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above, complained about difficulties in reading and writing. As to students from the 1st and 2nd year, we observed pre-dominance of complaints regarding speech (50%), memory (18%), fluency, hearing and concentration (12.5%), voice, occlusion (6.3%). **Conclusions:** It was possible to acknowledge that teachers are not only concerned with the issues related to school performance, bringing issues that go beyond the contexts of learning. It's a fact that the partnership between Speech Therapy professionals and teachers is essential for it strengthens the possibilities of work within the school.

9093. Aerodynamic Vocal Measurements from Professional Singers: Partial Results

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Introduction: Improved vocal measurements can be observed in professional singers due to their vocal training. **Objective:** Measure maximum phonation time /a,i,u/ and sound pressure level from professional singers. **Methods:** Ethics Committee approved database study (40680614.7.0000.5346). Inclusion: Professional singer (popular or lyric, male or female); 19 to 55 years old. Exclusion: pregnancy; history of neurological, endocrinological, psychiatric, gastric, or respiratory disease, alcoholism, smoking; hearing loss; laryngeal affection; vocal complaint; influenza or allergy during measurement. Evaluation: hearing and otorhinolaryngological evaluations; measurement of maximum phonation time /a,i,u/ (normality 15 to 25 seconds woman, 25 to 35 seconds man), in habitual pitch and loudness; measurement of sound pressure during /a/ emission (normality 65 dB woman, 64 dB man). Seventeen full records, 10 men (average 32,3 years), 7 women (average 28,7 years). **Results:** Maximum phonation time /a,i,u/ averages for men were respectively 19.65 s, 20.72 s, 19.69 s (80, 80 e 90% respectively bellow normality); and for women were 15.52 s, 17.39 s, 15.93 s (57, 29, 57 % respectively bellow normality). Sound pressure level average for men was 68.5 dBSPL, and for women was 74 dBSPL, both increased. **Conclusions:** Maximum phonation time average was bellow normality, and sound pressure level was increased, for most men and women. Professional singing did not improve maximum phonation time, but increased sound pressure level, that may indicate vocal abuse. Medical and speech therapies are recommended for this population.

Keywords: acoustics; phonation; singing; voice.

9096. Differential Threshold of Masking and Brainstem Auditory Evoked Potential in Subjects with Tinnitus and Normal Auditory Thresholds

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Introduction: Tinnitus is a conscious auditory illusion, a sound sensation not related to an external source of stimulation, affects more than 25 million Brazilians and can have an important repercussion on life quality. **Objectives:** To characterize the integrity of the auditory pathway to the brainstem and the auditory ability of binaural integration in adult individuals with tinnitus symptom and auditory thresholds within normality patterns. **Methods:** This research has a prospective descriptive analytical character of 20 patients with normal auditory thresholds and complaint of tinnitus. These patients were submitted to the brainstem auditory evoked potential with click stimulus and the differ-

ential masking threshold test (MLD). **Results:** Patients were aged between 20 and 60 years, being 2 males and 18 females. The brainstem auditory evoked potential revealed absolute latencies of waves I, III, V and interpeak intervals I-III, III-V and I-V within normality patterns bilaterally. The differential masking threshold was altered in 90% of the participants, corresponding to the difficulty in the auditory ability of binaural integration. **Conclusions:** Adults with normal auditory thresholds and tinnitus complaints present adequate conduction of the nerve pathways up to the brainstem and impairment in the identification of sounds in the presence of noise, demonstrating that tinnitus may have repercussions on central auditory abilities.

Keywords: tinnitus, auditory perception, audiometry, electrophysiology, questionnaires.

9097. The Influence of Brain Injury Time and Its Impact on Behavioral and Electrophysiological Tests of Auditory Processing

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Introduction: Chronic Subdural Hematoma is one of the most common forms of intracranial hemorrhage. Stimulation-induced reorganization capacity may be influenced by the elapsed time of the neurological injury. **Objective:** To verify the impact of injury time on behavioral and electrophysiological responses in individuals with Chronic Subdural Hematoma after surgical drainage. **Methods:** Participants were 13 individuals, aged 45 to 64 years, with auditory thresholds within normality patterns with significantly different lesion times. Seven individuals, mean lesion time of 2.9 months were allocated in the group with the least lesion time and six individuals with mean lesion time of 19.8 months were allocated in the group with longer lesion time. All subjects were submitted to behavioral and electrophysiological evaluation of auditory processing. **Results:** In the behavioral evaluation, all tests revealed significant lesion time effect. However, the groups were differentiated in two tests, and the Group with longer injury time had better performance with statistical difference between the groups. In the electrophysiological evaluation, in the P300 with verbal stimuli, the group with the longer lesion time presented larger amplitudes, with statistical difference and without significant lesion time. For the latency parameter, there was only significant lesion time and the latencies of the group with the shortest lesion time were larger than the group with the longer lesion time. **Conclusion:** The time of injury had influence in the behavioral tests and mainly, in the electrophysiological tests. Therefore, the time elapsed between injury and evaluation and rehabilitation of auditory processing should be considered.

9103. Relationship between Level of Schooling and Memory in Elderly Participants Of Groups Of Senior Citizens

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Introduction: The increase in healthy expectation causes many older people to seek to remain active by attending the elderly. In such groups individuals with the most varied degrees of schooling are found, which may be related to their cognitive ability, especially in memory. **Objective:** To investigate the relationship between the level of education of the elderly and the scores obtained in the Rivermead Behavioral Memory Test (RBMT). **Methodology:** This is an observational cross-sectional study with elderly participants

from elderly people who accepted to participate in the study. The elderly were invited to participate voluntarily in the research, in groups of senior citizens. Those who accepted answered a socio-demographic questionnaire (which included data on schooling) and were evaluated through the RBMT, which is a test that evaluates memory through tasks similar to everyday situations. The sample calculation evidenced the need to include 125 elderly in the sample. **Results:** 129 elderly people with a mean age of 60 to 88 years (mean 71.17 ± 6.27 years) participated in the study, with a predominance of females (86%). Schooling ranged from 0 to 25 years (mean 12.071 ± 4.64 years). The RBMT score varied between 4 and 30 points (mean 18.6 ± 4.77 points). The relationship between schooling and RBMT performance was observed ($r = 0.37$, $p = <0.0001$). **Conclusions:** It was found that, in the group studied, the higher the schooling, the higher the RBMT scores. However, more studies are needed on the subject in the elderly population.

Keywords: memory; aging; schooling.

9112. A Booklet Focused on the Auditory Rehabilitation and Usage of the Hearing Aids

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Introduction: currently hearing loss is increasingly becoming an earlier diagnosis. So the selection of the appropriate hearing aids and posterior auditory rehabilitation is of most importance, as it minimizes the consequences of the hearing loss and allows the individual to be a part of the hearing world. Based on the clinical experiences of auditory therapy on children, it was verified the need to create a book that, in a ludic and fantasious way, could communicate to the child the importance of using the hearing aid thoroughly, the care it needs, as well as motivation for the auditory rehabilitation. **Objective:** To elaborate an illustrated booklet as a way to give children with hearing loss incentive to use their hearing aids and to take part on the auditory therapy. **Methods:** Creating a children's story based on the experiences of the children with hearing loss that take part on the auditory rehabilitation. **Results:** A twelve pages booklet was created and distributed without any charge, and that, through the fantasy of the childish universe, informs about the stages of rehabilitation and the challenges the patients and their families may have to go through on their treatment, besides motivating the adherence to treatment. **Conclusions:** Through the making, distribution and publication of this material, we expect an increase in empathy and teamwork between the speech therapist, family and patient, just as improving the family's effort, making the use of the hearing aid and attendance to the rehabilitation process more effective.

Keywords: children; hearing loss; rehabilitation.

9114. Temporal Auditory Processing Tests on Cochlear Implant Users

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Introduction: The temporal processing refers to the analysis of temporal information of the auditory signal, such as the perception of a certain sound or its differentiation within a restricted or defined time domain, being fundamental in the auditory perception of verbal and nonverbal sounds. Temporal auditory processing tests can be used

in children and adults who use an individual sound amplification device and/or cochlear implant to evaluate and monitor auditory abilities of temporal resolution and temporal ordering of these subjects. **Objectives:** To review studies describing the temporal auditory processing tests used and how they are applied in children and adults, users of cochlear implant. **Data Synthesis:** A review was performed, with searches in PubMed, Scielo, Lilacs and Google Scholar databases. The following descriptors were used: cochlear implant and hearing tests and cochlear implants and their correlates in the English language. Articles in English, Portuguese and Spanish published in the period from 2009 to 2019 (10 years) were analyzed. **Conclusions:** According to the review of the studies published in the last 10 years, of which 3 are included. The temporal auditory processing tests used in children and adults with Cochlear Implants are: the Frequency Pattern Test or Pitch Pattern Sequence Test, the Duration Pattern Sequence Test, the Gap in Noise Test and the Random Gap Detection Test. The tests were applied in the free field at an intensity varying from 30 to 50 dB NS (sensation level) in patients with profound hearing loss.

Keywords: cochlear implantation; hearing tests; adult; child.

9117. Information Material on Hearing Health Applied to the Cleft Lip and Palate

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Introduction: The cleft lip and palate is a congenital craniofacial malformation, generated by an error in the fusion of the embryonic facial processes. These malformations affect other structures such as the velopharyngeal sphincter and the auditory tube. Children with cleft lip and palate may present more frequently otitis media of repetition. The occurrence of constant infections in the middle ear causes periods of hearing oscillation and sound detection fluctuation, impairing the hearing, language, speech and social interaction development. Thus, guidelines on basic hearing care in periods of otitis are important for a proper language development. **Objectives:** Elaborate an orientation and awareness folder on the impact of otitis media on the hearing of children with cleft lip and palate. **Methods:** Descriptive study of hearing health product development approved by the Ethics and Research Committee number 1.900.382. **Results:** An informative, colorful and free distribution flyer with guidance to parents and children's responsible with cleft lip and palate for which information on otitis media and its relation with cleft lip and palate, speech and hygiene habits were compiled. **Conclusions:** Elaboration of an informative flyer with data regarding the communication facilitation during periods of otitis and preventive methods for infections of upper airways. This product may help as a prevention instrument of auditory changes caused by otitis media and, consequently, for an adequate hearing and language development in this public.

Keywords: cleft lip; cleft palate; hearing; otitis media.