

# DENTISTRY-SPEECH INTEGRATION: THE IMPORTANCE OF INTERDISCIPLINARY TEAMS FORMATION

## *Integração odontologia-fonoaudiologia: a importância da formação de equipes interdisciplinares*

Thays Ribeiro da Silva <sup>(1)</sup>, Graziela de Luca Canto <sup>(2)</sup>

### ABSTRACT

The dentists and speech language pathologists work in the same area: the stomatognathic system. So, they have a responsibility to work together. Also, they have the need to ally with doctors, psychologists and physical therapists aiming the improvement of the therapies and treatments, promoting health and satisfaction to their patients. However, most dentists have difficulties about which cases need speech therapy and the appropriate time to require it, so does the speech language pathology in concerning to dentistry. The necessary professional skills to be part of a group must be taught and learned since academic life. The health professional should be able to produce and develop knowledge by biopsychosocial-cultural conditions of the health-illness process and also have the ability to communicate with the patients and other professionals. The purpose of this article was to clarify the interdisciplinary work importance in healthcare, focusing on the association between dentistry and speech language pathology for the health promotion of stomatognathic system. It also aims to show the importance of this approach from academic life to the training of prepared and humanized professionals to care the individuals as a whole and to be able to work in teams.

**KEYWORDS:** Interprofessional Relations; Dentistry; Speech, Language and Hearing Sciences

### ■ INTRODUCTION

So far, the dominant paradigm in science has led us to continuous division of knowledge in disciplines and subdisciplines<sup>1</sup>. Conceptualizing discipline as a scientific field, disciplinarity would be scientific specialized exploration in a specific area of homogeneous study, body of knowledge with its own characteristics in their plans for education, training, practice and subjects<sup>2</sup>.

However, one subject always depends on the interaction with others, occurring at different levels, such as: interdisciplinarity, which according to Piaget<sup>3</sup>, is “the degree to which the interaction among different disciplines or sectors of the same heterogeneous science leads to real interactions, to a certain reciprocity in exchanges leading to mutual enrichment “(p. 143). Differently, multidisciplinary, according with the same author, occurs when “to solve a problem it is necessary to obtain information from two or more sciences sectors or without the knowledge of the disciplines involved in the process are modified or enriched”<sup>3</sup>.

The resumes submitted by higher education courses in health area in Brazil presented with lack of coordination between the basic and clinical cycles, individualized professional practice and impersonal, isolated disciplines and overvaluation of the passive role of the student in the process of learning<sup>2</sup>. In this context the new National<sup>4</sup> Curriculum Guidelines, published in 2002, proposed a paradigm shift based on comprehensiveness, in which the professional

<sup>(1)</sup> Dentistry undergraduate student, UFSC, Florianópolis, Santa Catarina, Brazil; PET Dentistry-Speech Scholarship.

<sup>(2)</sup> Dentist; Dentistry-Speech PET Coordinator, MEC; Professor of Occlusion discipline and Coordinator of Dentistry Course, UFSC, Florianópolis, Santa Catarina, Brazil; PhD in Dentistry, UFSC.

Source of funding: Education program tutorial (PET) Dentistry-speech (MEC)

This manuscript was supported by CAPES – Brasil.

Conflict of interest: non-existent

profile to be formed is described as a “generalist, humanist, critical and reflective, to act at all levels of health care, based on technical and scientific rigor. Enabled the pursuit of activities related to the oral health of the population, based on ethical, legal, and in understanding the social, cultural economic means of your driving its actions to change reality for the benefit of society “(p. 1). Among the competencies and skills that the undergraduation students must develop are the action and the production of knowledge whose northern biopsichossociocultural the determinants of health disease process, the ability to communicate with the public and other health professionals, as well as how to work in interdisciplinary teams<sup>2,5</sup>.

Thus, currently, the audiologist and dentists undergo a change in their training, being seen as Health Care Professionals, able to work in a team and to take into account the social reality of the patients. Thus, they can maintain such a mechanism to support the disciplinary development and growth with all their technology, but keep the unity<sup>5</sup>.

The multiprofessional work consists in the annulment of individualistic model, increasing teamwork, sharing planning, division of labor, working for the assembly to be able to make a permanent contribution to society. In this case, in the context of health. One must assume that the health problems are always interdisciplinary<sup>6</sup>.

The current professional is already aware of the limitations of each area/ specialty and has been seeking a knowledge that covers not only the object of your study, but the individual as a whole, so you have the ability to work in teams with other professionals, know how to your route patients and then satisfy itself in finding quality health and high standards. The speech pathologist and dentist for having the stomatognathic system (SS) as a common field of work, need to be aware of the areas of expertise of each professional, for a treatment that complement the other and together achieve better clinical outcomes. However, this interaction has not been well elucidated before some professionals. Researchers interviewed 87 dentists or orthodontists and dentists have found that there are still gaps in spreading speech-dental work, because the work of the speech therapist in specialties is not fully defined. Ninety-five percent of Facial Orthopedics and 100% of dentists believe that the best results of the partnership between Speech and specialty arise from interaction with the area of orofacial myology. Despite showing some knowledge relative to other specialties in the speech area, dental surgeons were unable to define their relationship with them<sup>7</sup>.

Therefore, this study aimed to clarify the importance of interdisciplinary work in the health area,

focusing on the association between dental and speech therapy for SS health promotion, as well as showing the importance of an interdisciplinary approach since the academic life for the formation of qualified and humanized professionals for comprehensive care of individuals, able to work in teams.

## ■ THEORETICAL DISCUSSION

Nowadays, the proliferation of knowledge rapidly changes and is divided into isolated areas and is understood by “disciplinarity”, characterized by fragmentation of the object and the increasing specialization of the scientific subject<sup>8</sup>. Minds formed by disciplines lose their natural abilities to contextualize the knowledge as to integrate them into their sets, weakening the perception of global responsibility and solidarity<sup>9</sup>.

It is in such context that presents the interdisciplinary approach, which aims to broaden the world view of ourselves and of reality, in the purpose of overcoming the vision stratified<sup>8</sup>. It is based on teamwork, where each professional is familiar with the other areas, and a commitment to generate superior results to individual projects of each member<sup>2</sup>.

In health area, interdisciplinarity becomes progressively present. Etymologically, the term “health” in Latin “salus” means all, in Greek, the meaning is as a whole, real integrity. Thus, one can not fragment it into different areas, but have a holistic view of its meaning. Health is an area highly interdisciplinary and integration of disciplines within courses that prepare human resources to work in this field, can certainly lead to more training of professionals committed to the reality of health and its transformation<sup>8</sup>.

Among health areas that develop important roles are acting in an interdisciplinary dentistry and speech pathology, which along with the Medicine, Physiotherapy, Psychology among others, can provide full treatments to treat his patient in the environmental context, psychosocial and economic.

Some authors<sup>7,10</sup> reported that the first specialties of dentistry to interact with Speech Therapy were Pediatric Dentistry and Orthodontics. Posteriorly, others such as occlusion, Orthognathic Surgery, Periodontics and Prosthodontics began to consider the role of muscles and functions as etiologic factors, perpetuating or aggravating problems previously considered only the competence of Dentistry, who thus became also the scope of Speech.

The multidisciplinary teams are emerging with great force in the current market and, increasingly, the phono-dental link has been established with promising clinical results. However, this partnership

needs to be more widespread to improve integration and communication between areas, ensuring that the benefits of this union overcome theory and, in fact, benefit the population<sup>11</sup>.

In this context, the literature<sup>7</sup> about the interrelation between dentistry and speech pathology in Orofacial Motricity, concluded that lack of knowledge among dentists about which cases require speech therapy and the appropriate time for its accomplishment.

Thus, despite the Speech in Brazil have been regulated in 1981, needs to be further studied, widespread and recognized as part of the Health Team not only by professionals but also by the population. In its work, the speech therapist is concerned with the balance of the articulators, the stomatognathic as well as the associated musculature, which is a myofunctional.

The SS is formed by various static and dynamic structures such as bones, muscles, nerves and joints that work together to perform important functions such as speech, chewing, swallowing, breathing, among others. The harmonic work of this system favors the balance and neuromuscular occlusion and proper functioning of the temporomandibular joint (TMJ). Changes or imbalance in any of these components can lead to changes in the entire system, overriding the joint, muscles and, consequently, causing pain or discomfort. For being the field of activity of both dentists as of audiologists, the interaction between the two professions was needed to improve the diagnosis, prevention and treatment of their diseases. One is Temporomandibular Disorder (TMD). According to the American Academy of Orofacial Pain<sup>12</sup>, DTM has a multifactorial origin and is defined as a group of disorders involving the masticatory muscles, the TMJ and associated structures. According to the Academy the most frequent complaints of patients are pain in the face, TMJ, masticatory muscles and headache. Other symptoms are the manifestations: otologic, such as tinnitus, ear fullness and dizziness; speech: noise, fatigue, limitation of movement, pain and deviations. The audiologist should be alert to perform diagnosis and treatment, working along with the dentist and otolaryngologist. Among patients affected by TMJ disorders, 62.9% had some type of change in the articulators organs - lips, tongue and cheeks - and the functions of swallowing, chewing, breathing and speech, needing speech therapy for their complete rehabilitation<sup>11</sup>.

Following or concurrent with dental treatment, speech therapists can help by rearranging the functions altered by dysfunction with myofunctional orofacial exercises, to provide stability and improve them. If the source of the problem is psychological,

it is stated that a psychologist also complements the team. It is necessary for both professional know the treatment conduct from one another, so that there is a better direction of the case and mistakes are avoided.

Among other injuries that can affect SS, facial trauma can derail some of its important functions. Thus, they became a field of concern both as dental and speech<sup>13</sup>. The most common causes are automobile or motorcycle accidents, falls and assaults. The occurrence of mandibular fractures is common, being relevant to a given speech evaluation, since this structure participates actively in mastication and speech. In addition, patients referred orofacial symptomatology myofunctional as facial pain, cervical fatigue and reduced strength when chewing, limitation of mouth opening, and deviations limitation of mandibular movements and joint sounds. The speech therapy specific for facial trauma was effective for the rehabilitation of patients with facial fractures, eliminating the main complaints, minimizing clinical signs and sequelae inherent traumas, promoting rehabilitation myofunctional or functional adaptations. This work, together with the maxillofacial surgeon, contributes to the viability of the operation of the SS.

Another area of interaction between these professionals, with the inclusion of the orthodontist, is Orthognathic Surgery. The speech therapy with patients who undergo this procedure that helps reduce relapses caused by the maintenance of adaptive functional patterns. Other authors<sup>7</sup> found that with the sudden change of these structures, a new scheme proprioceptive should be purchased so that the soft tissue structures can perform their duties satisfactorily. It is imperative that the SLP is present in the multidisciplinary team of patients undergoing orthognathic surgery, to guide them and evaluate stomatognathic functions pre and post surgical. However, it is noteworthy that not always the postsurgical will be complemented with a speech treatment<sup>10</sup>.

In conjunction with the orthodontist, speech therapist works actively in the treatment and monitoring cases of malocclusion, orthodontic correction because you can only keep proper balance is harmonized with the patient's orofacial muscles. Thus, Amaral et al.<sup>7</sup> concluded that seems a consensus that the orthodontist must wait for high speech for granting high orthodontic because stability after it is obtained after the restoration of muscle balance. Some authors, however, reported cases in which the reinstatement occurred only with functional orthodontic correction, not requiring therapy myofunctional orofacial<sup>7</sup>.

Working with pediatric dentist, the partnership comprises from preventive care with actions that aim to control the harmful oral habits, including guidance on breastfeeding and its importance in craniofacial development of the child. When these habits have been established (lingual, tongue thrusting, finger sucking, mouth breathing) professional intervention is required to recover the normal functions<sup>7</sup>.

In mouth breathing, is important the interdisciplinary work involving prevention conducts and early treatment. Normally, the team should be composed of four experts: orthodontist (watching the craniofacial growth and correcting the occlusal changes), audiologist (through assessment, diagnosis and therapy miofunctional), otolaryngologist (diagnosing and treating disorders of the nasopharyngeal etiologies) and physiotherapist (correcting bodily disorders).

A new field of interdisciplinary dental and speech therapy is periodontics. Some studies report that the incorrect pressure of the tongue against the teeth can compromise periodontal health. Some authors<sup>14</sup> also found that patients with periodontal disease are more likely to be mouth breathers. Such people may also have trouble speaking, since in some cases, have difficulty articulating some phonemes best<sup>14</sup>. One can also cite the work of the speech therapist in the specialty of Oral Rehabilitation, as some adjustments masticatory and speech may be necessary when installing new dentures and dental implants.

Obviously, the development of interdisciplinary work and skill are not easy tasks. The difficulties encountered by health professionals are many, since there is a need for expansion of certain personality traits, such as: flexibility, humility, confidence, patience, intuition, adaptability, sensitivity to others, acceptance of risks learn to act in diversity, accept new roles among others<sup>8</sup>.

Other reports of frustration with the multidisciplinary interaction include the difficulty of motivation and awareness of patients and involvement of family members, which often offer some resistance to referral and treatment with other professionals<sup>7</sup>.

It is essential that these skills are fostered, trained and developed from academic life, so that the undergraduate student has fully trained and prepared for the labor market, both in private and

public, since the Unified Health System (SUS) is required that the trader is aware and learn to behave in an interdisciplinary team at Family Healthcare Strategy<sup>5</sup>.

The undergraduation student must be free to seek more than their required curriculum and classrooms have to offer and should have the right to move and take courses in different courses, internships and conduct experiments and practical contact with other areas. Moreover, it is necessary that teachers are able to provide the required training for the university, increasingly leaving able to meet the demand of the population.

## ■ FINAL CONSIDERATIONS

With this article, we can conclude that interdisciplinary work has become a requirement in health area for the market. The contemporary professionals must be able to work together to offer better therapeutic alternatives, with the goal of increasing the welfare of their patients and achieve better clinical outcomes.

Among the professionals with great need of interaction are the dentists and speech therapists, who have in common the same area of atuation: the stomatognathic system. Working in the field of Orthodontics, Oral and Maxillofacial Surgery, Periodontics and Implant Dentistry, Prosthodontics and Oral Rehabilitation, TMD and Orofacial Pain and also in conjunction with physicians, psychologists and physiotherapists these professionals can make your partnership an alliance with the aim of improving therapies and treatments and offer the most complete, promoting health and satisfaction to their patients.

Working as a team is not easy, requiring skills and personality traits are stimulated and developed, such as humility, patience, confidence, flexibility, intuition, respect, adaptability, among others. These skills should be taught and learned from academic life, encouraging undergraduation students to seek contact with other disciplines and knowledge in how to be part of a group. So universities form the most complete professional and able to meet the needs of the population.



**RESUMO**

Os odontólogos e fonoaudiólogos, por possuírem em comum a mesma área de atuação: o Sistema Estomatognático, tem a responsabilidade de trabalhar em conjunto. Além disso, têm a necessidade de se aliar com médicos, psicólogos e fisioterapeutas objetivando o aperfeiçoamento das terapias e tratamentos, promovendo satisfação e saúde aos seus pacientes. Entretanto, grande parte dos cirurgiões-dentistas apresentam dificuldades sobre quais casos necessitam de intervenção fonoaudiológica e o momento apropriado para a realização desta, o mesmo ocorre com os fonoaudiólogos em relação à Odontologia. As habilidades necessárias para que o profissional esteja apto a fazer parte de um grupo devem ser ensinadas e aprendidas desde a vida acadêmica, já que o profissional de saúde deve ser capaz de produzir e desenvolver conhecimentos que tenham por norte os condicionantes biopsicossocioculturais do processo saúde doença, a capacidade de comunicação com os pacientes e outros profissionais. O objetivo deste artigo foi esclarecer a importância do trabalho interdisciplinar na área da saúde, com enfoque na associação entre Odontologia e Fonoaudiologia. Também visou mostrar a relevância desta abordagem desde a vida acadêmica para a formação de profissionais capazes de trabalhar em equipe, habilitados e humanizados para o atendimento integral dos indivíduos.

**DESCRIPTORIOS:** Relações Interprofissionais; Odontologia; Fonoaudiologia

**■ REFERENCES**

1. Chaves M. Complexidade e transdisciplinaridade: uma abordagem multidimensional do setor saúde. *Rev Bras Educ Med.* 1998;22(1):7-18.
2. Garcia MAA, Pinto ATBCS, Odoni APC, Longhi BS, Machado LI, Linek MIS, et al. Interdisciplinaridade necessária à educação médica. *Rev Bras Educ Med.* 2007;31(2):147-55.
3. Piaget J. L'epistemologie des relations interdisciplinaires. In: Apostel L, Berger G, Briggs A, Michaud G. L'interdisciplinarité: problemes d'enseignement et de recherche dans les universites. Paris: Organization de Coperation et developpement Économiques; 1973. p. 131-44.
4. Brasil. Ministério da Educação. Conselho Nacional de Educação. Câmara de Educação Superior. Resolução CNE-CES 3, de 19 de fevereiro de 2002. Diretrizes Curriculares Nacionais do Curso de Graduação em Odontologia. *Diário Oficial da União, Brasília*, 4 mar. 2002; Seção 1, p. 10.
5. Carvalho ACP. Planejamento do curso de graduação de Odontologia: É importante planejar os cursos de graduação considerando-se as Diretrizes Curriculares Nacionais. *Rev Abeno.* 2004;1(4):7-13.
6. Morita MC, Kriger L. Mudanças nos cursos de Odontologia e a interação com o SUS: o conceito de saúde explicitado na constituição e os princípios que nortearam a criação e implantação do SUS são fundamentais na definição das Diretrizes Curriculares dos cursos da área de Saúde. *Rev Abeno.* 2004;1(4):17-21.
7. Amaral EC, Bacha SMC, Ghersel ELA, Rodrigues PMI. Interrelação entre a Odontologia e a Fonoaudiologia na motricidade orofacial. *Rev CEFAC.* 2006;8(3):337-51.
8. Vilela EM, Mendes IJM. Interdisciplinaridade e saúde: estudo bibliográfico. *Rev Latino-Am Enferm.* 2003;11(4):525-31.
9. Meirelles BHS, Erdmann AL. A interdisciplinaridade como construção do conhecimento em saúde e enfermagem. *Texto contexto - enferm.* 2005;14(3):411-8.
10. Marcondes GB. Contribuições para uma aproximação entre as áreas da fonoaudiologia e da odontologia [monografia]. São Paulo (SP): CEFAC; 1999.
11. Pereira CC, Felício CM. Os distúrbios miofuncionais orofaciais na literatura odontológica: revisão crítica. *Dent Press Ortodon Ortop Facial.* 2005;4(10):134-42.
12. Okeson JP. Diagnóstico diferencial e considerações sobre o tratamento das desordens temporomandibulares. In: Okeson JP. *Dor orofacial: guia de avaliação, diagnóstico e tratamento.* The American Academy of Orofacial Pain. Chicago: Quintessence; 1998. p. 113-84.

13. Bianchini EMG, Mangilli LD, Marzotto SR, Nazário D. Pacientes acometidos por trauma da face: caracterização, aplicabilidade e resultados do tratamento fonoaudiológico específico. Rev CEFAC. 2004;4(6):388-95.

14. Campos LCS, Reis FKW, Buarque APFC, Guedes JBR, Cunha DA, Silva HJ. A interferência das doenças periodontais na fala: relato de caso clínico. Int j dent. 2010;9(1):52-6.

Received on: September 20, 2012

Accepted on: February 10, 2013

Mailing address:

Thays Ribeiro da Silva

Rua Leopoldo Freiberger, nº 23 – Centro

Biguaçu - SC - Brasil

CEP: 88160-000

E-mail: thaysribeiros@gmail.com