a given territory in relation to prevention and collective action in speech-language pathology and audiology.

The long waiting lists for patients can be considered both a difficulty for the speech-language pathologists and audiologists that refer patients to another service, hoping that the referrals would assist their care, and a consequence of the low availability of professionals on the municipal health network. The development of SUS[11] faces political challenges, which depends on the local, state and federal organizations in a decentralized scope. Studies that analyze the integration of speech-language pathologists and audiologists in certain locations in Brazil confirm the conclusion that the low availability of these professionals in the public health service is a reality that exists; however, it depends on the redesign of the management for the health needs of the population. The distribution of the speech-language pathologist and audiologist availability in order to meet municipal demand is indicated as a way to promote fairness and completeness of the care to the subject[12,14].

Regarding the gaps perceived by speech-language pathologists and audiologists regarding referrals, with respect to failures and faults perceived in this issue, the main challenges are: the difficulty of access by users to the services offered by the network, the lack of knowledge of professionals regarding the possibilities of speech-language pathology and audiology, and the lack of available resources in the network that are required for this field. Since the beginning of the SUS, Brazil has experienced demographic and epidemiological changes that increasingly require a *"transition from a model of care centered on acute diseases to a model based on the intersectoral health promotion and the integration of health services"*[11]. A way to enable integration between services and ensure the completeness of the subject would be the communication through referrals and matrix organization. Thus, it would be possible to understand the subject according to their broader needs, including the assessment and rehabilitation in various health aspects. For this to occur there must be professional knowledge about

the performance of the various health disciplines. In order to enable referrals, the services required must be available on the network [15] .

From the analysis of Table 3 and Chart 4, it may be noticed that 50% of the participants understand the shared care as part of their performance as speech-language pathologists and audiologists, as well as part of the matrix organization. In this way, the shared care is something often present on the report related to the performance of the participants of this research.

With respect to matrix organization, shared care is part of the work. According to the matrix organization concept designed by the author[16], its development involves *"joint interventions and care between the specialist and some professionals of the reference team".* From this, it is possible to notice that there is a difference between the concepts of shared care and joint care, the latter being the appropriate recommendation to the matrix organization. Another study elucidates how the professional should be when performing shared care[17]: "*(...) shared care for an interdisciplinary intervention, with knowledge exchange, capacity building and mutual responsibilities, generating experience for both professionals*".

However, the speech-language pathologists and audiologists do not report how they perform the shared care. Based on the literature, it is expected that both professionals are focused on the development of the service, avoiding different intentions. Based on the answers of the questionnaire, it is not possible to confirm the way in which the shared care occurs, what may be further studied in later studies.

With respect to matrix organization, most speech-language pathologists and audiologists defined this concept as: support (33%) and strategy (33%), in addition to understand that this performance should be jointly and through the articulation between the disciplines. The matrix organization concept[16] is defined as: *"Organizational arrangements and a methodology for the management of the work related to the health field, aiming to expand the possibilities of expanded clinic and dialogic integration between different specialties and professions."*

Therefore, all speech-language pathologists and audiologists understand that the matrix organization involves the integration of different disciplines. However, there is a difference in the definition that the participants list when compared to the original concept, while some speech-language pathologists and audiologists understand it as strategy or support.

The matrix organization is based on three foundations: the joint interventions, the contact with the form of work, and the exchange of knowledge and guidance with the team responsible for the patient; although the matrix organization can be restricted to the latter. Concerning the exchange of knowledge and guidance of the responsible for the matrix organization, it is important to emphasize that only one (16%) speech-language pathologist and audiologist reported to perform capacity building activities as part of his work in the matrix organization.

We also emphasize that one (16%) speech-language pathologist and audiologist works in matrix organization at all care levels, while three (30%) participants reported to conduct the matrix organization only in the primary care. This is intriguing, since matrix organization is proposed to be performed at the most diverse levels of health care, as a horizontal work methodology that does not consider the knowledge of the professional as a private property of a fragmented area, but as part of a whole system, in order to increase the resolution in health through the exchange of knowledge[17].

One of the challenges of matrix organization, as reported by two (33%) speech-language pathologists and audiologists, is the professional availability of the reference team and of the responsible for the matrix. Authors[17] indicate that the barriers relating to management are essential with regard to the matrix organization. The management organization is often not prepared to develop the matrix organization in the proposed way.

It can be concluded from the results of this research that the matrix organization in the speech-language pathology and audiology in the municipal health department is being incorporated into the professional practice of the speech-language pathologist and audiologist. However, the organization of the concept and practice of this work methodology faces some divergences when compared to its original concept. The development of the matrix organization practice is considered a management methodology; therefore, it is the responsible for the organization of resources to be able to perform it in an appropriate way.

All participants of this study reported to perform the articulation of speech-language pathology

and audiology with the network, but also reported that they face challenges. The lack of human resources is the most frequent challenge.

In general, it may be noted that, with respect to challenges, there is a repetition that there is no available resources in the network that are necessary for speech-language pathology and audiology. Generally, it is stated that the high demand in contrast with the complaint of few resources has as a consequence, the long waiting lists for patients, which generates a difficulty of access to services offered by the municipal health network.

When asked about what spaces have been offered by the municipal government, in order to expose their complaints and needs for performance of the speech-language pathology and audiology work, the participants of the study stated that they consider as speech spaces, in which they can expose their work demands: the Working Group on Speech-Language Pathology and Audiology (66%) and the Management Board (50%). According to the authors[18],

> (1) *"*group activities can be beneficial both emotionally and socially, assisting the individual in their personal and interpersonal relationships, creating situations of dialogue, coping with difficulties, working as an exchange of experiences, which can aid in their rehabilitation and/or coexistence with others*."*

In this way, it is possible to understand the significant importance in the participation of a working group directed to the workers. The reports related to challenges are mostly of agreement among the study participants.

In addition, authors[3] point out that the managing board proposes a space of participation, of great transforming importance, since it provides dialogues and exchanges of experiences. In the research data, two (33%) participants reported that they use this space to expose their perceptions, anguishes and work needs.

However, opinions are divergent in relation to the reception by these spaces to the work demands of the speech-language pathologist and audiologist. Thus, there is not a significant majority on this subject. It is important to highlight that participants work in different places, not necessarily having the same complaints and needs.

According to the participants' responses, the low resolution of their demands is due to the lack of governability of the managers in the spaces in which these demands are presented by the professionals. Speech-language pathologist and audiologist 5 reports, as an example of this, the barriers imposed by the bureaucratization of requests made by professionals. Among these, the participant lists the request for hiring speech-language pathologists and audiologists. Authors[13] understand the challenges of the need for resources to work in the SUS as part of the current situation in public health, in which the barrier to the resolution of these challenges is the political influence in the most diverse spheres.

As shown in the results, in the context of the public health network, in which the participants are inserted, the solution to improve the speech-language pathology and audiology work would be to hire more professionals for the municipal health services. Throughout the several topics of discussion in this study, this solution is related to the difficulty of speech-language pathologists and audiologists of reconciling all the needs that involve their work, such as the aforementioned willingness to perform the matrix organization and the long waiting list of patients. The health professional is often exposed to occupational risks and vulnerability, and the lack of resources to perform the work is one of the main causes[20].

Finally, the study provided a free space to the participants in question 19, providing the opportunity to express themselves on other issues compatible with the objectives of this research. Two participants used the space to highlight the relevance of the study in relation to the context of current speech-language pathology and audiology work in collective health. Spaces for professionals to present their point of view are relevant, not only to detail the difficulties of their work, but also to offer a moment to listen to these perceptions, beliefs and impressions regarding the situation in which they are inserted, so that the solutions can be seen in the collective plan. Such action contributes to value the worker and generates subsidies for the resolution of problems experienced in their professional practice[21].

Conclusion

The results of this study showed that the inclusion of a speech-language pathologist and audiologist in the municipal health secretariat is still more frequent in secondary care than in other health care

levels. The distribution of the speech-language pathologist and audiologist by territory occurs unevenly: the same assistance related to speech-language pathology and audiology is not available in all territories. Similarly, the services provided to the population by age group are also uneven: there is more supply of speech-language pathology and audiology care for child and adolescent health than for adult and elderly health.

The matrix organization is developed differently in the health districts and it does not happen with the frequency desired by speech-language pathologists and audiologists, and it also does not cover all care levels.

All these factors, when combined to the challenges listed by speech-language pathologists and audiologists, related to their practice, to referrals, to the articulations of the network services and to the performance in matrix support, in addition to proposals for improving the performance of their profession, refer to the need for resolution by the health management, since strategies are required to enable professional work.

It is believed that the result of this study may generate subsidies for future planning and to create strategies that can contribute to the structuring of speech-language pathology and audiology services offered to the population.

References

1. Menicucci, TMG. História da reforma sanitária brasileira e do Sistema Único de Saúde: mudanças, continuidades e a agenda atual. História, Ciências, Saúde – Manguinhos. 2014.

2. Giovanella L, Mendonça MHM. Atenção Primária a Saúde. IN Giovanella et al. Políticas e Sistema de Saúde no Brasil. Editora Fiocruz. 2ª Ed. 2011.

3. Sistema de Conselhos Federal e Regionais de Fonoaudiologia. Contribuição da Fonoaudiologia para o Avanço do SUS. 2013.

4. Almeida, BPB; Cunha MC, Souza LAP. Fonoaudiologia e saúde mental: atendimento em grupo a sujeitos institucionalizados com transtornos mentais. Revista Internacional de Humanidades Médicas. 2016; 4(2).

5. Solla J, Chioro A. Atenção Ambulatorial e Especializada. IN Giovanella et al. Políticas e Sistema de Saúde no Brasil. Editora Fiocruz. 2ª Ed. 2011.

6. Costa KN, Guimarães VC. Fonoaudiologia nos serviços de urgência e emergência do Brasil: série histórica de 2005 a 2011. Distúrb Comun, abril, 2012; 24(1): 69-75.

7. Moreira, MD. Mota, HB. Os caminhos da fonoaudiologia no sistema único de saúde – SUS. Rev. CEFAC. Jul-Set, 2009; 11(3): 516-521.

8. Turato ER. Tratado da Metodologia da Pesquisa Clínico-qualitativa. Rio de Janeiro: Vozes, 2003.

9. Cavalheiro MTP. Fonoaudiologia e Saúde da Família. Rev. CEFAC. 2009 Abr-Jun; 11(2): 179-368.

10. Gurgueira AL. Fonoaudiologia no Sistema Único de Saúde. In: Fernandes FDM, Mendes BCA, Navas AL. Tratado de fonoaudiologia. 2a ed. São Paulo: Roca; 2010. p.619-26.

11. Lipay MS, Almeida EC. A fonoaudiologia e sua inserção na saúde pública. Rev. Ciênc. Méd. 2007; 16(1): 31-41.

12. Santos JN, Maciel FJ, Martins VO, Rodrigues ALV, Gonzaga AF, Silva LF. Inserção dos fonoaudiólogos no SUS/MG e sua distribuição no território do estado de Minas Gerais. Rev. CEFAC, São Paulo. 2010.

13. Paim J, Travassos C, Almeida C, Bahia L, Macinko J. O sistema de saúde brasileiro: história, avanços e desafios. Séries Saúde no Brasil. 2011.

14. Bazzo LMF, Noronha CV. Perspectiva dos Gestores sobre a oferta da atenção fonoaudiológica no SUS em Salvador, Bahia. Revista Baiana de Saúde Pública. 2011; 105-120.

15. Delfini PSS, Reis AOA. Articulação entre serviços públicos de saúde nos cuidados voltados à saúde mental infanto-juvenil. Cad. Saúde Pública, fev, 2012; 28(2): 357-366.

16. Campos GWS, Domitti AC. Apoio matricial e equipe de referência: uma metodologia para gestão do trabalho interdisciplinar em saúde. Cad. Saúde Pública, fev, 2007; 23(2): 399-407.

17. Campos GWS, Cunha GT. Apoio Matricial e Atenção Primária em Saúde. Saúde Soc. 2011; 20 (4): 961-970.

18. Souza APR, Crestani AH, Vieira CR, Machado FCM, Pereira LL. O Grupo na fonoaudiologia: Origens clínicas e na saúde coletiva. Revista CEFAC. São Paulo. 2010.

19. Gohn MGM. Conselhos gestores e participação sociopolítica. São Paulo: Cortez, 2001, 128p1. IN Fabiana Alvarenga Filipe, Regiane Helena Bertagna. Rev. Fac. Educ. (Univ. do Estado de Mato Grosso). 2015; p 203-208.

20. Santos JLG, Vieira M, Assuiti LFC, Gomes D, Meirelles BHS, Santos SMA. Risco e vulnerabilidade nas práticas dos profissionais de saúde. Rev Gaúcha Enferm., Porto Alegre (RS) 2012 jun;33(2): 205-212.

21. Mendes WAI, Ceoto EC. Relato de Intervenção em Psicologia: identidade social do agente comunitário de saúde. Saúde Soc. 2011; 20 (2): 496-506.