Speech-language pathologists’ knowledge about working on pediatric feeding disorder

Conhecimento de fonoaudiólogos sobre a atuação no distúrbio alimentar pediátrico

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ABSTRACT

Purpose: To understand the training, knowledge, demand and clinical performance of speech-language pathologists on the subject of pediatric feeding disorders in the interior of Rio Grande do Sul. Methods: cross-sectional study, descriptive of quantitative approach. The population of this study was composed of Speech-Language Pathology professionals working on health and education institutions in the 42 cities of Midwest macro-region of Rio Grande do Sul. The contact with the participants was obtained from a register made available by the Regional Health Coordinations of this macro-region. The data collection occurred through an online quiz made available on the Google Forms platform. Results: the knowledge for working with the pediatric population with feeding disorder proved to be insufficient for proper handling of cases. The biggest doubts of speech-language pathologists are about the etiology and treatment of the disease, in addition to 74.1% of the participants reporting lack of confidence to assess and treat patients with this condition. Conclusion: most of the speech-language pathologists of the Midwest macro-region of Rio Grande do Sul do not feel up to handle cases with pediatric feeding disorder and report little knowledge about the subject. Thus, the investment in continuing training is considered necessary, in order to improve the creation of common knowledge, providing scientific subsidies and technical elements for replication in their workplaces.

Keywords: Eating behavior; Child; Speech-Language Pathology; Health Knowledge; Attitudes and Practice; Health education

RESUMO

Objetivo: compreender como é a formação, o conhecimento, a demanda e a atuação clínica dos fonoaudiólogos do estado do Rio Grande do Sul na temática de distúrbios alimentares pediátricos. Métodos: estudo transversal, descritivo, de abordagem quantitativa. A população foi composta por profissionais de Fonoaudiologia atuantes nas instituições de saúde e educação dos 42 municípios de abrangência da Macrorregião Centro-Oeste do Rio Grande do Sul. O contato com os participantes ocorreu a partir de um cadastro disponibilizado pelas Coordenações Regionais de Saúde dessa macroregião. A coleta de dados ocorreu por meio de um questionário online disponível na plataforma Formulários Google. Resultados: o conhecimento para a atuação junto à população pediátrica com distúrbio alimentar mostrou-se insuficiente para a adequada condução dos casos. As maiores dúvidas das fonoaudiólogas foram a respeito da etiologia e tratamento do distúrbio, além de 74,1% das participantes referirem insegurança para avaliar e tratar os pacientes com esse quadro. Conclusão: a maioria das fonoaudiólogas da Macrorregião Centro-Oeste do Rio Grande do Sul sente insegurança para atuar com o distúrbio alimentar pediátrico e relata pouco conhecimento sobre o tema. Portanto, considera-se necessário o investimento em formação continuada para as profissionais, a fim de favorecer a criação de saberes comuns, fornecendo subsídios científicos e elementos técnicos para a replicação nos seus locais de trabalho.

Palavras-chave: Comportamento Alimentar; Criança; Fonoaudiologia; Conhecimentos, Atitudes e Prática em Saúde; Educação em Saúde
INTRODUCTION

The eating process, despite being focused on survival, is considered an important act of relationship between the individual and the world. The relationship established with food is built from birth, in contact with the mother, family members, and experiences around them. Therefore, health professionals working in childhood must be aware of children’s feeding, because, besides being a source for growth and development, it provides psychic experiences and sociocultural behaviors\(^1,2,3\).

Feeding difficulties are a problem that has become common in family environments around the world, causing negative impact to the child and to the family relationship, and may be the cause of frequent conflicts in relationships\(^4\). Different studies show that 20% to 50% of children are picky eaters or selective eaters, according to their caregivers\(^4\).

Most parents/caregivers consider that eating is innate and easy. However, eating is a complex learning process that depends on several aspects to happen, such as motor and oral sensory skills, emotional and motivational aspects, and the child’s social, family, and environmental context\(^5\).

According to the Diagnostic and Statistical Manual of Mental Disorders V (DSM-V), eating difficulty is a term used to group all problems related to altered eating behaviors that cause concern in parents or guardians. In this group, three behaviors are recognized: children who eat little, children with restricted numbers of foods on the menu, and children who are afraid to eat\(^6\). In 2009, Kerzner\(^7\) proposed seven profiles within the general classification of eating difficulties, being: misinterpretation by parents, selective or picky eating, agitated child with low appetite, food phobia, presence of organic disease, presence of psychological disorder or neglected child, and crying that interferes with eating.

Recently, eating difficulties have been classified as pediatric feeding disorders (PFD), defined as impaired oral intake that is not age appropriate, associated with medical, nutritional, feeding, and/or psychosocial domains, medical, nutritional, feeding abilities, and/or psychosocial dysfunction. This term was constructed in order to unify worldwide the eating difficulties, following the structures of the International Classification of Functioning (ICF)\(^8\). The proposed criteria for the diagnosis of PFD are based on the four domains, and the impairment in one of them may lead to dysfunction in any of the others, resulting in an eating disorder\(^9\).

In English, there are two terms that cover eating aspects: feeding - refers to the dynamics of the practice of feeding in infants and children\(^9\); eating - is directly related to the act of eating food\(^10,11\). Thus, with similar meanings, both terms are involved in PFD.

Known as a disorder of multifactorial cause, it has been observed that the behavioral component related to eating is very present in cases of PFD\(^9\). Several authors have reported that eating disorders may be a family relationship disorder, claiming that it is an eating disorder shared between the parents and the child\(^12,13,14\).

In addition, it is necessary to take into account the environmental factor, since food, besides being essential for survival, is also part of a social context, involving family relationships, the place of meals, and frequency, among others\(^14\).

Speech therapy in PFD is a current issue in Brazil, rarely addressed in Speech Therapy graduation courses and with few publications on the subject. However, the insertion of the speech therapist in the multidisciplinary team is extremely important in conducting these cases, since he/she is the professional responsible for evaluating the motor-oral skills, readiness, and food safety, besides treating alterations in the stomatognathic system and its functions. The speech therapist has a crucial role in building the child’s relationship with the mouth, with food, and in learning how to eat pleasantly, safely, and efficiently\(^15\).

Therefore, the objective of this research was to understand the background, knowledge, demand and clinical performance of speech therapists in the countryside of the state of Rio Grande do Sul, in the topic of feeding difficulties.

METHODS

This was a cross-sectional and descriptive study, with a quantitative approach. The Research Ethics Committee of the Federal University of Santa Maria - REC/FUSM, approved the study under ruling No. 4,489,419.

The population of this study was made up of Speech Therapy professionals working in the public health and education institutions of the 42 cities in the Midwest Macro-region of the state of Rio Grande do Sul (RS). The contact occurred by means of telephone call and/or e-mail, from a registration list made available by the Regional Health Coordinators (RHC) of this macro-region (4th and 10th RHC). We contacted fifty-eight professionals, who signed the Free and Informed Consent Form (FICF).

The research was carried out by means of data analysis obtained with the application of a questionnaire from January to March 2021.

The questionnaire prepared by the authors addressed questions related to eating difficulties and divided into two sections. The first section aimed to characterize the sample with data on education; time of graduation; educational institution where graduated; complementary education; municipality and place of work; work bond with the municipality of performance; time of performance; areas of performance; clinical demands of care and performance in multidisciplinary team. The second section aimed at collecting specific information regarding the speech therapists’ knowledge about acting in pediatric feeding disorder, with questions such as definition of the pathology nomenclature; etiology; clinical performance of the professionals in the disorder; knowledge about the practice of speech therapy in pediatric feeding disorder; difference between pediatric feeding disorder and childhood dysphagia; work with infants, lactating and breastfeeding; courses and assisted lives on the subject; the team needed to work on pediatric feeding disorder; training on the pathology during graduation; family participation in the therapeutic process; number of cases attended; safety to assess and rehabilitate, and feelings when receiving a patient with this diagnosis.

The results were analyzed using the STATA 10 program. Descriptive statistics were performed and Pearson’s chi-square test was used to verify the association between the time of academic training and knowledge about pediatric feeding disorder, as well as the degree of training of professionals and knowledge about pediatric feeding disorder. In all analyses, p<0.05 was considered statistically significant.
RESULTS

The study comprised 27 speech therapy professionals working in the cities of the Midwest Macro-region of Rio Grande do Sul. All the participants were female, from now on speech therapists, graduated in both federal public (88.89%) and private (11.11%) educational institutions, with a mean time of graduation of 6.7 years. As for post-graduation courses, 24 (88.89%) had some level (specialization, master’s and/or doctorate) and 3 (11.11%) did not (Table 1).

Regarding the places of work of the speech therapists in the cities, 19 of them were connected to the health area (working in a Rehabilitation Specialized Center or in the Municipal Health Secretariat), 5 to the education area (working in an Association of Parents and Friends of the Exceptional - APAE and Municipal Secretariat of Education) and 3 of them reported being connected to both areas. The average working time of the speech therapists was 5.2 years (varying from 0.08 years to 22 years). In addition, 6 reported working in more than one municipality in the region.

Figure 1 presents the areas in which the participants work, with Language being the most cited area and the only one in common for all of them.

Figure 2 shows the speech therapists demands from the population of the cities received by the professionals participating in the study, with a predominance of complaints related to language.

The action of the speech therapists in the multidisciplinary team was mentioned as viable by 26 professionals, being part of a team formed by at least one of these professionals: psychologist, physiotherapist, nutritionist, pediatrician, occupational therapist, otorhinolaryngologist, social worker, psychopedagogue, special educator and nurse.

Eating difficulties were mentioned as part of the complementary training of 40.7% of the speech therapists, with an average of 5 to 10 hours of courses taken. As for knowledge and work with eating disorders, 81.48% of the speech therapists reported having knowledge about the theme, and 44.44% reported working in this area.

Table 2 shows the answers of the professionals who worked with pediatric feeding disorders.

Regarding the specific knowledge of PED, 66.67% reported not knowing which methods to apply to work in these cases, this being the main doubt of the professionals in this area.

As for the 44.44% of the speech therapists in the sample that work with eating disorders, the average of cases seen by them was 3 cases until the moment of the research, and the parents’ participation in the therapy was around 58.3%. Although 44.44% of the professionals reported working with PED, only 11.11% also work with prevention. In addition, 74.07% of the study participants said they did not feel safe to assess and rehabilitate patients with the disorder.

There was no significant association between the time of graduation of the speech therapists and the performance in the area, as well as for the knowledge of the professionals about the definition of eating difficulties, etiology, prevention, treatment and performance team. Even the speech therapists who graduated less than 10 years ago, and received training

<table>
<thead>
<tr>
<th>Table 1. General characteristics of the sample regarding education in Speech Therapy, complementary education and work bond with the municipality (n=27)</th>
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<tbody>
<tr>
<td><strong>Variables</strong></td>
</tr>
<tr>
<td>Educational institution (graduation)</td>
</tr>
<tr>
<td>Public</td>
</tr>
<tr>
<td>Private</td>
</tr>
<tr>
<td>Time of training in the area</td>
</tr>
<tr>
<td>Less than 5 years</td>
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<tr>
<td>From 5 to 10 years</td>
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<tr>
<td>More than 10 years</td>
</tr>
<tr>
<td>More than 20 years</td>
</tr>
<tr>
<td>Higher level of complementary education</td>
</tr>
<tr>
<td>None</td>
</tr>
<tr>
<td>Expertise</td>
</tr>
<tr>
<td>Master’s degree</td>
</tr>
<tr>
<td>Doctorate</td>
</tr>
<tr>
<td>Association with the municipality</td>
</tr>
<tr>
<td>Health (Municipal Secretariat or SRC)</td>
</tr>
<tr>
<td>Education (Municipal Secretariat or APAE)</td>
</tr>
<tr>
<td>Both</td>
</tr>
<tr>
<td>Length of service</td>
</tr>
<tr>
<td>Less than 5 years</td>
</tr>
<tr>
<td>From 5 to 10 years</td>
</tr>
<tr>
<td>More than 10 years</td>
</tr>
<tr>
<td>More than 20 years</td>
</tr>
</tbody>
</table>

Subtitle: N = number of participants; % = percentage; SRC = Specialized Rehabilitation Center; APAE = Association of Parents and Friends of the Exceptional

![Figure 1. Areas of practice of the speech therapists in the sample](image1)

![Figure 2. Speech-language pathology demands of the population served in the cities](image2)

Subtitle: % = percent
on the subject during their graduation, reported insecurity in evaluating and rehabilitating patients with eating difficulties.

Regardless of the time of training, all speech therapists mentioned understanding the relationship between oral and sensory abilities for feeding, in addition to reporting knowing how to differentiate feeding difficulty from childhood dysphagia (Table 3).

As for the level of the professionals’ degrees, there was no relationship with their performance in the area of feeding difficulties. Most reported knowing the definition of the term and etiologies, and were able to differentiate feeding difficulty from infantile dysphagia. The results identified that most of the speech therapists had knowledge about the prevention of feeding difficulties, but did not work at this level.

Notwithstanding the participants’ degree, most of them reported not knowing about the treatment for pediatric feeding disorders, besides mentioning insecurity to evaluate and treat patients.

As for further training in the area, there was no relationship with the level of education of professionals, but there was an association between the completion of courses on the subject and work in the area (Table 4).

**DISCUSSION**

The difficulties involving pediatric feeding disorders are scarcely addressed in the studies in the Speech Therapy area. According to Müller et al.\(^\text{16}\), between 2010 and 2013 there was the highest occurrence of studies in the area, most of them in Europe and the United States. In Brazil, a lack of studies is observed, associated with the scarcity of interdisciplinary teams specialized in the theme. There are few publications with this approach in the country; however, there is evidence of its efficacy, and this evidence seems to modify the speech therapist’s performance in terms of infant feeding\(^\text{17}\).

According to the results of the present study, 44.44% of the interviewed speech therapists worked with PED, and the average of cases seen by them was three. This happens even in a scenario of easy access to interdisciplinary work.

Although the speech therapists have time for training and availability to work with a large team of health professionals, this does not happen when it comes to PED. According to Sharp et al.\(^\text{18}\), treatment with a multidisciplinary intervention provides numerous benefits for children with feeding difficulties,
and a team that includes psychology, medicine, nutrition, speech therapy and occupational therapy is ideal.

Among the professionals who worked with PED, only 11.11% also worked with prevention related to food. Prevention aims to avoid the occurrence of diseases, based on the knowledge about them and on the control mechanisms\textsuperscript{(19)}, identifying risk groups, monitoring the factors that lead to risk, and creating preventive actions. The speech therapist is inserted in health care since the baby’s birth, helping in the maintenance of safe feeding. Therefore, preventive actions can be established from that moment on, aiming to prolong proper nutrition for the child and prevent alterations in the development of the stomatognathic system of eating skills.

The PED, besides affecting the child’s life, also causes a great impact on the family. In infancy, it is essential to include parents in the therapeutic process, since they are the ones responsible for feeding the child. According to Simione et al.\textsuperscript{(14)}, family-centered care will lead to better health outcomes for the child and the parents, helping with quality of life. The active participation of the parents in the therapeutic process unifies the treatment conduct and enables the generalization of care within the home\textsuperscript{(12)}. The speech therapists in this study reported involving the family in the therapeutic process, with 58.33% parental participation, susceptible to variation according to the case.

In the study by Simione et al.\textsuperscript{(20)}, the caregivers reported that they prefer health professionals and treatment approaches with principles of family-centered care. In addition, they pointed to the importance of incorporating family principles into care and setting treatment goals that are explicitly linked to health and improvements in quality of life.

The speech therapists were questioned about the contact with the theme during their graduation, and the results showed that only 40.74% of the participants were introduced to the theme during the course, proving the idea that the theme is recent in the performance of speech therapists in Brazil, since, among the professionals who graduated more than 10 years ago, 61.54% of them reported not having received instructions about eating difficulties during their training.

Besides being a current issue, the speech therapists action in this disorder is little known, both by the professionals and by the population in general. The data collected showed that the most common complaints in the speech therapists consultations referred to oral language, which may show the lack of knowledge of the community about speech therapists action in infant feeding, which ends up not seeking the speech therapists in the feeding area.

The found results showed that the lack of knowledge is one of the main causes of insecurity to act in the area, confirming the unanimous interest of the professionals in participating in the training offered in this research.

We noticed that the average amount of complementary training was from five to ten hours, a time which can be considered insufficient, given the complexity of the disorder, since the courses are extremely important to help the speech therapists, because, in the present study, there was an association between taking courses on the subject and working in the area.

The speech therapists who work with the disorder had more confidence to intervene in the cases, and 72.73% of them had taken a course on the subject, confirming that the courses are giving them confidence. Therefore, the professionals must be qualified in order to expand the speech therapists performance in PFD and supply the public service, since the diagnoses of the disease are on the rise. According to Kovacic et al.\textsuperscript{(21)}, in the United States, more than one in every 37 children under 5 years of age has a pediatric feeding disorders, being more prevalent than autism and cerebral palsy, which can generate an increase in the demand for care in health services in Brazil as well. The high incidence of the disorder reveals the need for trained professionals to meet the imminent demand.

According to the study by Goday et al.\textsuperscript{(9)}, PFD is associated with medical, nutritional, eating, and/or psychosocial dysfunction conditions. Because it has a multifactorial etiology, it is important that professionals know how to identify it, in order to provide an appropriate treatment for each case. According to data from this study, the main doubts of speech therapists were about the etiology and treatment methods of the disorder.

Because of the significant impact of PFD on family relationships, it is important that professionals use evidence-based treatment approaches and incorporate family-centered care principles\textsuperscript{(20)}. Thus, the encouragement of continued and interdisciplinary training is a favorable action for the rise of care to the patient with PFD.

The expansion of knowledge about PFD is extremely relevant and a priority, both because they are increasingly frequent disorders, and because of the need to deepen the interrelationships with food and dietary, epidemiological and clinical factors. Professionals responsible for child health should pay attention to recognizing these processes and the different profiles, so as not to minimize the situations and aid in diagnosis\textsuperscript{(22,23)}.

### Table 4. Relationship between the degree of training of speech therapists and knowledge about pediatric feeding disorder

<table>
<thead>
<tr>
<th>Variables</th>
<th>Degree of training</th>
<th>Value of p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None or expertise n = 19</td>
<td>Master’s and/or Ph. n = 8</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PFD definition</td>
<td>73.68%</td>
<td>26.32%</td>
</tr>
<tr>
<td>Difference between PFD and ID</td>
<td>84.21%</td>
<td>15.79%</td>
</tr>
<tr>
<td>PFD Etiology</td>
<td>68.42%</td>
<td>31.58%</td>
</tr>
<tr>
<td>PFD treatment</td>
<td>10.53%</td>
<td>89.47%</td>
</tr>
<tr>
<td>Team to serve PFD</td>
<td>26.32%</td>
<td>73.68%</td>
</tr>
<tr>
<td>Safety to treat PFD</td>
<td>73.68%</td>
<td>26.32%</td>
</tr>
<tr>
<td>Safety to treat PFD</td>
<td>26.32%</td>
<td>73.68%</td>
</tr>
<tr>
<td>Works with PFD</td>
<td>31.58%</td>
<td>68.42%</td>
</tr>
<tr>
<td>PFD course</td>
<td>47.37%</td>
<td>52.63%</td>
</tr>
<tr>
<td></td>
<td>36.84%</td>
<td>61.16%</td>
</tr>
</tbody>
</table>

**Subtitle:** N = number of speech therapists; % = percentage; p= statistical analysis using Person’s Chi-square test; PFD = pediatric feeding disorder; ID = infantile dysphagia.
Thus, it is important that speech therapy courses include eating disorders in their curriculum, since improvement courses are not always financially accessible to professionals. Besides that, it would be interesting that the health services seek, together with the teaching institutions, the complementary training in the area for their professionals, considering the growing incidence of the pathology and the importance of permanent education in health to qualify the assistance, a fact that becomes evident in face of the high interest for training reported by the professionals in the sample.

Despite the efforts made in data collection, it is admitted that the absence of studies on the subject limited the expansion of this research. Likewise, despite the low cost of the online questionnaire used for data collection, the questions may have been interpreted differently by the professionals. Moreover, it is worth noting the difficulty in obtaining contact and adherence from the target population of the study.

CONCLUSION

Most speech therapists from the Midwest Macro-region of Rio Grande do Sul feel insecure to work with pediatric feeding disorders, and report scarce knowledge on the theme, since it is a recent approach within the profession. It is noteworthy that the courses are providing safety to the professionals and, therefore, it is considered necessary to invest widely in permanent health education, in order to expand the speech therapists performance in cases of the disease.

ACKNOWLEDGEMENTS

To the Research Incentive Fund of the Dean of Graduate Studies and Research at the Federal University of Santa Maria (FIPE/PRPGP/UFSM), for the support given to carry out this research.

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