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ARTICLES

Reflections on diagnosis in Educational Speech Language Pathology and Audiology

Reflexões sobre o diagnóstico na Fonoaudiologia Educacional

Reflexiones sobre el diagnóstico en Fonoaudiología Educativa

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Abstract

Objective: To understand which diagnostic concepts support some practices performed by speech therapists who work in educational institutions. **Methods:** Work of empirical nature and drawings structured with quality, descriptive and transversal cut. Five speech therapists participated in this research, identified from the snowball technique. Semi-structured interviews were realized with guiding questions about the work developed in the educational area and the realization of some diagnosis. After collecting the data were transcribed, organized, selected, categorized, and analyzed. **Results:** It appears that, in general, the speech therapists associate the term "diagnostic" with the realization of screenings; the practice of the clinical diagnostic appears; and only one important mentioned is that the institutional diagnostic practice is focused on the characterization of the scholar institution. It was not observed institutional diagnostic mentioning (a participative process including the knowledge and experience of many actors) to think the determinant factors that are shown in the explicative network of educational/ scholar problems. **Conclusions:** The importance of situational diagnostics stands out to realize a technical, social, economic and political analysis in the educational context. Based on a listening more open by the different actors, practices may be organized that aren't defined by a priority of the professional speech therapist, but constructed by the dialogue with the school, constituting a less medical practice.

Keywords: Speech, Language and Hearing Sciences; Education; Diagnosis; Language; Medicalization

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CHP and DPCO - study design and delineation; data collection; data analysis and interpretation; drafting the article.
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Resumo

Objetivo: compreender quais conceitos de diagnóstico sustentam algumas práticas realizadas por fonoaudiólogos que atuam em instituições de ensino. **Métodos:** trabalho de natureza empírica e desenho estrutural qualitativo, descritivo e de corte transversal. Participaram desta pesquisa cinco fonoaudiólogos, identificados a partir da técnica *snowball*. Foram realizadas entrevistas semiestruturadas com perguntas norteadoras sobre o trabalho desenvolvido pelo profissional na área educacional e a realização de algum diagnóstico. Após a coleta, os dados foram transcritos, organizados, selecionados, categorizados e, depois, analisados. **Resultados:** Verifica-se que, de modo geral, os fonoaudiólogos associam o termo "diagnóstico" à realização de triagens; comparece a prática do diagnóstico clínico; e somente um informante fez menção ao diagnóstico institucional, prática esta voltada para a caracterização da instituição escolar. Não foi observada menção ao diagnóstico situacional (processo participativo que envolve o conhecimento e as experiências de vários atores) para pensar os fatores determinantes da rede explicativa dos problemas educacionais/escolares. **Conclusões:** destaca-se a importância do diagnóstico situacional, a fim de se realizar uma análise técnica, social, econômica e política do contexto educacional. Alicerçada pela escuta mais aberta dos diversos atores, pode-se organizar práticas que não sejam definidas a priori pelo profissional fonoaudiólogo, mas construídas no diálogo com a escola, constituindo uma prática menos medicalizante.

Palavras-chave: Fonoaudiologia; Educação; Diagnóstico; Linguagem; Medicalização

Resumen

Objetivo: comprender qué conceptos de diagnóstico respaldan algunas prácticas realizadas por logopedas que trabajan en instituciones educativas. **Métodos**: trabajo de naturaleza empírica y diseño estructural cualitativo, descriptivo y transversal. Cinco logopedas participaron en esta investigación, identificada a partir de la técnica de bola de nieve. Se llevaron a cabo entrevistas semiestructuradas con preguntas orientadoras sobre el trabajo desarrolado por el profesional em el área educativa y haciendo un diagnóstico. Después de la recopilación, los datos se transcribieron, organizaron, seleccionaron, categorizaron y luego analizaron. **Resultados**: Parece que, en general, los terapeutas del habla asocian el término «diagnóstico» con la realización de exámenes de detección; aparece la práctica del diagnóstico clínico; y solo un informante mencionó el diagnóstico institucional, una práctica destinada a caracterizar la institución escolar. No se mencionó el diagnóstico situacional (proceso participativo que involucra el conocimiento y las experiencias de varios actores) para pensar sobre los factores determinantes de la red explicativa de problemas educativos / escolares. **Conclusiones**: se resalta la importancia del diagnóstico situacional para realizar un análisis técnico, social, económico y político del contexto educativo. Basado en la escucha más abierta de los diferentes actores, es posible organizar prácticas que no están definidas a priori por el fonoaudiólogo, pero que se construyen en diálogo con la escuela, lo que constituye una práctica menos medicalizante.

Palabras clave: Fonoaudiología; Diagnóstico; Lenguaje; Medicalización

Introduction

Since their inception, the Speech, Language and Hearing (SLH) Sciences in Brazil have been linked to education although, currently, their practice is considerably more connected to clinical than educational issues[1]. This has probably come about because of the training of SLH professionals which, with its technical and specialized viewpoint, sustains a model of operation that remains closely linked to medical practices.

We recognize that, although principally developed within health, the work of the SLH professional is increasingly included within the educational context, with highly heterogeneous conceptions and practices[2], in other words, from theoretical perspectives and points of view unlike those that refer to education, health, the subject, normality/pathology, medicalization and others.

As mentioned, different perspectives permeate the work of the SLH professional in the field of education, affecting their professional practice, particularly at the inaugural level at which such practice is circumscribed - when undertaking a diagnosis. Furthermore, such a diagnosis, institutional or situational, is one way to initiate action, since, in general, it enables the SLH professional to better understand the organization and any problems in the network and/or institution in which they work. However, we use the expression "one way", since an SLH professional will not always use a diagnosis in their professional practice, leaving them to propose a set of pre-established activities in a unidirectional manner which, often (if not always) do not match the reality of the institution in which they work[3].

Resolution no. 387/2010 of the Federal Council of Speech, Language and Hearing Sciences (*Conselho Federal de Fonoaudiologia*: CFFa) lays out the attributes of the Educational SLH professional and proposes institutional diagnosis as one of the activities to be carried out. Such diagnosis is described as a means to identify and characterize learning problems[4]. The scientific literature contains the expressions "institutional diagnosis" and "situational diagnosis", as well as references to clinical diagnoses. It is worth remembering that Resolution no. 387/2010 notes that an SLH professional who works in school institutions is not permitted to undertake clinical diagnoses, except in cases supported by the provisions contained within current Special Education Policies.

Given the polysemic nature of words, we note that the term institutional diagnosis found in the SLH Sciences and Education literature may have different meanings from those seen in CFFa Resolution no. 387/2010. In a study of institutional diagnoses in schools[3], it was observed that such diagnosis refers to a process to investigate and interpret the ways in which the institution is organized and functions, the dynamic of the subjects within this context, as well as aspects related to the economic, social, historical, cultural, educational, environmental and epidemiological conditions of the community under investigation. An important change in conceptual terms has taken place, given that the institutional diagnosis is not restricted to the identification and characterization of learning problems, but has expanded, although it remains limited to the institution.

The distinction between the expressions "institutional" and "situational" does not only involve different conceptions. The SLH professional's choice to undertake a diagnosis in one way or another means that their activities either move towards a practice focused on identifying diseases and problems, reinforcing the biomedical model, or their view is expanded to activities based on an understanding of the context in which the institution is situated[5].

The practice of diagnosis in education is centred on the identification of pathologies and the construction of labels, reducing social problems to biological ones and reinforcing the medicalization of education. In this sense, it is necessary to rethink the way SLH professionals situated in educational contexts work, in order not to perpetuate medicalized practices whose function has been to blame the individual for issues outside their control and to make them the victim of an educational system fraught with problems that need urgent rethinking[5].

It is therefore of fundamental importance for the SLH professional to initiate their work in school by undertaking a situational diagnosis, a tool developed by professionals from the field of collective health, whose aim is to identify, analyze and construct proposals to address the population's health problems. This tool has been adapted as an important instrument in educational practices, for example, in the SLH Sciences Course at the Federal University of Bahia. A situational diagnosis

allows, for example, for the identification and analysis of population groups; and of health and education problems within a certain territory and, subsequently, enables the identification and selection of required interventions, aimed at solving the identified problems[6]. Furthermore, it is important to note that the construction of the situational diagnosis tool is based on data extracted from the territory, on listening to a range of actors who constitute that territory, enabling the professional to find out about and analyze the determining factors of the explanatory network for educational/school and health problems, in all, to enable them to consider practices to carry out in the fields of education and health[7].

Relying on this type of diagnosis assumes an adherence to a transformative perspective, not bound to rigid or normative models. On the contrary, it seeks to constitute a process that unleashes the critical and creative practices of the subjects involved[6].

It is worth noting, finally, that it was the practice, albeit incipient, of this type of diagnosis that motivated this study, whose aim is to understand the diagnostic concepts that support certain practices undertaken by SLH professionals who work in educational institutions. What is recorded here leads us to highlight and promote the reflection that the way this diagnosis is – or is not – undertaken may contribute to and reinforce the medicalization of education.

Methods

This is an empirical, qualitative, descriptive and cross-sectional study. The data was collected for a Master's dissertation entitled "Conceptions and Practices in Educational SLH: reflections on the work of the SLH professional in the basic education network".

This research project was subjected to assessment by, and received a favourable opinion from, the Human Research Ethics Committee of the Institute of Health Sciences at the Federal University of Bahia (*Universidade Federal da Bahia*: UFBA), under number 2.081.615. The study respected all established norms relating to the ethical aspects determined by Resolution 466/12 of the National Council of Health, which approves the guidelines and regulatory standards for research undertaken with human beings.

We used the snowball technique to identify participants, whereby each participant indicates the next[8]. The first SLH professional invited to participate in the study was recommended by the researcher's professional colleagues, working in the municipality of Salvador. The participants were invited to sign an Informed Consent Form (ICF) and the research only began following signature and approval by the Research Ethics Committee. All participants signed an ICF and received information about the study, its theme, objectives, methodology, rights, duration, risks and benefits.

The inclusion criteria for participation in the study were thus: professionals registered with the Regional Council of SLH Sciences and who work/worked in the public or private education system (weekly or fortnightly), for a minimum of six months, in the city of Salvador, extending to other cities in Bahia. The exclusion criteria were all professionals who had not worked in the area of Educational SLH Sciences for more than two years.

Data collection took place between October and December 2017. Semi-structured interviews were undertaken in one session (meeting) lasting approximately one hour, at a previously-agreed time, date and location. An instrument for audio recording was used with the interviewee's authorization, for later transcription, enabling better data access and greater fidelity to the interviewee's speech.

The sample was made up of five (5) SLH professionals. This reduced sample is a reflection of the difficulty of finding SLH professionals working in the city of Salvador and the state of Bahia, given the study's inclusion and exclusion criteria, particularly the criteria related to weekly or fortnightly work for a minimum of six months. The search for SLH professionals was initially undertaken by consulting the Federal Council of Speech, Language and Hearing Sciences site and through telephone contact with the Regional Council of Speech, Language and Hearing Sciences (*Conselho Regional de Fonoaudiologia*: CREFONO) – fourth region, in an attempt to locate specialists in the area working in Bahia. In 2017, no SLH professionals were registered as specialists in education within the state. Salvador's Municipal Secretary of Education and the state of Bahia's State Secretary of Education were also contacted, but did not respond. In the absence of official data regarding the presence of SLH professionals in the school context,

we initiated the search for participants using the above-mentioned methodological approach – the snowball technique.

Each interviewee was identified by the letter P, followed by a number (1,2,3,4 and 5). Interviewee descriptions were as follows: (a) P1, 31 years old, female, graduated in 2009, specialized in Special Education and Orofacial Motricity and worked for six years in the Metropolitan Region of Salvador in public schools in the Municipal Education System, in Early Childhood and Primary Education; (b) P2, 29 years old, male, graduated in 2015, worked for nine months in the Bahian countryside in public schools in the Municipal Education System in Early Childhood, Primary and Inclusive Education; (c) P3, 31 years old, male, graduated in 2011, specialized in Public Health and in Language and has worked for six years in the Bahian countryside in public schools in the Municipal Education System in Early Childhood, Primary and Inclusive Education; (d) P4, 28 years old, female, graduated in 2012, specialized in Regression Therapy and in Clinical SLH Therapy and worked for a year in the city of Salvador in private schools in Inclusive Education; and (e) P5, 24 years old, male, graduated in 2016, currently studying a specialization in Mental Health with an emphasis on Autism Spectrum Disorder and has worked for a year in the Bahia countryside, in public schools in the Municipal Education System in Early Childhood and Primary Education.

From these descriptions, we note that the average age of the SLH professionals interviewed was 28.6 years and most were male. The average time since graduation was 6.6 years. In reference to the type of training following graduation, the interviewees specialized in a range of areas including Education and Language. Most participants, 4 out of 5, worked in the public education system, more specifically in early childhood and primary education.

Following collection, the data was transcribed, organized, selected and analyzed based on the study aims and on research into situational diagnosis[6,7], SLH Sciences[2,4], education[1] and medicalization[5]. Analysis categories were constructed according to an in-depth reading of the responses given by the SLH professionals we interviewed when questioned about undertaking diagnoses at the institution in which they worked. Based on guiding questions, such as "What kind of work do you carry out at school?" "Tell us about the activities you carry out" and "Within these activities do you undertake any diagnoses? Which?", we organized each interviewee's attitudes about a specific diagnosis-related theme into a chart and summarized these through meaning centres, which constituted the categories in the following step. After identifying each interviewee's attitude about that category, we constructed a broader chart containing all the interviewees' attitudes, in order to identify and survey possible congruence and differences between the interviewees' attitudes, including potential contradictions within the attitudes of the same interviewee. Data analysis and discussion were based on the categories established, in line with the aim and the theoretical framework for institutional and situational diagnoses, and medicalization adopted in this study.

Results and discussion

Data analysis allowed us to identify the following response categories: absence of situational diagnosis, relationship between screening and diagnosis, relationship between diagnosis and medical and/or SLH diagnosis, proposed matrix approach, structural assessment of the school and absence of any type of diagnosis. The results for each response category are presented and discussed below.

Absence of situational diagnosis

Nobody in the study sample mentioned situational diagnosis. It is possible that it did not emerge in the interviewee's responses because they were still not using this tool. One explanation for this refers to their academic training, since, for the most part, academic institutions do not provide opportunities for undergraduate students to discover this instrument. Despite not mentioning situational diagnosis, three interviewees confirmed that they sought to link up with other services within the network - such connections are a relevant step in this type of diagnosis. This attempt at coordination can be seen in the following excerpts:

> *"We established links with the Social Assistance Secretary, with the Social Assistance Reference Centre (Centro de Referência da Assistência Social: CRAS) and the Health Secretary. There was a very good relationship with some nurses, so they ended up connecting with certain demands that came to*

the Family Health Programme (Programa Saúde da Família: PSF) and since the town is small, everybody knows everything, they made referrals to the SLH worker, they asked what type of work is it? Do you deal with this?" (P2)

"All the referral processes that we made, referring vulnerable children to CRAS, right? We refer children with seizure profiles to CAPS, right? Any other health complaints. There is the Centre for Specialties and Child Rehabilitation, where we make some referrals, there is the educational psychologist and so on. So there's a flowchart set up for this work". (P3).

*"I've already established partnerships with CAPS, with CRAS and with the Specialized Social Assistance Reference Centre (*Centro de Referência Especializado de Assistência Social: *CREAS), which are social assistance mechanisms, and I'm beginning to set up partnerships with schools so we can make these connections. It's just that we are still getting organized, up to now, to the beginning of December, [there's been] one municipal meeting for the areas of education, health and social assistance, for us to discuss how we're going to work within the network. Because we need to understand what's in the network, how these mechanisms function, to be able to access rights."* (P5)

The movement these professionals have made in relation to their practices is understood as positive, extending their activities beyond the school walls so that, by joining up with other intersectoral mechanisms, they can find ways to increase the potential of their activities within the school context. These partnerships, however, are limited, since they are aimed at making referrals with without making connections between SLH professionals and the networks (education, health and social work, for example) in order to carry out broader, joined-up activities.

It is important for the SLH professional to be informed about situational diagnosis, a concept/instrument prepared by professionals from the area of Collective Health who work in situational analysis, aimed at identifying, analyzing and constructing proposals to address the population's health problems.

This tool, constructed after listening to a range of actors, including teachers, students and managers, provides knowledge and analysis of the determining factors that appear in the explanatory network of educational/school problems. Situational diagnosis also provides for the planning of practices to be conducted in the educational field[7].

Based on this tool[6], the existing population groups in the district are identified according to demographic, epidemiological, socio-economic and political criteria; the health problems of the different population groups are identified and described; these problems are then prioritized and explained with the aim of identifying their determining factors and, finally, of identifying, selecting and planning the required interventions aimed at solving these problems.

It is essential for critical nodes to be identified, in other words, the determining factors that appear in the explanatory network of more than one problem. The determinants of health are social, economic, cultural, ethnic/racial, psychological and behavioural factors that influence the incidence of health problems, and their risk factors, in the population[9].

In this way, when a professional opts for a situational focus, they must choose the population's health problems as the privileged object of their intervention[7]. An SLH professional must, therefore, base their activities on a broad concept of health, approaching a concept that points to health determinants and factors that may generate great inequalities in the life stages, as established by the VIII National Health Conference[10].

In the field of education, it is important to call for the construction of a situational diagnosis, seen as an inaugural moment that outlines the work of an SLH professional in education. Through this instrument, and based on listening to various actors (teachers, students, managers, etc.), it is possible to approach the school environment and find out about and analyze the determining factors that appear in the explanatory network of educational/school issues or, to put it another way, to think about education (and health) issues in a broader way, taking account of their complexity within the sphere of territory, and in health and education systems[7].

The use of this methodology by professionals involved in education, however, is still under construction, particularly at the Federal University of Bahia, where this studied was conducted. Through a situational analysis of health and education, it is possible to identify, describe, prioritize and explain the population's health and education problems and thus determine priority activities[11]. Problems are identified, considered and constructed in the dialogic relationship between the SLH professional and the other actors within the socio-historical con-

text under analysis. Their causes and the potential activities to resolve them are then addressed.

Relationship between diagnosis and screening

We observed in our study that four of the five SLH professionals we interviewed associated the term "diagnosis" with screening. This relationship may be observed in the part of the interview found below. Here, when questioned about whether they conduct any form of diagnosis, the interviewee initially asserts that these are not conducted and immediately afterwards describes the practice of screening:

> *"I didn't make them but the issue of screening, when I saw the need, that a more specific diagnosis was required. Because there are areas where we need another professional to complete a diagnosis, [then] I referred. But I didn't make a diagnosis, no."* (P1)

In further reference to screening, two interviewees, P3 and P5, more specifically mentioned hearing screening, where programmes are organized in order to identify hearing problems, and referred them for hearing and otorhinolaryngological assessment[12]. Examples of this may be seen below:

> *"With audio, I work doing hearing screening in schools, right? So, with the otoscope I go and do the meatoscopy screening, I identify infections, earwax plugs, foreign objects, right? I make the referral and then immediately forward them to audiometry. Nevertheless, these are isolated incidents, we aren't able to do screening with all the audiometry students."* (P3)
>
> *"At some stage I also address the issue of hearing health, so I do the children's hearing assessments. In older children I'm able to do the meatoscopy, to observe the hearing canal, to see if there are any earwax plugs, in some cases, I see very severe cases and so I refer them to the doctor for treatment."* (P5)

We know that School Hearing Screening is recommended in public health policies and considered an extremely important instrument in identifying early hearing impairments. This early diagnosis enables referral to specialized professionals, aimed at the rehabilitation and prevention of children's cognitive, social, emotional and communication impairments[13].

In this sense, screening is seen as an important instrument to provide, as early as possible, a language for the child, whether that is a spoken and heard language - for most children in Brazil this is the Portuguese language - or a gestural and visual language, Brazilian Sign Language (*Língua Brasileira de Sinais*: LIBRAS), considered to be the Natural Language of the deaf[14], according to the LIBRAS law (law number 10.436, of 24 April 2002) and Decree number 5626, of 22 December 2005, which regulates it.

However, this screening practice is only used to survey demands, in other words, problems are identified but action is sometimes isolated and restricted to referrals. Screening should serve as a policy activity. It is important for the SLH professional to organize and undertake a more profound analysis of the data surveyed through screening, in order to be able take it to other bodies and for demands to be met by both the health and education systems.

Data may also be important for activities within the institution over the short, medium and long term (such as guidance for parents, students, teachers, technical staff, longitudinal monitoring of child development, and so forth). However, in the case of our interviewees, the only actions derived from screening were referrals to the health system, as we can see below:

> *"Hearing assessments, last year, from the complaints the students presented, I managed to identify six cases. We referred six cases to audiometry and hearing loss was detected in these students, some even went to Salvador, to the Centre for the* Prevention and Rehabilitation of People with Disabilities *(Centro de Prevenção e Reabilitação de Deficiências: CEPRED), to the Irmã Dulce [Rehabilitation Centre], so this was very striking, it reinforced, even further, the importance of the SLH professional really within education".* (P2)

The fact that there is a connection with other intersectoral mechanisms in the system, in this case CEPRED, the Prof Dr José Maria de Magalhães Neto Healthcare Centre and the Santo Antônio Hospital - the Irma Dulce Social Works Foundation, is noteworthy. However, there are no reports of any follow up by the SLH professional working in the school regarding these children's hearing health throughout their schooling, or of activities undertaken in the school based on this data.

In other words, the children were referred to the health system, but the professionals responsible for

their cases did not, apparently, talk to each other. There is also no indication in the interviews of a response to the school or to the other professionals who accompanied the child. The interviewees also did not report feedback to parents or guardians regarding the child's hearing issues. Hearing screening also did not enable the SLH professional to consider activities within the school, for example, to promote hearing health in the child population. We further note that there appears to be significant difficulty in thinking about activities for population groups.

One interviewee asserted that he only undertook screening "in the last resort", even though this approach is a requirement in most schools. The schools understand screening as an ideal mechanism to survey problems, although this data is not systematized for policy, nor are the children welcomed into the systems, as mentioned.

> *"When I get to school and say "so, screening in the last resort", the school was already quite sorry because initially they wanted us to go and identify something, dyslexia, ADHD, "n" disorder, for us to provide guidance about these treatments and reduce demand."* (P5).

We observe in the speech above that the desire (in particular from the school) appears to be for a practice aimed at clinical diagnosis, principally to identify language impairments and hearing issues. In the passage below, this relationship is very clear, given that the interviewee asserts that, even taking educational aspects into consideration, the SLH professional should maintain a clinical view, so that diagnosed – or at least identified – pathologies can be described in later reports.

> *"That's it, you have to make a survey, diagnosis, report, clinical assessment, have that view, at the same time as you take the educational process into consideration, you have to have a clinical view of those children, imagine in an institution, in a school with two hundred and some students, you have to have that view, that survey, to write a report about each one of them, it's work!"* (P2).

This view, more specifically aimed at clinical issues, is characteristic of perspectives based on the dichotomy between health and education, based on the biomedical model of heath, emphasizing etiology, diagnosis and the treatment of disorders. Furthermore, such perspectives tend to overlook the fact that other factors, beyond the biological and individual, constitute health. This is in line with medicalized practices, since they seek organic causes for problems of a different order, ignoring social, educational, cultural, economic, environmental and other issues[3]. In the next section, we will present and discuss the relationship between diagnosis and clinical issues.

Relationship between diagnosis and medical and/or SLH diagnosis

Three of the five SLH professionals noted a relationship between diagnosis, and medical and/or SLH diagnosis. In the excerpts below, we observe this relationship and note that the interviewees understand medical and/or SLH diagnoses as those that could be undertaken within the institutions, given that they specifically did not undertake other type(s) of diagnosis.

> *"I did more the issue of screening, when I saw the need, which needed a more specific diagnosis, right? [...] So I connected with a social worker, with a psychologist, when I had the opportunity, also with a neurologist, sometimes there were students who needed a diagnosis like dyslexia."* (P1).
> *"Mainly diagnoses of SLH disorders, articulation disorder, language delay, hearing impairment."* (P2).
> *"We only undertake SLH diagnoses, we only diagnose within the SLH context. You understand? So, phonetic and phonological disorders, we always do them, right? Nothing broader than that."* (P3).

We may observe, for example, in P3's speech, that the interviewee restricts the possible diagnoses to phonetic/phonological diagnoses and, beyond this restriction, provides indications that other diagnoses fall outside the SLH context, in other words, for them a situational diagnosis, for example, is beyond the scope of SLH practice.

It is important to mention that the relationship established between diagnosis in the educational arena and clinical aspects may be justified, in part, by the training students receive, which remains highly connected to medical practices[1]. The SLH professional should utilize other forms of diagnosis, in particular, the situational diagnosis, as an essential tool for work in the educational field. This persistence in education diagnoses with a clinical bias has contributed to a growing number of diagnoses of supposed disturbances and disorders

and, in consequence, to the pathologization and medicalization of education.

Proposed matrix approach

Only one out of the five SLH professionals mentioned using the matrix approach with teachers at the institutions in which they worked. This approach was not explicitly mentioned in the interview questions, however, it was mentioned by one interviewee, as we may observe:

> *"Already deconstructing a lot of these difficulties, of these diagnoses, is one of the collective health concepts, the matrix approach, which I end up using within education, creating matrix strategies for these teachers to address these realities."* (P5)

Another important tool for SLH work is that of the matrix approach or matrix support, understood as a way of producing health in which two or more teams, in a process of shared construction, create a proposal for educational and therapeutic intervention[15].

The matrix approach is not only an arena for training, in which the SLH professional, the "holder of knowledge" shares their knowledge with the professionals at the institution in which they work. The approach is constructed from dialogue, solving problems related to pertinent issues, practical discussions generating tensions so that effective pathways may be constructed together, according to the situations experienced. This, therefore, is an important arena in which to consider factors that impact on the learning and teaching process and on school functioning.

Although understood positively – since, unlike with the other interviewees, the use of the matrix approach in the institutions comes from the professional himself – we know that the matrix approach is not an action created by the SLH professional on their own, but is a participatory process, jointly constructed with other actors.

While the matrix approach is not always applied by SLH professionals working in public and private educational institutions, structural assessment is one of the first activities undertaken by professionals who work in the educational sphere.

Structural assessment of the school

As part of the diagnosis, a structural assessment of the school was only mentioned by one of the five SLH professionals interviewed. A further three interviewees asserted that they only observed certain isolated classroom aspects, which they then communicated to teachers/coordinators. Only one interviewee confirmed that they did not undertake any type of structural assessment, as seen in the excerpts below:

> *"I talked about the noise, because the teachers' rooms, generally all the schools in the municipality have a small opening in the wall, in the corridor and so this is harmful, one classroom can hear the noise from another classroom, in other words, the teachers can hear what the others are doing. So I asked about this noise issue, because it also ended up affecting the teacher's voice and it's an issue for the students too."* (P1)
> *"Not yet [undertaken any work aimed at infrastructure issues]."* (P2)
> *"I establish the guidance profile, but I don't go very far into this argument, because then you end up arguing with the management, so you leave it to health surveillance to set up this health profile." (P3)*
> *"I talked [to the management] about the ventilation and it was resolved, but with the noise, the school would have to be renovated and so it's more difficult, right?"* (P4)
> *"Normally we do it [the diagnosis] at the beginning of the job, because I can't work without knowing where I'm working. So we carried out an analysis of the quality of the classrooms, of the teacher, of the structure, what they have resources for and what they don't, if I'm going to need to take materials, if I'm not, so this institutional diagnosis overview, to find out how the school is functioning and also to support the teacher, to suggest changes."* (P5)

All the interviewees who mentioned conducting a structural assessment (an important activity for understanding how the school functions and considering changes that can have an impact on the quality of education), referred to ventilation and noise and the latter is related to damage leading to vocal problems for the teacher.

Some studies in the SLH literature focus on these issues and note that high noise levels, over 60 dBA, require the teacher to raise the intensity of their voice, in order for the students to be able to hear what is said, consequently causing vocal fatigue, as well as other long-term symptoms, such as hoarseness and pain in the vocal cords[16].

In this way, some of the SLH professional's actions in schools involve both noise analysis and its predisposing factors, including possible ways

of combatting these, as well as vocal work aimed at teachers, as we see below:

> *"[undertook activities aimed at] More emergency complaints, such as guidance for teachers, care for the voice."* (P2)
> *"On the part of the voice, [carried out] only the vocal health programme."* (P3).

From the above excerpts, we can see that work with the voice was restricted to guidance. One of the interviewees above cites the vocal health programme, but does not describe how this was carried out.

We know that this type of SLH work should go beyond the prevention of vocal disorders, since vocal health promotion activities for teachers should be allied with other activities of an intersectoral nature, aimed at minimizing risks within the environment and in the organization of work[17]. An SLH professional working in the educational context is responsible for the care of the teacher's voice, and should, therefore, consider practices beyond personal care, in order to reduce risks and collaborate in promoting teacher health[17].

As well as the specific work mentioned above, one recurring issue in the interviews was the practice of notifying teachers about problems observed in institutions, thereby delegating the solving of structural school problems to the teachers. This practice can be seen in certain assertions, such as this:

> *"I notify the teachers, right? I talk to them about the importance of the white board, of the noise of the fan, of the hostile environment within the classroom."* (P3)

Only one interviewee in our study said they had not undertaken any work related to institutional structure. On questioned about this, they informed us that the quality was good and that they had not done any work focused on infrastructure issues, lighting, ventilation, noise, furniture or similar. The interviewee justified this absence of analysis by saying that the school had just undertaken adaptations to improve accessibility.

> *"I wouldn't say [the infrastructure] was good, between regular and good. Because some are in the process of adaptations, in line with accessibility, those that have classrooms with multifunctional resources by order of the Ministry of Education, right? So, they need to be renovated to become accessible. So I would say that the framework of schools and structures is good."* (P2).

Only one interviewee mentioned school structural assessment, as part of the institutional and situational diagnosis. Despite not being a specific category in this study, it is crucial to mention this practice, since it is aimed at creating a profile of the school institution. However, although it supports the professional in understanding the school's singularity and functioning, it does not take into consideration what the actors have to say about the education and health problems they face.

> *"Normally we do it [the institutional diagnosis] at the beginning of the job, because I can't work without knowing where I'm working. So we carried out an analysis of the quality of the classrooms, of the teacher, of the structure, what they have resources for and what they don't, if I'm going to need to take materials, if I'm not, so this institutional diagnosis overview, to find out how the school is functioning and also to support the teacher, to suggest changes."* (P5)

As we can see, it appears that the respondent is seeking progress in identifying problems that interfere in the learning and teaching process, for example, structural factors. However, we should point out that the SLH professional alone should not be responsible for interpreting and determining what the problem is and what merits intervention. In the processing and analysis of information regarding such problems[6], joint reflection is required, with the various actors involved (not restricted to the SLH professional and the teacher) considering the educational problems, in this case structural, that need to be overcome.

Absence of any type of diagnosis

Only two of the five SLH professionals confirmed, in the first instance, that they did not conduct any type of diagnosis, as can be seen below:

> *"No, I did not [conduct clinical, institutional or situation diagnosis]!"* (P1)
> *"No, I didn't conduct any! Not a clinical diagnosis, nor an institutional one, because I didn't want them to require this of me, because it would become a clinic within the school, right?"*(P4)

One interviewee further confirmed that they had created a type of "SLH dynamics" report to prevent them from being required to deliver non-specific diagnoses, as can be seen in their response transcribed below:

> *"I filled in some so-called "reports" that I invented. I wrote "SLH dynamics" because I didn't want to write a report in the school, nor provide a diagnosis, so they wouldn't get used to it."* (P4)

We note that P4 stressed that they did not make any kind of diagnosis to avoid requests from the institution in which they worked. The professional further asserted that, if they did undertake any type of diagnosis, it would "*become a clinic within the school*." (P4)

In the excerpts above, we observe that these SLH professionals probably say they do not undertake any form of diagnosis as a result of the relationship they have established between situational/institutional diagnoses and clinical, medical and/or SLH diagnoses. To understand that undertaking a (situational or institutional) diagnosis is a practice that corroborates with clinical service is to believe that there is only one possible type of diagnosis: the clinical.

It is important to note that CFFa Resolution[4] no.387 of 18 September 2010, which discusses the attributions and competencies of the Educational SLH Professional, only mentions institutional diagnosis, more specifically institutional diagnoses of learning and teaching situations related to their knowledge area. Even this type of diagnosis may involve wider practice, aimed at profiling the school institution, leading the professional to understand the school's singularity and functioning in a broader manner, in connection with the network, and not only in relation to learning and teaching situations.

We also need to discuss working relationships involved in the practice, or lack, of (institutional/situational) diagnoses by these professionals. The interviewees point to certain weaknesses in their working relationships. In some cases, the professional demonstrates a fear of exposing issues pertinent to their work, because of a fear of losing their job, as we may observe in the following segment:

> *"I notify the teachers, right? I talk to them about the importance of the white board, of the noise of the fan of the hostile environment within the classroom, but I don't go on stressing this all the time because it generates conflict, and I could end up unemployed."* (P3)
>
> *"At the beginning it was full of conflict [the relationship with the school team] because, it's like, imagine a SLH professional who arrives at the school and so as not to undertake a diagnosis, the school goes crazy, the school gets stressed. The SLH worker wants to come here to talk."* (P5)

In these interview excerpts, we note the SLH professional's conflict between the work they would like to do and what the school expects of them. This conflict is aggravated by the precariousness of their employment contracts, given that none of the SLH professionals in this study were in statutory employment, in other words, all took on the risks of an "uncertain and unpredictable job, in which employment risks are principally assumed by the workers and not by their employers" (p.2)[18].

Another aspect that merits attention is the fact that, by providing a broader view of health and education problems, a situational diagnosis is a tool that favours non-medicalized practices.

According to a document issued by the Fórum[5] (entitled "Recommendations of non-medicalized practices for education and health professionals and services"), questions of social life are complex, multifactorial and marked by culture and historical time. Here, medicalization is understood as a process through which questions of social life are reduced to links between a difficulty in adapting to social norms and organic determinism expressed through individual illness[5].

The medicalization logic seeks out organic causes to problems of a different order, ignoring social issues. Education does not fall outside this process and, according to this logic, difficulties in the education process "are easily reduced to supposed disorders, which, for their part "reassure" families and health and education professionals in the face of a series of social dilemmas"[5].

A tool such as situational diagnosis provides the SLH professional with a better understanding of the territory, the education system (and its possible interface with the health system) and the system's organizational capacity. Furthermore, it is a tool that enables the SLH professional to construct collective activities, which are better understood in a systemic model and which allow for a shared and dialogic view of problems and the activities required to resolve them. A situational diagnosis can be de-medicalized to the extent that it broadens

the SLH professional's view, moving away from a view of individual and biological determinism.

It is therefore essential to reflect on the importance of reframing SLH work so that this professional, so important in the education system, either public or private, can, in fact, help to improve education and consequently society, since education is the basis on which a fairer, more egalitarian and democratic society is founded[5].

Conclusion

The relationship between health and education enables the SLH professional to move through both fields, expanding discussions about the educational context and promoting activities that enhance practices aimed at the collective, in order to promote positive changes in the community.

However, we have observed here that, within the professional practices in education, the construction of diagnoses is sustained by a strong clinical, preventive and medicalized influence. This is in detriment to activities that would enable the SLH professional to discover and analyze the determining factors in the explanatory network of educational problems so as to contemplate more effective, collective practices for the field of education.

Professionals, even in the educational environment, tend to undertake screening, clinical diagnoses and referrals, without incorporating the practice of situational diagnosis into their professional routines. Screening practices and referrals remain very limited, since they do not support the consideration of wider, more long-term procedures. It is important to focus on teaching situational diagnoses in the undergraduate years, so that, on setting foot in various public and/or private institutions, professionals can use these as an essential tool for their work. It is also important that this subject be raised in congresses, seminars and courses and be discussed and debated with professionals who are already practicing in the school environment. It has not yet been possible to present and discuss the study's results with the participants in person. However, the study's final manuscript is available by e-mail.

Finally, we note the importance of diagnoses with a situational focus in the process to de-medicalize education. Based on such a diagnosis, it is possible to undertake a technical, social, economic and political analysis of the educational context. Such an analysis, based on listening openly to the different actors, may support the organization of practices that are not defined *a priori* by the SLH professional, but are rather constructed on dialogue with the school, creating a less medicalized practice.

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