# Professional Master's Degree

## Medical Approach to Speech, Language and Communication Disorders

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## Medical Approach to Speech, Language, and Communication Disorders

Modality:**Online**
Duration: **12 months.**
Certificate: **TECH Technological University**
Official Nº of hours: **1,500 h.**
Website: **www.techtitute.com/us/medicine/professional-master-degree/master-medical-approach-speech-language-communication-disorders**

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# Introduction

Speech and language disorders are relatively frequent at an early age, although their late diagnosis causes around 40% to 60% of children to have a pathology that becomes chronic. Determining the exact cause and its early attention by the medical professional will be key to its correction. Fortunately, progress in this field and the application of new technologies in the management of these patients allow the child's communication to be finally effective and adequate. The achievements obtained in this area thanks to research make it necessary for physicians to be continuously up to date. As such, this 100% online degree is born, where the specialist doctor will be able to delve into the advances in the assessment and diagnosis of dyslalias, dyslexias or specific language disorder. All this with multimedia content that you can easily access 24 hours a day from your computer.

*Thanks to this Professional Master's Degree, in 12 months you will be up to date with the most notable advances in the early detection of delays in speech development"*

The medical professional, especially in Primary Care, plays a relevant role in the detection of certain pathologies at an early age. These include speech, language and communication disorders. These are quite frequent manifestations, which cause concern among parents and health care professionals, but which have made great progress in recent years thanks to studies that have achieved remarkable advances in the understanding of neurodevelopmental processes and improved intervention techniques.

The physician, therefore, is a key player for the child who presents dyslalia, dyslexia or autism and whose identification in the so-called "critical periods" or "windows of opportunity" are decisive in order to achieve optimal recovery and improvement results. For this reason, TECH has designed a university degree that offers the professional the latest information on the assessment, diagnosis and intervention in children with Speech, Language and Communication Disorders. All this from the hand of a team of specialized professionals with extensive professional experience.

In this way, through innovative multimedia content, the professional will be able to learn more about genetic syndromes, the current classification of autism spectrum disorder, Asperger's disorder, Rett or pervasive developmental disorders. Likewise, the Relearning system, based on the reiteration of content, will allow students to progress through the syllabus in a much more agile way. This favors an exhaustive and reliable update of knowledge, based on the latest scientific evidence on patients with hearing impairment or child and adolescent dysarthria.

The professionals are also faced with a program taught exclusively in online mode, which they can access comfortably whenever and wherever they wish. Students taking this Professional Master's Degree will be able to view the syllabus of this degree at any time from an electronic device with an internet connection. In addition, TECH gives healthcare professionals the freedom to distribute the teaching load according to their needs, which allows them to balance their personal and/or work responsibilities with an education that is at the forefront of the academic field.

This **Professional Master's Degree in Medical Approach to Speech, Language, and Communication Disorders** contains the most complete and up-to-date educational program on the market. Its most notable features are:

- Development of more than 75 case studies presented by experts in Speech, Language and Communication Disorders
- The graphic, schematic, and practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice
- Latest developments in Speech, Language, and Communication Disorders
- It contains practical exercises where the self-assessment process can be carried out to improve learning
- With special emphasis on innovative methodologies in Speech, Language, and Communication Disorders
- All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an internet connection

*Easily access the latest scientific studies on Speech, Language and Communication Disorders from your computer at any time”*

*With this cdegree you will learn about the determining factors of disorders in childhood and adolescence, as well as the areas of the brain involved in the attentional processes"*

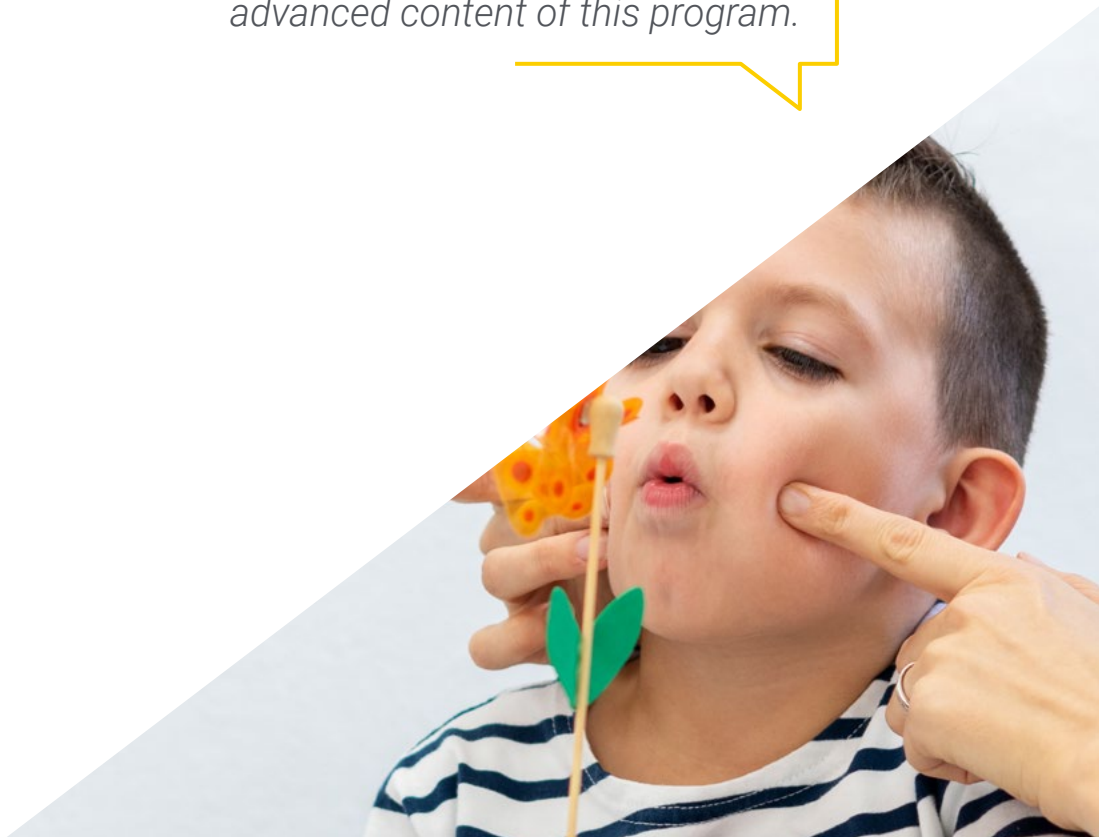
*Detailed videos and case studies are two key teaching tools available to you to update your knowledge of language disorders.*

*The Relearning system applied by TECH will allow you to progress in a much more natural way through the advanced content of this program.*

The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive training programmed to train in real situations.

This program is designed around Problem-Based Learning, whereby the professionals must try to solve the different professional practice situations that arise throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.



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# Objectives

During the 1,500 teaching hours of this university degree, the medical professional will be able to keep abreast of the advances that have been made in the diagnosis and intervention of patients with Speech, Language and Communication disorders. For this purpose, it has a syllabus that has been developed by a specialized teaching team, which will show in a dynamic and visual way, the assessment tools, the interaction with other specialists involved in the rehabilitation process and the etiology of certain disorders.

*This Professional Master's Degree provides you with the most up-to-date syllabus in the field of diagnosis and assessment of genetic syndromes"*

## General Objectives

- Provide a specialized education based on theoretical and instrumental knowledge that will enable the student to obtain skills in detection, prevention, assessment and intervention in the logopathies treated
- Consolidate basic knowledge of the intervention process in the classroom and other spaces based on the latest technological advances that facilitate access to information and the curriculum for these students
- Update and develop specific knowledge on the characteristics of these disorders in order to refine the differential and proactive diagnosis that sets the guidelines for intervention
- Raise awareness in the educational community of the need for educational inclusion and holistic intervention models with the participation of all members of the community
- Learn about educational experiences and good practices in speech therapy and psychosocial intervention that promote the personal, socio-family and educational adaptation of students with these educational needs

*With this university program you will be able to delve into the most successful strategies used to manage the patient with communication difficulties"*

## Specific Objectives

### Module 1. Basis of Speech and Language Therapy

- Delve into the concept of speech therapy and the areas of action of professionals in this discipline
- Acquire knowledge about the concept of language and the different aspects that compose it
- Delve into the typical development of language, knowing its stages, as well as being able to identify the warning signs of language development
- Understand and be able to classify the different language pathologies, from the different approaches currently existing
- Know the different batteries and tests available in the discipline of speech therapy, in order to carry out a correct assessment of the different areas of language
- Be able to develop a speech therapy report in a clear and precise way, both for the families and for the different professionals
- Understand the importance and effectiveness of working with an interdisciplinary team, whenever necessary and beneficial for the child's rehabilitation

### Module 2. Dyslalias: Assessment, Diagnosis, and Intervention

- Delve into the knowledge of dyslalias and the different types of classifications and subtypes that exist
- Understand and be able to apply the processes involved in the intervention, at the same time, to acquire knowledge to be able to intervene and to make own and effective material for the different dyslalias that may occur

### Module 3. Dyslexia: Assessment, Diagnosis, and Intervention

- Gain knowledge about everything involved in the evaluation process, in order to be able to carry out the most effective speech therapy intervention possible
- Learn about the reading process from vowels and syllables to paragraphs and complex texts
- Analyze and develop techniques for a correct reading process
- Be aware and be able to involve the family in the child's intervention, so that they are part of the process and that this collaboration is as effective as possible

### Module 4. Specific Language Disorder

- Acquire sufficient knowledge to be able to assess a verbal fluency disorder
- Identify the main language disorders and their therapeutic treatment
- Recognize the need for an intervention supported and endorsed by both the family and the teaching staff of the child's school

### Module 5. Understanding Autism

- Contact with the disorder. Identify myths and false beliefs
- Know the different areas affected, as well as the first indicators within the therapeutic process
- Promote professional competence based on a global vision of the clinical picture; multifactorial assessment
- Provide the necessary tools for an adequate specific adaptation in each case
- Broaden the vision of the field of action; professionals and family as an active role
- The role of the speech therapist as a dynamic element in the patient with autism

### Module 6. Genetic Syndromes

- Be able to identify the most frequent genetic syndromes currently in use
- In-depth knowledge about the characteristics of each of the syndromes described in the degree
- Acquire optimal knowledge to carry out a correct and functional assessment of the different symptoms that may occur
- Delve into different intervention tools, including material and resources, both manipulatives and computer devices, as well as possible adaptations to be made All this, in order to achieve an effective and efficient intervention by the professional

### Module 7. Dysphemia and/or Stuttering: Assessment, Diagnosis, and Intervention

- Gain knowledge about the concept of dysphemia, including its symptoms and classification
- Be able to differentiate between normal dysfluency and verbal fluency impairment, such as dysphemia
- Delve into the marking of objectives and the depth of the intervention of a dysphemic child, in order to be able to carry out the most efficient and effective work possible.
- Understand and be aware of the need to keep a record of all the sessions and everything that happens in them

### Module 8. Dysarthria in Children and Adolescents

- Acquisition of the basic fundamentals of dysarthria in children and adolescents, both conceptual and classificatory, as well as the particularities and differences with other pathologies
- Be able to differentiate the symptomatology and characteristics of verbal apraxia and dysarthria, being able to identify both pathologies by carrying out an adequate assessment process
- Clarify the role of the speech therapist in both the assessment and intervention process, being able to apply appropriate and personalized exercises to the child
- Gain knowledge about the environments and contexts of children's development, being able to provide appropriate support in all of them and guide the family and educational professionals in the rehabilitation process
- Know the professionals involved in the assessment and intervention of Dysarthric children, and the importance of collaboration with all of them during the intervention process

### Module 9. Understanding Hearing Impairments

- Assimilation of the anatomy and functionality of the organs and mechanisms involved in hearing
- Delve into the concept of hypoacusis and the different types of hearing loss that exist
- Gain knowledge about the assessment and diagnostic tools to assess hearing loss and the importance of a multidisciplinary team to carry it out
- Be able to carry out an effective intervention in a hypoacusia, knowing and internalizing all the phases of such intervention

- Know and understand the functioning and importance of hearing aids and cochlear implants
- Delve into bimodal communication and to be able to understand its functions and their importance
- Approach the world of sign language, knowing its history, its structure, and the importance of its existence
- Understand the role of the sign language Interpreter

**Module 10. Psychological Knowledge of Interest in the Speech-Language Pathology Field**

- Understand the area of knowledge and work of child and adolescent psychology: object of study, areas of action, etc.
- Become aware of the characteristics that a professional working with children and adolescents should have or enhance
- Acquire the basic knowledge necessary for the detection and referral of possible Psychological Problems in children and adolescents that may disturb the child's well-being and interfere in the Speech Therapy rehabilitation and to reflect on them
- To know the possible implications that different psychological problems (emotional, cognitive, and behavioral) may have on speech therapy rehabilitation
- Acquire knowledge related to attentional processes, as well as their influence on language and intervention strategies to be carried out at the speech therapy level together with other professionals
- Delve into the subject of executive functions and to know their implications in the area of language, as well as to acquire strategies to intervene on them at a speech therapy level together with other professionals
- Acquire knowledge on how to intervene at the level of social skills in children and adolescents, as well as to delve into some concepts related to them, and to obtain specific strategies to enhance them
- Know different behavior modification strategies that are useful in consultation to achieve both the initiation, development, and generalization of appropriate behaviors, as well as the reduction or elimination of inappropriate behaviors
- Delve into the concept of motivation and to acquire strategies to promote it in consultation
- Acquire knowledge related to school failure in children and adolescents
- Gain knowledge about the main study habits and techniques that can help to improve the performance of children and adolescents from a speech therapy and psychological point of view

*Take the opportunity to learn about the latest advances in this area in order to apply it to your daily practice"*

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# Skills

This Professional Master's Degree will enable medical professionals to enhance their skills in the detection of patients with different types of language disorders such as aphasia, dyslexia, ADHD, as well as the different clinical manifestations of diseases such as Duchenne. The clinical cases, provided by the specialists who teach this degree, will also allow students to broaden their competencies in this key field in the development of children.

*This qualification will enable you to quickly detect the main warning signs of children with speech disorders"*

## Basic Skills

- Delve into concepts and logopedic procedures and each and every one of the areas of action of the professionals of this discipline
- Acquire knowledge about the dimensions of language and speech
- Delve into the evolutionary and normative neurodevelopmental aspects
- Understand and be able to classify the different speech and language pathologies
- Acquire skills for the elaboration of technical reports
- Assimilate effective intervention practices from a multidisciplinary approach

*With this 100% online program you will be up to date with the new technologies used in the intervention of patients with Williams or Rett Syndrome"*



## Specific Skills

- Delve into the knowledge of logopathies and the different types of existing classifications and subtypes
- Gain knowledge of the assessment process, in order to carry out the most effective speech therapy intervention possible
- Be aware and be able to involve the family, as well as the rest of the educational agents in the whole speech therapy process, considering the contextual and psychosocial variables
- Learn and integrate the use of technologies, as well as the application of innovative therapies and resources from other related disciplines

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# Course Management

A teaching team of speech therapists and specialists in the care of children with speech, language and communication difficulties will be in charge of providing medical professionals with the most up-to-date knowledge in this field. A teaching staff that stands out not only for its professionalism and experience in this area, but also for its proximity and human quality. All these factors have determined its selection by TECH for the delivery of this Professional Master's Degree, whose objective is to offer students an education in accordance with the present academic times.

*TECH has rigorously selected the specialized teaching team that delivers this degree, so that you get the latest information in the field of speech disorders"*

## Management

### Ms. Vázquez Pérez, Maria Asunción

- Forensic Speech Therapist with teaching experience in Attention Deficit Hyperactivity Disorder (ADHD)
- Diploma in Speech Therapy with training and experience in hearing impairment, Autism Spectrum Disorders, augmentative communication systems

## Professors

### Ms. Berbel, Fina Mari

- Rehabilitation clinic manager
- Speech therapist at the Federation of Deaf People of Alicante
- Speech Therapist graduated from the University of Murcia with a Professional Master's Degree in Clinical Audiology and Hearing Therapy
- Training in Spanish Sign Language interpreting

### Ms. Cerezo Fernández, Ester

- Speech therapist specialized in Neurology
- Master's degree in clinical neuropsychology, expert in myofunctional therapy and early care, neurological speech therapy
- Graduate in Speech Therapy

### Ms. López Mouriz, Patricia

- General Health Psychologist graduated in Psychology from the University of Santiago de Compostela (USC)
- Master's Degree in General Health Psychology from the same university in 2018
- Training in equality, brief therapy, and learning difficulties in children
- Specialised in psychological intervention in drug addiction and eating disorders, as well as in group intervention with women in vulnerable situations
- Degree in Psychology from the University of Santiago de Compostela (USC)

### Ms. Mata Ares, Sandra María

- Speech therapist
- Specialist in Speech Therapy Intervention in Childhood and Adolescence
- Master's Degree in Speech Therapy intervention in childhood and adolescence
- She has specific training in disorders related to Speech and Language in childhood and adulthood

### Ms. Rico Sánchez, Rosana

- Director and Speech Therapist in the Speech Therapy and Pedagogy Center "Words and More"
- Speech therapist collegial Nº 09/032 Professional Association of Speech Therapists of Castilla y León

### Ms. Plana González, Andrea

- Specialized in phonological awareness, dyslexia, dyslalia, ASD, aphasia, dementia, dysarthria and dysphagia
- Graduated in Speech Therapy at the University of Valladolid
- Master's Degree in Orofacial and Myofunctional Therapy from the Pontifical University of Salamanca
- Specialized in phonological awareness, dyslexia, dyslalia, ASD, aphasia, dementia, dysarthria and dysphagia

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# Structure and Content

TECH makes available to students all the innovative teaching tools in which the latest technology applied to teaching has been used. Through a dynamic methodology, students will be able to obtain updated knowledge on the basics of speech therapy and language, the importance of working with an interdisciplinary team that intervenes in the child with speech disorders or the different syndromes and disorders that affect communication. All of this is complemented with clinical case studies and specialized readings to which you will have access 24 hours a day, without classes with fixed timetables or attendance.

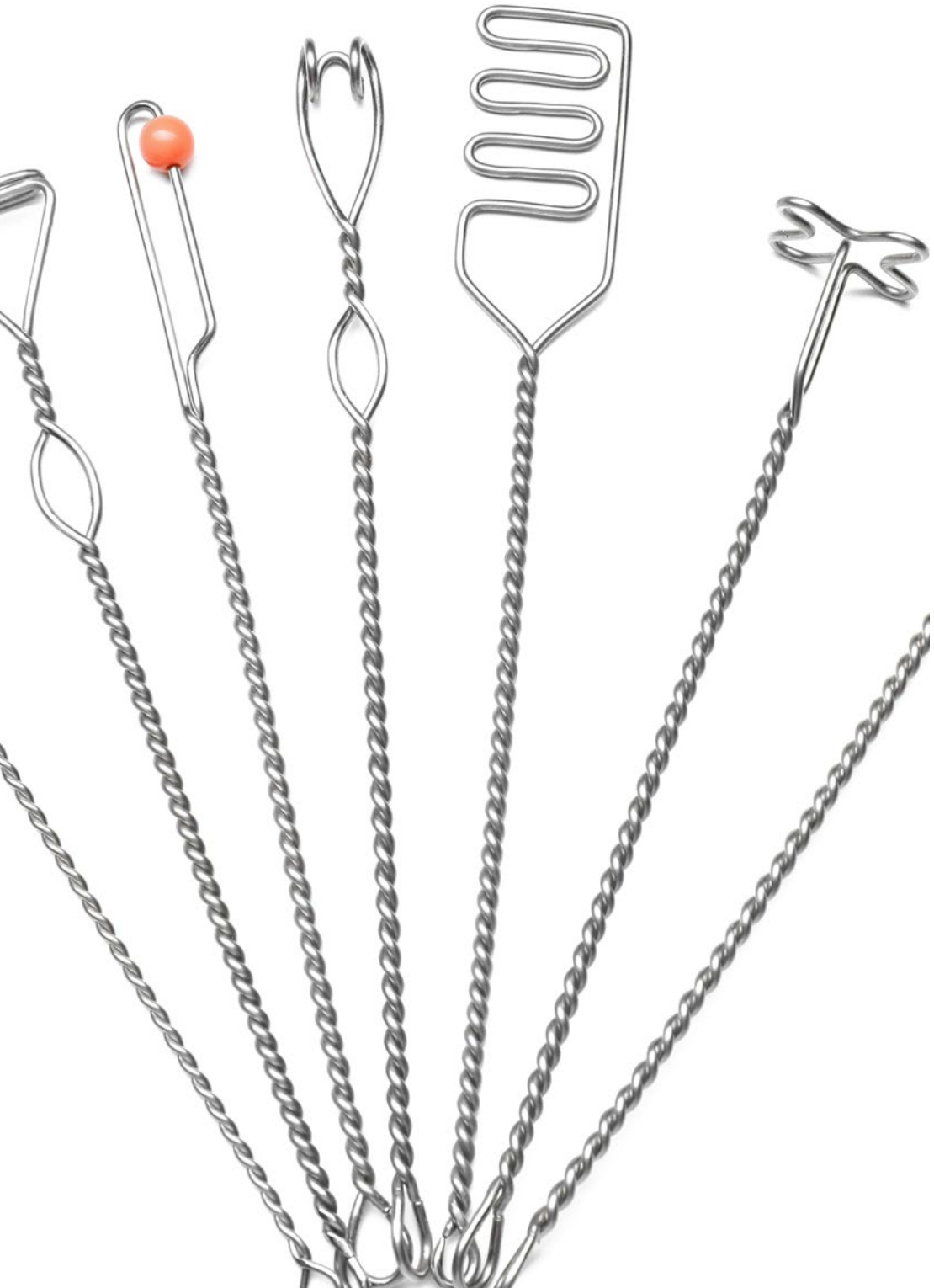
*The curriculum will immerse you in the most relevant techniques used for the diagnosis and intervention of patients with dysphemia, tachyphemia or dysglossia"*

## **Module 1.** Basis of Speech and Language Therapy

1.1. Introduction to the Professional Master's Degree and to the Module
- 1.1.1. Introduction to the Professional Master's Degree
- 1.1.2. Introduction to the Module
- 1.1.3. Previous Aspects of the Language
- 1.1.4. History of the Study of Language
- 1.1.5. Basic Theories of Language
- 1.1.6. Research in Language Acquisition
- 1.1.7. Neurological Bases of Language Development.
- 1.1.8. Perceptual Bases in Language Development
- 1.1.9. Social and Cognitive Bases of Language
  - 1.1.9.1. Introduction
  - 1.1.9.2. The Importance of Imitation
- 1.1.10. Final Conclusions

1.2. What is Speech Therapy?
- 1.1.1. Speech Therapy
  - 1.1.1.1. Concept of Speech Therapy
  - 1.1.1.2. Concept of Speech Therapist
- 1.2.2. History of Speech Therapy
- 1.2.3. Speech Therapy in the rest of the World
  - 1.2.3.1. Importance of the Speech Therapy Professional in the Rest of the World
  - 1.2.3.2. What are Speech Therapists called in other countries?
  - 1.2.3.3. Is the figure of the Speech Therapist valued in other Countries?
- 1.2.4. Functions of the Speech-Language Pathologist
  - 1.2.4.1. Functions of the Speech Therapist according to the BOE
  - 1.2.4.2. The Reality of Speech Therapy
- 1.2.5. Areas of Intervention of the Speech Therapist
  - 1.2.5.1. Areas of Intervention According to the BOE
  - 1.2.5.2. The Reality of the Speech-Language Pathologist's areas of intervention
- 1.2.6. Forensic Speech Therapy
  - 1.2.6.1. Initial Considerations
  - 1.2.6.2. Concept of Forensic Speech Therapist
  - 1.2.6.3. The Importance of Forensic Speech Therapists
- 1.2.7. The Hearing and Speech Teacher
  - 1.2.7.1. Concept of Hearing and Speech Teacher
  - 1.2.7.2. Areas of work of the Hearing and Speech Teacher
  - 1.2.7.3. Differences between Speech-Language Pathologist and Hearing and Speech Teacher
- 1.2.8. Final Conclusions

1.3. Language, Speech, and Communication
- 1.3.1. Preliminary Considerations
- 1.3.2. Language, Speech, and Communication
  - 1.3.2.1. Concept of Language
  - 1.3.2.2. Concept of Speech
  - 1.3.2.3. Concept of Communication
  - 1.3.2.4. How do they Differ?
- 1.3.3. Language Dimensions
  - 1.3.3.1. Formal or Structural Dimension
  - 1.3.3.2. Functional Dimension
  - 1.3.3.3. Behavioral Dimension
- 1.3.4. Theories that explain Language Development
  - 1.3.4.1. Preliminary Considerations
  - 1.3.4.2. Theory of Determinism: Whorf
  - 1.3.4.3. Theory of Behaviorism: Skinner
  - 1.3.4.4. Theory of Innatism: Chomsky
  - 1.3.4.5. Interactionist positions
- 1.3.5. Cognitive theories that explain the development of Language.
  - 1.3.5.1. Piaget
  - 1.3.5.2. Vygotsky
  - 1.3.5.3. Luria
  - 1.3.5.4. Bruner
- 1.3.6. Influence of the Environment on Language Acquisition



1.3.7. Language Components
1.3.7.1. Phonetics and Phonology
1.3.7.2. Semantics and Lexicon
1.3.7.3. Morphosyntax
1.3.7.4. Pragmatics
1.3.8. Stages of Language Development
1.3.8.1. Prelinguistic Stage
1.3.8.2. Linguistic Stage
1.3.9. Summary Table of Normative Language Development
1.3.10. Final Conclusions
1.4. Speech, Language, and Communication Disorders
1.4.1. Introduction to Unit
1.4.2. Speech, Language, and Communication Disorders
1.4.2.1. Concept of Communication Disorder
1.4.2.2. Concept of Speech Disorder
1.4.2.3. Concept of Language Disorder
1.4.2.4. How do they Differ?
1.4.3. Communication Disorders
1.4.3.1. Preliminary Considerations
1.4.3.2. Comorbidity with other Disorders
1.4.3.3. Types of Communication Disorders
1.4.3.3.1. Social Communication Disorder
1.4.3.3.2. Unspecified Communication Disorder
1.4.4. Speech Disorders
1.4.4.1. Preliminary Considerations
1.4.4.2. Origin of Speech Disorders
1.4.4.3. Symptoms of a Speech Disorder
1.4.4.3.1. Mild Delay
1.4.4.3.2. Moderate Delay
1.4.4.3.3. Severe delay
1.4.4.4. Warning signs in Speech Disorders

1.4.5. Classification of Speech Disorders
- 1.4.5.1. Phonological Disorder or Dyslalia
- 1.4.5.2. Dysphemia
- 1.4.5.3. Dysglossia
- 1.4.5.4. Dysarthria
- 1.4.5.5. Tachyphemia
- 1.4.5.6. Others

1.4.6. Language Disorders
- 1.4.6.1. Preliminary Considerations
- 1.4.6.2. Origin of Language Disorders
- 1.4.6.3. Conditions Related to Language Disorders
- 1.4.6.4. Warning signs in Language Development

1.4.7. Types of Language Disorders
- 1.4.7.1. Receptive Language Difficulties
- 1.4.7.2. Expressive Language Difficulties
- 1.4.7.3. Receptive-Expressive Language Difficulties

1.4.8. Classification of Language Disorders
- 1.4.8.1. From the Clinical Approach
- 1.4.8.2. From the Educational Approach
- 1.4.8.3. From the Psycholinguistic Approach
- 1.4.8.4. From the Axiological Point of View

1.4.9. What skills are Affected in a Language Disorder?
- 1.4.9.1. Social Skills
- 1.4.9.2. Academic Problems
- 1.4.9.3. Other Affected skills
- 1.4.10. Types of Language Disorders
  - 1.4.10.1. SLD
  - 1.4.10.2. Aphasia
  - 1.4.10.3. Dyslexia
  - 1.4.10.4. Attention Deficit Hyperactivity Disorder (ADHD)
  - 1.4.10.5. Others
- 1.4.11. Comparative Table of Typical Development and Developmental Disturbances

1.5. Logopedic Assessment Instruments

1.5.1. Introduction to Unit

1.5.2. Aspects to be Highlighted during the Logopedic Evaluation
- 1.5.2.1. Fundamental Considerations

1.5.3. Evaluation of Orofacial Motor Skills: The Stomatognathic System

1.5.4. Areas of Speech-Language, Speech, and Communication Speech-Language Assessment:
- 1.5.4.1. Anamnesis (Family Interview)
- 1.5.4.2. Assessment of the Preverbal Stage
- 1.5.4.3. Assessment of Phonetics and Phonology
- 1.5.4.4. Assessment of Morphology
- 1.5.4.5. Syntax Evaluation
- 1.5.4.6. Evaluation of Semantics
- 1.5.4.7. Evaluation of Pragmatics

1.5.5. General Classification of the Most Commonly Used Tests in Speech Assessment
- 1.5.5.1. Developmental Scales: Introduction
- 1.5.5.2. Oral Language Assessment Tests: Introduction
- 1.5.5.3. Test for the Assessment of Reading and Writing: Introduction

1.5.6. Developmental Scales
- 1.5.6.1. Brunet-Lézine Developmental Scale
- 1.5.6.2. Battelle Developmental Inventory
- 1.5.6.3. Portage Guide
- 1.5.6.4. Haizea-Llevant
- 1.5.6.5. Bayley scale of Child Development
- 1.5.6.6. McCarthy Scale (Scale of Aptitudes and Psychomotor Skills for Children)

1.5.7. Oral Language Assessment Test
1.5.7.1. BLOC
1.5.7.2. Monfort Induced Phonological Register
1.5.7.3. ITPA
1.5.7.4. PLON-R
1.5.7.5. PEABODY
1.5.7.6. RFI
1.5.7.7. ALS-R
1.5.7.8. EDAF
1.5.7.9. CELF 4
1.5.7.10. BOEHM
1.5.7.11. TSA
1.5.7.12. CEG
1.5.7.13. ELCE
1.5.8. Test for Reading and Writing Assessment
1.5.8.1. PROLEC-R
1.5.8.2. PROLEC-SE
1.5.8.3. PROESC
1.5.8.4. TALE
1.5.9. Summary Table of the Different Tests
1.5.10. Final Conclusions
1.6. Components That Must be Included in a Speech-Language Pathology Report
1.6.1. Introduction to Unit
1.6.2. The Reason for the Appraisal
1.6.2.1. Request or Referral by the Family
1.6.2.2. Request or Referral by School or External Center
1.6.3. Medical History
1.6.3.1. Anamnesis with the Family
1.6.3.2. Meeting with the Educational Center
1.6.3.3. Meeting with Other Professionals
1.6.4. The Patient's Medical and Academic History
1.6.4.1. Medical History
1.6.4.1.1. Evolutionary Development
1.6.4.2. Academic History
1.6.5. Situation of the Different Contexts
1.6.5.1. Situation of the Family Context
1.6.5.2. Situation of the Social Context
1.6.5.3. Situation of the School Context
1.6.6. Professional Assessments
1.6.6.1. Assessment by the Speech Therapist
1.6.6.2. Assessments by Other Professionals
1.6.6.2.1. Assessment by the Occupational Therapist
1.6.6.2.2. Teacher Assessment
1.6.6.2.3. Psychologist's Assessment
1.6.6.2.4. Other Assessments
1.6.7. Results of the Assessments
1.6.7.1. Logopedic Evaluation Results
1.6.7.2. Results of the other Evaluations
1.6.8. Clinical Judgment and/or Conclusions
1.6.8.1. Speech-Language Pathologist's Judgment
1.6.8.2. Judgment of Other Professionals
1.6.8.3. Judgment in Common with the Other Professionals
1.6.9. Speech Therapy Intervention Plan
1.6.9.1. Objectives to Intervene
1.6.9.2. Intervention Program
1.6.9.3. Guidelines and/or Recommendations for the Family
1.6.10. Why is it so Important to Carry Out a Speech Therapy Report?
1.6.10.1. Preliminary Considerations
1.6.10.2. Areas where a Speech Therapy Report can be Key

1.7. Speech Therapy Intervention Program
- 1.7.1. Introduction
  - 1.7.1.1. The need to elaborate a Speech Therapy Intervention Program
- 1.7.2. What is a Speech Therapy Intervention Program?
  - 1.7.2.1. Concept of the Intervention Program
  - 1.7.2.2. Intervention Program Fundamentals
  - 1.7.2.3. Speech Therapy Intervention Program Considerations
- 1.7.3. Fundamental Aspects for the Elaboration of a Speech Therapy Intervention Program
  - 1.7.3.1. Characteristics of the Child
- 1.7.4. Planning of the Speech Therapy Intervention
  - 1.7.4.1. Methodology of Intervention to be Carried Out
  - 1.7.4.2. Factors to Take Into Account in the Planning of the Intervention
    - 1.7.4.2.1. Extracurricular Activities
    - 1.7.4.2.2. Chronological and Corrected Age of the Child
    - 1.7.4.2.3. Number of Sessions per Week
    - 1.7.4.2.4. Collaboration on the Part of the Family
    - 1.7.4.2.5. Economic Situation of the Family
- 1.7.5. Objectives of the Speech Therapy Intervention Program
  - 1.7.5.1. General Objectives of the Speech Therapy Intervention Program
  - 1.7.5.2. Specific Objectives of the Speech Therapy Intervention Program
- 1.7.6. Areas of Speech Therapy Intervention and Techniques for its Intervention
  - 1.7.6.1. Voice
  - 1.7.6.2. Speech
  - 1.7.6.3. Prosody
  - 1.7.6.4. Language
  - 1.7.6.5. Reading
  - 1.7.6.6. Writing
  - 1.7.6.7. Orofacial
  - 1.7.6.8. Communication
  - 1.7.6.9. Hearing
  - 1.7.6.10. Breathing
- 1.7.7. Materials and Resources for Speech Therapy Intervention
  - 1.7.7.1. Proposition of Materials of Own Manufacture and Indispensable in a Speech Therapy Room
  - 1.7.7.2. Proposition of Indispensable Materials on the Market for a Speech Therapy Room
  - 1.7.7.3. Indispensable Technological Resources for Speech Therapy Intervention
- 1.7.8. Methods of Speech Therapy Intervention
  - 1.7.8.1. Introduction
  - 1.7.8.2. Types of Intervention Methods
    - 1.7.8.2.1. Phonological Methods
    - 1.7.8.2.2. Clinical Intervention Methods
    - 1.7.8.2.3. Semantic Methods
    - 1.7.8.2.4. Behavioral-Logopedic Methods
    - 1.7.8.2.5. Pragmatic Methods
    - 1.7.8.2.6. Medical Methods
    - 1.7.8.2.7. Others
  - 1.7.8.3. Choice of the Most Appropriate Method of Intervention for Each Subject
- 1.7.9. The Interdisciplinary Team
  - 1.7.9.1. Introduction
  - 1.7.9.2. Professionals Who Collaborate Directly with the Speech Therapist
    - 1.7.9.2.1. for Psychologists
    - 1.7.9.2.2. Occupational Therapists
    - 1.7.9.2.3. Professors
    - 1.7.9.2.4. Hearing and Speech Teachers
    - 1.7.9.2.5. Others
  - 1.7.9.3. The Work of these Professionals in Speech-Language Pathology Intervention
- 1.7.10. Final Conclusions

1.8. Augmentative and Alternative Communication Systems (AACS)
- 1.8.1. Introduction to Unit
- 1.8.2. What are AACS?
  - 1.8.2.1. Concept of Augmentative Communication System
  - 1.8.2.2. Concept of Alternative Communication System
  - 1.8.2.3. Similarities and Differences
  - 1.8.2.4. Advantages of AACS
  - 1.8.2.5. Disadvantages: of AACS
  - 1.8.2.6. How do AACS arise?
- 1.8.3. Principles: of AACS
  - 1.8.3.1. General Principles
  - 1.8.3.2. False myths about AACS
- 1.8.4. How to Know the Most Suitable AACS?
- 1.8.5. Communication Support Products
  - 1.8.5.1. Basic Support Products
  - 1.8.5.2. Technological Support Products
- 1.8.6. Strategies and Support Products for Access
  - 1.8.6.1. Direct Selection
  - 1.8.6.2. Mouse Selection
  - 1.8.6.3. Dependent Scanning or Sweeping
  - 1.8.6.4. Coded Selection
- 1.8.7. Types of AACS
  - 1.8.7.1. Sign Language
  - 1.8.7.2. The Complemented Word
  - 1.8.7.3. PECs
  - 1.8.7.4. Bimodal Communication
  - 1.8.7.5. Bliss System
  - 1.8.7.6. Communicators
  - 1.8.7.7. Minspeak
  - 1.8.7.8. Schaeffer System
- 1.8.8. How to Promote the Success of the AACS Intervention?
- 1.8.9. Technical Aids Adapted to Each Person
  - 1.8.9.1. Communicators
  - 1.8.9.2. Pushbuttons
  - 1.8.9.3. Virtual Keypads
  - 1.8.9.4. Adapted Mice
  - 1.8.9.5. Data Input Devices
- 1.8.10. AACS Resources and Technologies
  - 1.8.10.1. AraBoard Builder
  - 1.8.10.2. Talk up
  - 1.8.10.3. #IamVisual
  - 1.8.10.4. SPQR
  - 1.8.10.5. DictaPicto
  - 1.8.10.6. AraWord
  - 1.8.10.7. Picto Selector

1.9. The family as Part of the Intervention and Support for the Child
- 1.9.1. Introduction
  - 1.9.1.1. The Importance of the Family in the Correct Development of the child
- 1.9.2. Consequences in the Family Context of a Child with Atypical Development
  - 1.9.2.1. Difficulties Present in the Immediate Environment
- 1.9.3. Communication Problems in the Immediate Environment
  - 1.9.3.1. Communicative Barriers Encountered by the Subject at Home
- 1.9.4. Speech Therapy intervention aimed at the Family-Centered Intervention Model
  - 1.9.4.1. Concept of Family Centered Intervention
  - 1.9.4.2. How to carry out the Family Centered Intervention?
  - 1.9.4.3. The importance of the Family-Centered Model
- 1.9.5. Integration of the family in the Speech-Language Pathology Intervention
  - 1.9.5.1. How to integrate the family in the Intervention?
  - 1.9.5.2. Guidelines for the Professional
- 1.9.6. Advantages of family integration in all contexts of the subject
  - 1.9.6.1. Advantages of coordination with Educational Professionals
  - 1.9.6.2. Advantages of coordination with Health Professionals

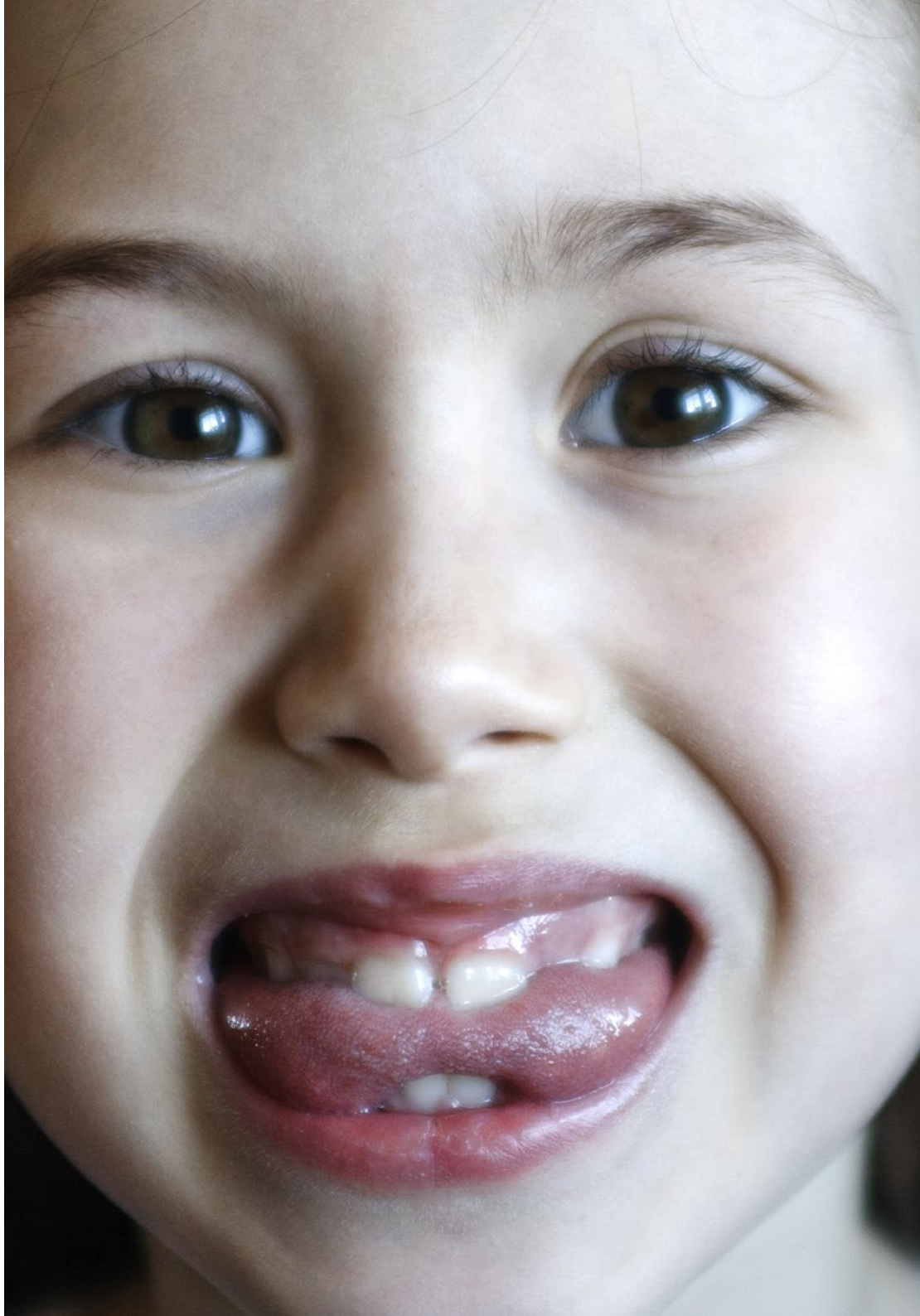
1.9.7. Recommendations for the Family Environment
1.9.7.1. Recommendations to Facilitate Oral Communication
1.9.7.2. Recommendations for a Good Relationship in the Family Environment
1.9.8. The Family as a Key Part in the Generalization of the Established Objectives
1.9.8.1. The Importance of the Family in Generalization
1.9.8.2. Recommendations to facilitate Generalization
1.9.9. How do I communicate with my child?
1.9.9.1. Modifications in the child's family environment
1.9.9.2. Advice and Recommendations from the child
1.9.9.3. The Importance of keeping a Record Sheet
1.9.10. Final Conclusions
1.10. Child Development in the School context
1.10.1. Introduction to Unit
1.10.2. The Involvement of the School Center during the Speech Therapy Intervention
1.10.2.1. The Influence of the School Center in the child's development
1.10.2.2. The Importance of the Center in the Speech Therapy Intervention
1.10.3. School Supports
1.10.3.1. Concept of School Support
1.10.3.2. Who provides School Support in the Center?
1.10.3.2.1. Hearing and Speech Teacher
1.10.3.2.2. Therapeutic Pedagogy Teacher (PT)
1.10.3.2.3. Counselor
1.10.4. Coordination with the Professionals of the Educational Center
1.10.4.1. Educational Professionals with whom the Speech-Language Pathologist coordinates with
1.10.4.2. Basis for Coordination
1.10.4.3. The Importance of Coordination in the Child's Development
1.10.5. Consequences of the Child with Special Educational Needs in the Classroom
1.10.5.1. How the Child Communicates with Teachers and Students?
1.10.5.2. Psychological Consequences
1.10.6. School Needs of the Child
1.10.6.1. Taking Educational Needs into Account in Intervention
1.10.6.2. Who Determines the Child's Educational Needs?
1.10.6.3. How Are They Established?
1.10.7. Methodological bases for Classroom Intervention.
1.10.7.1. Strategies to favor the child's Integration
1.10.8. Curricular Adaptation
1.10.8.1. Concept of Curricular Adaptation
1.10.8.2. Professionals who Apply it
1.10.8.3. How does it Benefit the Child with Special Educational Needs?
1.10.9. Final Conclusions

## **Module 2.** Dyslalias: Assessment, Diagnosis, and Intervention

2.1. Module Presentation
2.1.1. Introduction
2.2. Introduction to Dyslalia
2.2.1. What are Phonetics and Phonology?
2.2.1.1. Basic Concepts
2.2.1.2. Phonemes
2.2.2. Classification of Phonemes
2.2.2.1. Preliminary Considerations
2.2.2.2. According to the point of Articulation
2.2.2.3. According to the mode of Articulation
2.2.3. Speech Emission
2.2.3.1. Aspects of Sound Emission
2.2.3.2. Mechanisms Involved in Speech
2.2.4. Phonological Development
2.2.4.1. The Implication of Phonological Awareness
2.2.5. Organs Involved in Phoneme Articulation
2.2.5.1. Breathing Organs
2.2.5.2. Organs of Articulation
2.2.5.3. Organs of Phonation

2.2.6. Dyslalias
2.2.6.1. Etymology of the Term
2.2.6.2. Concept of Dyslalia
2.2.7. Adult Dyslalia
2.2.7.1. Preliminary Considerations
2.2.7.2. Characteristics of adult Dyslalia
2.2.7.3. What is the difference between childhood Dyslalia and adult Dyslalia?
2.2.8. Comorbidity
2.2.8.1. Comorbidity in Dyslalia
2.2.8.2. Associated Disorders
2.2.9. Prevalence
2.2.9.1. Preliminary Considerations
2.2.9.2. The Prevalence of Dyslalia in the PreSchool Population
2.2.9.3. The Prevalence of Dyslalia in the School Population
2.2.10. Final Conclusions
2.3. Etiology and Classification of Dyslalias
2.3.1. Etiology of Dyslalias
2.3.1.1. Preliminary Considerations
2.3.1.2. Poor Motor Skills
2.3.1.3. Respiratory Difficulties
2.3.1.4. Lack of Comprehension or Auditory Discrimination
2.3.1.5. Psychological Factors
2.3.1.6. Environmental Factors
2.3.1.7. Hereditary Factors
2.3.1.8. Intellectual Factors
2.3.2. Classification of Dyslalias according to Etiological Criteria
2.3.2.1. Organic Dyslalias
2.3.2.2. Functional Dyslalias
2.3.2.3. Developmental Dyslalias
2.3.2.4. Audiogenic Dyslalias
2.3.3. The classification of Dyslalias according to Chronological Criteria
2.3.3.1. Preliminary Considerations
2.3.3.2. Speech Delay
2.3.3.3. Dyslalia
2.3.4. Classification of Dyslalia according to the Phonological Process involved.
2.3.4.1. Simplification
2.3.4.2. Assimilation
2.3.4.3. Syllable Structure
2.3.5. Classification of Dyslalia based on Linguistic Level
2.3.5.1. Phonetic Dyslalia
2.3.5.2. Phonological Dyslalia
2.3.5.3. Mixed Dyslalia
2.3.6. Classification of Dyslalia according to the Phoneme involved.
2.3.6.1. Hotentotism
2.3.6.2. Altered Phonemes
2.3.7. Classification of Dyslalia according to the number of errors and their persistence
2.3.7.1. Simple Dyslalia
2.3.7.2. Multiple Dyslalias
2.3.7.3. Speech Delay
2.3.8. The Classification of Dyslalias according to the type of error
2.3.8.1. Omission
2.3.8.2. Addiction/Insertion
2.3.8.3. Substitution
2.3.8.4. Inversions
2.3.8.5. Distortion
2.3.8.6. Assimilation
2.3.9. Classification of Dyslalia in terms of Temporality
2.3.9.1. Permanent Dyslalias
2.3.9.2. Transient Dyslalias
2.3.10. Final Conclusions

2.4. Assessment Processes for the Diagnosis and Detection of Dyslalia
- 2.4.1. Introduction to the Structure of the Assessment Process
- 2.4.2. Medical History
  - 2.4.2.1. Preliminary Considerations
  - 2.4.2.2. Content of the Anamnesis
  - 2.4.2.3. Aspects to emphasize of the Anamnesis
- 2.4.3. Articulation
  - 2.4.3.1. In Spontaneous Language
  - 2.4.3.2. In Repeated Speech
  - 2.4.3.3. In Directed Language
- 2.4.4. Motor Skills
  - 2.4.4.1. Key Elements
  - 2.4.4.2. Orofacial Motor Skills
  - 2.4.4.3. Muscle Tone
- 2.4.5. Auditory Perception and Discrimination
  - 2.4.5.1. Sound Discrimination
  - 2.4.5.2. Phoneme Discrimination
  - 2.4.5.3. Word Discrimination
- 2.4.6. Speech Samples
  - 2.4.6.1. Preliminary Considerations
  - 2.4.6.2. How to Collect a Speech Sample?
  - 2.4.6.3. How to make a record of the Speech Samples?
- 2.4.7. Standardized tests for the Diagnosis of Dyslalia
  - 2.4.7.1. What are Standardized Tests?
  - 2.4.7.2. Purpose of Standardized Tests
  - 2.4.7.3. Classification
- 2.4.8. Non-Standardized Tests for the Diagnosis of Dyslalias
  - 2.4.8.1. What are Non-Standardized Tests?
  - 2.4.8.2. Purpose of Non-Standardized Tests
  - 2.4.8.3. Classification
- 2.4.9. Differential Diagnosis of Dyslalia
  - 2.4.10. Final Conclusions



2.5. User-Centered Speech-Language Pathology Intervention
- 2.5.1. Introduction to Unit
- 2.5.2. How to Set Goals During the Intervention?
  - 2.5.2.1. General Considerations
  - 2.5.2.2. Individualized or Group Intervention, Which is More Effective?
  - 2.5.2.3. Specific objectives that the Speech-Language Pathologist has to take into account for the Intervention of each Dyslalia
- 2.5.3. Structure to be Followed During Dyslalia Intervention
  - 2.5.3.1. Initial Considerations
  - 2.5.3.2. What is the Order of Intervention for Dyslalia?
  - 2.5.3.3. In Multiple Dyslalia, which Phoneme would the Speech-Language Pathologist start working on and what would be the reason?
- 2.5.4. Direct Intervention in Children with Dyslalia
  - 2.5.4.1. Concept of Direct Intervention
  - 2.5.4.2. Who is the Focus of this Intervention?
  - 2.5.4.3. The importance of Direct Intervention for Dyslexic Children
- 2.5.5. Indirect Intervention for Children with Dyslalia
  - 2.5.5.1. Concept of Indirect Intervention
  - 2.5.5.2. Who is the Focus of this Intervention?
  - 2.5.5.3. The importance of Carrying Out Indirect Intervention in Dyslexic Children
- 2.5.6. The Importance of Play During Rehabilitation
  - 2.5.6.1. Preliminary Considerations
  - 2.5.6.2. How to Use Games for Rehabilitation?
  - 2.5.6.3. Adaptation of Games to Children, Necessary or Not?
- 2.5.7. Auditory Discrimination
  - 2.5.7.1. Preliminary Considerations
  - 2.5.7.2. Concept of Auditory Discrimination
  - 2.5.7.3. When is the right time during the Intervention to include Auditory Discrimination?
- 2.5.8. Making a Schedule
  - 2.5.8.1. What is a Schedule?
  - 2.5.8.2. Why Should a Schedule be Used in the Speech Therapy Intervention of the Dyslexic Child?
  - 2.5.8.3. Benefits of Making a Schedule
- 2.5.9. Requirements to Justify Discharge
- 2.5.10. Final Conclusions

2.6. The Family as a Part of the Intervention of the Dysbalic Child
- 2.6.1. Introduction to Unit
- 2.6.2. Communication Problems with the Family Environment
  - 2.6.2.1. What Difficulties does the Dyslexic Child Encounter in their Family Environment to Communicate?
- 2.6.3. Consequences of Dyslalias in the Family
  - 2.6.3.1. How do Dyslalias Influence the Child in their Home?
  - 2.6.3.2. How do Dyslalias Influence the Child's Family?
- 2.6.4. Family Involvement in the Development of the Dyslalic Child.
  - 2.6.4.1. The Importance of the Family in the Child's Development
  - 2.6.4.2. How to Involve the Family in the Intervention?
- 2.6.5. Recommendations for the Family Environment
  - 2.6.5.1. How to Communicate with the Dyslexic Child?
  - 2.6.5.2. Tips to Benefit the Relationship in the Home
- 2.6.6. Benefits of Involving the Family in the Intervention
  - 2.6.6.1. The Fundamental Role of the Family in Generalization
  - 2.6.6.2. Tips for Helping the Family Achieve Generalization
- 2.6.7. The Family as the Center of the Intervention
  - 2.6.7.1. Supports That Can be Provided to the Family
  - 2.6.7.2. How to Facilitate these Aids During the Intervention?
- 2.6.8. Family Support to the Dyslalic Child
  - 2.6.8.1. Preliminary Considerations
  - 2.6.8.2. Teaching Families how to Reinforce the Dyslexic child
- 2.6.9. Resources Available to Families
- 2.6.10. Final Conclusions

2.7. The School Context as Part of the Dyslalic Child's Intervention
- 2.7.1. Introduction to Unit
- 2.7.2. The involvement of the School During the Intervention Period
  - 2.7.2.1. The Importance of the Involvement of the School
  - 2.7.2.2. The Influence of the School on Speech Development
- 2.7.3. The Impact of Dyslalias in the School Context
  - 2.7.3.1. How Can Dyslalias Influence the Curriculum?
- 2.7.4. School Supports
  - 2.7.4.1. Who Provides Them?
  - 2.7.4.2. How Are They Carried Out?
- 2.7.5. The coordination of the Speech Therapist with the School Professionals
  - 2.7.5.1. With Whom Does the Coordination Take Place?
  - 2.7.5.2. Guidelines to Be Followed to Achieve Such Coordination
- 2.7.6. Consequences in Class of the Dyslalic Child
  - 2.7.6.1. Communication with Classmates
  - 2.7.6.2. Communication with Teachers
  - 2.7.6.3. Psychological Repercussions of the Child
- 2.7.7. Orientations
  - 2.7.7.1. Guidelines for the School, to Improve the Child's Intervention
- 2.7.8. The School as an Enabling Environment
  - 2.7.8.1. Preliminary Considerations
  - 2.7.8.2. Classroom Care Guidelines
  - 2.7.8.3. Guidelines for improving Classroom Articulation
- 2.7.9. Resources Available to the School
  - 2.7.10. Final Conclusions

2.8. Bucco-phonatory Praxias
- 2.8.1. Introduction to Unit
- 2.8.2. The Praxias
  - 2.8.2.1. Concept of Praxias
  - 2.8.2.2. Types of Praxias
    - 2.8.2.2.1. Ideomotor Praxias
    - 2.8.2.2.2. Ideational Praxias
    - 2.8.2.2.3. Facial Praxias
    - 2.8.2.2.4. Visoconstructive Praxias
  - 2.8.2.3. Classification of Praxias According to Intention (Junyent Fabregat, 1989)
    - 2.8.2.3.1. Transitive Intention
    - 2.8.2.3.2. Aesthetic Purpose
    - 2.8.2.3.3. With Symbolic Character
- 2.8.3. Frequency of the Performance of Orofacial Praxias.
- 2.8.4. What Praxias are used in the Speech Therapy Intervention of Dyslalia?
  - 2.8.4.1. Labial Praxias
  - 2.8.4.2. Lingual Praxias
  - 2.8.4.3. Velum of Palate Praxias
  - 2.8.4.4. Other Praxias
- 2.8.5. Aspects that the Child Must Have to Be Able to Perform the Praxias
- 2.8.6. Activities for the Realization of the Different Facial Praxias
  - 2.8.6.1. Exercises for the Labial Praxias
  - 2.8.6.2. Exercises for the Lingual Praxias
  - 2.8.6.3. Exercises for Soft Palate Praxias
  - 2.8.6.4. Other Exercises
- 2.8.7. Current Controversy over the use of Orofacial Praxias
- 2.8.8. Theories in favor of the use of Praxias in the Intervention of the Dyslexic Child
  - 2.8.8.1. Preliminary Considerations
  - 2.8.8.2. Scientific Evidence
  - 2.8.8.3. Comparative Studies
- 2.8.9. Theories against the realization of Praxias in the intervention of the Dyslexic Child
  - 2.8.9.1. Preliminary Considerations
  - 2.8.9.2. Scientific Evidence
  - 2.8.9.3. Comparative Studies
  - 2.8.10. Final Conclusions

2.9. Materials and Resources for the Speech Therapy Intervention of Dyslalia: Part I
- 2.9.1. Introduction to Unit
- 2.9.2. Materials and Resources for the Correction of the Phoneme /p/ in All Positions
  - 2.9.2.1. Self-Made Material
  - 2.9.2.2. Commercially Available Material
  - 2.9.2.3. Technological Resources
- 2.9.3. Materials and Resources for the Correction of the Phoneme /s/ in All Positions
  - 2.9.3.1. Self-Made Material
  - 2.9.3.2. Commercially Available Material
  - 2.9.3.3. Technological Resources
- 2.9.4. Materials and Resources for the Correction of the Phoneme /r/ in All Positions
  - 2.9.4.1. Self-Made Material
  - 2.9.4.2. Commercially Available Material
  - 2.9.4.3. Technological Resources
- 2.9.5. Materials and Resources for the Correction of the Phoneme /l/ in All Positions
  - 2.9.5.1. Self-Made Material
  - 2.9.5.2. Commercially Available Material
  - 2.9.5.3. Technological Resources
- 2.9.6. Materials and Resources for the Correction of the Phoneme /m/ in All Positions
  - 2.9.6.1. Self-Made Material
  - 2.9.6.2. Commercially Available Material
  - 2.9.6.3. Technological Resources
- 2.9.7. Materials and Resources for the Correction of the Phoneme /n/ in All Positions
  - 2.9.7.1. Self-Made Material
  - 2.9.7.2. Commercially Available Material
  - 2.9.7.3. Technological Resources
- 2.9.8. Materials and Resources for the Correction of the Phoneme /d/ in All Positions
  - 2.9.8.1. Self-Made Material
  - 2.9.8.2. Commercially Available Material
  - 2.9.8.3. Technological Resources
- 2.9.9. Materials and Resources for the Correction of the Phoneme /z/ in All Positions
  - 2.9.9.1. Self-Made Material
  - 2.9.9.2. Commercially Available Material
  - 2.9.9.3. Technological Resources
- 2.9.10. Materials and Resources for the Correction of the Phoneme /k/ in All Positions
  - 2.9.10.1. Self-Made Material
  - 2.9.10.2. Commercially Available Material
  - 2.9.10.3. Technological Resources

2.10. Materials and Resources for the Speech Therapy Intervention of Dyslalia: Part II
- 2.10.1. Materials and Resources for the Correction of the Phoneme /f/ in All Positions
  - 2.10.1.1. Self-Made Material
  - 2.10.1.2. Commercially Available Material
  - 2.10.1.3. Technological Resources
- 2.10.2. Materials and Resources for the Correction of the Phoneme /ñ/ in All Positions
  - 2.10.2.1. Self-Made Material
  - 2.10.2.2. Commercially Available Material
  - 2.10.2.3. Technological Resources
- 2.10.3. Materials and Resources for the correction of the Phoneme /g/ in All Positions
  - 2.10.3.1. Self-Made Material
  - 2.10.3.2. Commercially Available Material
  - 2.10.3.3. Technological Resources
- 2.10.4. Materials and Resources for the Correction of the Phoneme /ll/ in All Positions
  - 2.10.4.1. Self-Made Material
  - 2.10.4.2. Commercially Available Material
  - 2.10.4.3. Technological Resources
- 2.10.5. Materials and Resources for the Correction of the Phoneme /b/ in All Positions
  - 2.10.5.1. Self-Made Material
  - 2.10.5.2. Commercially Available Material
  - 2.10.5.3. Technological Resources

2.10.6. Materials and Resources for the Correction of the Phoneme /t/ in All Positions
2.10.6.1. Self-Made Material
2.10.6.2. Commercially Available Material
2.10.6.3. Technological Resources
2.10.7. Materials and Resources for the Correction of the Phoneme /ch/ in All Positions
2.10.7.1. Self-Made Material
2.10.7.2. Commercially Available Material
2.10.7.3. Technological Resources
2.10.8. Materials and Resources for the Correction of the Phoneme /l/ in All Positions
2.10.8.1. Self-Made Material
2.10.8.2. Commercially Available Material
2.10.8.3. Technological Resources
2.10.9. Materials and Resources for the Correction of the Phoneme /r/ in All Positions
2.10.9.1. Self-Made Material
2.10.9.2. Commercially Available Material
2.10.9.3. Technological Resources
2.10.10. Final Conclusions

## **Module 3.** Dyslexia: Assessment, Diagnosis, and Intervention

3.1. Basic Fundamentals of Reading and Writing
3.1.1. Introduction
3.1.2. The Brain
3.1.2.1. Anatomy of the Brain
3.1.2.2. Brain Function
3.1.3. Methods of Brain Scanning
3.1.3.1. Structural Imaging
3.1.3.2. Functional Imaging
3.1.3.3. Stimulation Imaging
3.1.4. Neurobiological Basis of Reading and Writing
3.1.4.1. Sensory Processes
3.1.4.1.1. The Visual Component
3.1.4.1.2. The Auditory Component
3.1.4.2. Reading Processes
3.1.4.2.1. Reading Decoding
3.1.4.2.2. Reading Comprehension
3.1.4.3. Writing Processes
3.1.4.3.1. Written Coding
3.1.4.3.2. Syntactic Construction
3.1.4.3.3. Planning
3.1.4.3.4. The Act of Writing
3.1.5. Psycholinguistic Processing of Reading and Writing
3.1.5.1. Sensory Processes
3.1.5.1.1. The Visual Component
3.1.5.1.2. The Auditory Component
3.1.5.2. Reading Process
3.1.5.2.1. Reading Decoding
3.1.5.2.2. Reading Comprehension
3.1.5.3. Writing Processes
3.1.5.3.1. Written Coding
3.1.5.3.2. Syntactic Construction
3.1.5.3.3. Planning
3.1.5.3.4. The Act of Writing
3.1.6. The Dyslexic Brain in the Light of Neuroscience
3.1.7. Laterality and Reading
3.1.7.1. Reading with the Hands
3.1.7.2. Handedness and Language
3.1.8. Integration of the Outside World and Reading
3.1.8.1. Attention
3.1.8.2. Memory
3.1.8.3. Emotions
3.1.9. Chemical Mechanisms Involved in Reading
3.1.9.1. Neurotransmitters
3.1.9.2. Limbic System
3.1.10. Conclusions and Appendices

3.2. Talking and Organizing Time and Space for Reading
- 3.2.1. Introduction
- 3.2.2. Communication
  - 3.2.2.1. Oral Language
  - 3.2.2.2. Written Language
- 3.2.3. Relationship between Oral Language and Written Language
  - 3.2.3.1. Syntactic Aspects
  - 3.2.3.2. Semantic Aspects
  - 3.2.3.3. Phonological Aspects
- 3.2.4. Recognize Language Forms and Structures
  - 3.2.4.1. Language, Speech, and Writing
- 3.2.5. Develop Speech
  - 3.2.5.1. Oral Language
  - 3.2.5.2. Linguistic prerequisites for Reading
- 3.2.6. Recognize the structures of Written Language
  - 3.2.6.1. Recognize the Word
  - 3.2.6.2. Recognize the Sequential Organization of the Sentence
  - 3.2.6.3. Recognize the meaning of Written Language
- 3.2.7. Structure Time
  - 3.2.7.1. Organizing Time
- 3.2.8. Structuring Space
  - 3.2.8.1. Spatial Perception and Organization
- 3.2.9. Reading Strategies and their Learning
  - 3.2.9.1. Logographic Stage and Global Method
  - 3.2.9.2. Alphabetic Stage
  - 3.2.9.3. Orthographic Stage and Learning to Write
  - 3.2.9.4. Understanding to Be Able to Read
- 3.2.10. Conclusions and Appendices

3.3. Dyslexia
- 3.3.1. Introduction
- 3.3.2. Brief History of the Term Dyslexia
  - 3.3.2.1. Chronology
  - 3.3.2.2. Different Terminological Meanings
- 3.3.3. Conceptual Approach
  - 3.3.3.1. Dyslexia
    - 3.3.3.1.1. WHO Definition
    - 3.3.3.1.2. DSM-IV Definition
    - 3.3.3.1.3. DSM-V Definition
- 3.3.4. Other Related Concepts
  - 3.3.4.1. Conceptualization of Dysgraphia
  - 3.3.4.2. Conceptualization of Dysorthography
- 3.3.5. Etiology
  - 3.3.5.1. Explanatory Theories of Dyslexia
    - 3.3.5.1.1. Genetic Theories
    - 3.3.5.1.2. Neurobiological Theories
    - 3.3.5.1.3. Linguistic Theories
    - 3.3.5.1.4. Phonological Theories
    - 3.3.5.1.5. Visual Theories
- 3.3.6. Types of Dyslexia
  - 3.3.6.1. Phonological Dyslexia
  - 3.3.6.2. Lexical Dyslexia
  - 3.3.6.3. Mixed Dyslexia
- 3.3.7. Comorbidities and Strengths
  - 3.3.7.1. ADD or ADHD
  - 3.3.7.2. Dyscalculia
  - 3.3.7.3. Dysgraphia
  - 3.3.7.4. Visual Stress Syndrome
  - 3.3.7.5. Crossed Laterality
  - 3.3.7.6. High Abilities
  - 3.3.7.7. Strengths
- 3.3.8. The Person with Dyslexia
  - 3.3.8.1. The Child with Dyslexia
  - 3.3.8.2. The Adolescent with Dyslexia
  - 3.3.8.3. The Adult with Dyslexia

3.3.9. Psychological Repercussions
3.3.9.1. The Feeling of Injustice
3.3.10. Conclusions and Appendices
3.4. How to Identify the Person with Dyslexia?
3.4.1. Introduction
3.4.2. Warning Signs
3.4.2.1. Warning Signs in Early Childhood Education
3.4.2.2. Warning Signs in Primary Education
3.4.3. Frequent Symptomatology
3.4.3.1. General Symptomatology
3.4.3.2. Symptomatology by Stages
3.4.3.2.1. Infant Stage
3.4.3.2.2. School Stage
3.4.3.2.3. Adolescent Stage
3.4.3.2.4. Adult Stage
3.4.4. Specific Symptomatology
3.4.4.1. Dysfunctions in Reading
3.4.4.1.1. Dysfunctions in the Visual Component
3.4.4.1.2. Dysfunctions in the Decoding Processes
3.4.4.1.3. Dysfunctions in Comprehension Processes
3.4.4.2. Dysfunctions in Writing
3.4.4.2.1. Dysfunctions in the Oral-Written Language Relationship
3.4.4.2.2. Dysfunction in the Phonological Component
3.4.4.2.3. Dysfunction in the Encoding Processes
3.4.4.2.4. Dysfunction in Syntactic Construction Processes
3.4.4.2.5. Dysfunction in Planning
3.4.4.3. Motor Processes
3.4.4.3.1. Visuoperceptive Dysfunctions
3.4.4.3.2. Visuoconstructive Dysfunctions
3.4.4.3.3. Visuospatial Dysfunctions
3.4.4.3.4. Tonic Dysfunctions
3.4.5. Dyslexia Profiles
3.4.5.1. Phonological Dyslexia Profile
3.4.5.2. Lexical Dyslexia Profile
3.4.5.3. Mixed Dyslexia Profile
3.4.6. Dysgraphia Profiles
3.4.6.1. Visuoperceptual Dyslexia Profile
3.4.6.2. Visuoconstructive Dyslexia Profile
3.4.6.3. Visuospatial Dyslexia Profile
3.4.6.4. Tonic Dyslexia Profile
3.4.7. Dysorthographic Profiles
3.4.7.1. Phonological Dysorthography Profile
3.4.7.2. Orthographic Dysorthographic Profile
3.4.7.3. Syntactic Dysorthography Profile
3.4.7.4. Cognitive Dysorthography Profile
3.4.8. Associated Pathologies
3.4.8.1. Secondary Pathologies
3.4.9. Dyslexia versus other Disorders
3.4.9.1. Differential Diagnosis
3.4.10. Conclusions and Appendices
3.5. Assessment and Diagnosis
3.5.1. Introduction
3.5.2. Evaluation of Tasks
3.5.2.1. The Diagnostic Hypothesis
3.5.3. Evaluation of Processing Levels
3.5.3.1. Sublexical Units
3.5.3.2. Lexical Units
3.5.3.3. Supralexical Units
3.5.4. Assessment of Reading Processes
3.5.4.1. Visual Component
3.5.4.2. Decoding Process
3.5.4.3. Comprehension Process



3.5.5. Evaluation of Writing Processes
- 3.5.5.1. Neurobiological Skills of the Auditory Component
- 3.5.5.2. Encoding Process
- 3.5.5.3. Syntactic Construction
- 3.5.5.4. Planning
- 3.5.5.5. The Act of Writing

3.5.6. Evaluation of the Oral-Written Language Relationship
- 3.5.6.1. Lexical Awareness
- 3.5.6.2. Representational Written Language

3.5.7. Other Aspects to be Assessed
- 3.5.7.1. Chromosomal Assessments
- 3.5.7.2. Neurological Assessments
- 3.5.7.3. Cognitive Assessments
- 3.5.7.4. Motor Assessments
- 3.5.7.5. Visual Assessments
- 3.5.7.6. Linguistic Assessments
- 3.5.7.7. Emotional Appraisals
- 3.5.7.8. School Ratings

3.5.8. Standardized Tests and Evaluation Tests
- 3.5.8.1. TALE
- 3.5.8.2. PROLEC
- 3.5.8.3. DST-J Dyslexia
- 3.5.8.4. Other Tests

3.5.9. The Dytective Test
- 3.5.9.1. Contents
- 3.5.9.2. Experimental Methodology
- 3.5.9.3. Summary of Results

3.5.10. Conclusions and Appendices

3.6. Intervention in Dyslexia

3.6.1. General Aspects of Intervention

3.6.2. Selection of objectives based on the Diagnosed Profile
- 3.6.2.1. Analysis of Collected Samples

3.6.3. Prioritization and Sequencing of Targets
3.6.3.1. Neurobiological Processing
3.6.3.2. Psycholinguistic Processing
3.6.4. Adequacy of the Objectives to the Contents to be worked on.
3.6.4.1. From the Specific Objective to the Content
3.6.5. Proposal of Activities by Intervention Area
3.6.5.1. Proposals based on the Visual Component
3.6.5.2. Proposals based on the Phonological Component
3.6.5.3. Proposals based on Reading Practice
3.6.6. Programs and Tools for Intervention
3.6.6.1. Orton-Gillingham Method
3.6.6.2. ACOS Program
3.6.7. Standardized Materials for Intervention
3.6.7.1. Printed Materials
3.6.7.2. Other Materials
3.6.8. Space Organization
3.6.8.1. Lateralization
3.6.8.2. Sensory Modalities
3.6.8.3. Eye Movements
3.6.8.4. Visuoperceptual Skills
3.6.8.5. Fine Motor Skills
3.6.9. Necessary Adaptations in the Classroom
3.6.9.1. Curricular Adaptations
3.6.10. Conclusions and Appendices

3.7. From Traditional to Innovative. New Approach
3.7.1. Introduction
3.7.2. Traditional Education
3.7.2.1. Brief Description of Traditional Education
3.7.3. Current Education
3.7.3.1. The Education of Our Days
3.7.4. Process of Change
3.7.4.1. Educational Change. From Challenge to Reality
3.7.5. Teaching Methodology
3.7.5.1. Gamification
3.7.5.2. Project-Based Learning
3.7.5.3. Others
3.7.6. Changes in the Development of the Intervention Sessions
3.7.6.1. Applying the New Changes in Speech Therapy Intervention
3.7.7. Proposal of Innovative Activities
3.7.7.1. "My Logbook"
3.7.7.2. The Strengths of Each Student
3.7.8. Development of Materials
3.7.8.1. General Tips and Guidelines
3.7.8.2. Adaptation of Materials
3.7.8.3. Creating our Own Intervention Material
3.7.9. The Use of Current Intervention Tools
3.7.9.1. Android and iOS Operating System Applications
3.7.9.2. The Use of Computers
3.7.9.3. Digital Whiteboard
3.7.10. Conclusions and Appendices

3.8. Strategies and Personal Development of the Person with Dyslexia
3.8.1. Introduction
3.8.2. Study Strategies
3.8.2.1. Study Techniques
3.8.3. Organization and Productivity
3.8.3.1. The Pomodoro Technique
3.8.4. Tips on How to Face an Exam
3.8.5. Language Learning Strategies
3.8.5.1. First Language Assimilation
3.8.5.2. Phonological and Morphological Awareness
3.8.5.3. Visual Memory
3.8.5.4. Comprehension and Vocabulary
3.8.5.5. Linguistic Immersion
3.8.5.6. Use of ICT
3.8.5.7. Formal Methodologies

3.8.6. Development of Strengths
3.8.6.1. Beyond the Person with Dyslexia
3.8.7. Improving Self-concept and Self-esteem
3.8.7.1. Social Skills
3.8.8. Eliminating Myths
3.8.8.1. Student with Dyslexia. I Am Not lazy
3.8.8.2. Other Myths
3.8.9. Famous People with Dyslexia
3.8.9.1. Well-known People with Dyslexia
3.8.9.2. Real Testimonials
3.8.10. Conclusions and Appendices
3.9. Guidelines
3.9.1. Introduction
3.9.2. Guidelines for the Person with Dyslexia
3.9.2.1. Coping with the Diagnosis
3.9.2.2. Guidelines for Daily Living
3.9.2.3. Guidelines for the Person with Dyslexia as a Learner
3.9.3. Guidelines for the Family Environment
3.9.3.1. Guidelines for Collaborating in the Intervention
3.9.3.2. General Guidelines
3.9.4. Guidelines for the Educational Context
3.9.4.1. Adaptations
3.9.4.2. Measures to be taken to facilitate the Acquisition of Content
3.9.4.3. Guidelines to be Followed to Pass Exams
3.9.5. Specific Guidelines for Foreign Language Teachers
3.9.5.1. The Challenge of Language Learning
3.9.6. Guidelines for other Professionals
3.9.7. Guidelines for the Form of Written Texts
3.9.7.1. Typography
3.9.7.2. Font Size
3.9.7.3. Colors
3.9.7.4. Character, Line, and Paragraph Spacing
3.9.8. Guidelines for Text Content
3.9.8.1. Frequency and Length of Words
3.9.8.2. Syntactic Simplification
3.9.8.3. Numerical Expressions
3.9.8.4. The Use of Graphical Schemes
3.9.9. Writing Technology
3.9.10. Conclusions and Appendices
3.10. The Speech-Language Pathologist's Report on Dyslexia
3.10.1. Introduction
3.10.2. The Reason for the Evaluation
3.10.2.1. Family Referral or Request
3.10.3. The Interview
3.10.3.1. The Family Interview
3.10.3.2. The School Interview
3.10.4. The History
3.10.4.1. Clinical History and Evolutionary Development
3.10.4.2. Academic History
3.10.5. The Context
3.10.5.1. The Social Context
3.10.5.2. The family context
3.10.6. Assessments
3.10.6.1. Psycho-Pedagogical Assessment
3.10.6.2. Speech Therapy Assessment
3.10.6.3. Other Assessments
3.10.7. The Results
3.10.7.1. Logopedic Evaluation Results
3.10.7.2. Results of Other Assessments
3.10.8. Conclusions
3.10.8.1. Diagnosis
3.10.9. Intervention Plan
3.10.9.1. The Needs
3.10.9.2. The Speech Therapy Intervention Program
3.10.10. Conclusions and Appendices

## **Module 4.** Specific Language Disorder

4.1. Background Information
- 4.1.1. Module Presentation
- 4.1.2. Module Objectives
- 4.1.3. Historical Evolution of SLD
- 4.1.4. Late Language Onset vs. SLD SLD
- 4.1.5. Differences between SLD and Language Delay
- 4.1.6. Difference between ASD and SLD
- 4.1.7. Specific Language Disorder vs. Aphasia
- 4.1.8. SLD as a predecessor of Literacy Disorders
- 4.1.9. Intelligence and Specific Language Disorder
- 4.1.10. Prevention of Specific Language Disorder

4.2. Approach to the Specific Language Disorder
- 4.2.1. Definition of SLD
- 4.2.2. General Characteristics of SLD
- 4.2.3. Prevalence of SLD
- 4.2.4. Prognosis of SLD
- 4.2.5. Etiology of SLD
- 4.2.6. Clinically based classification of SLD
- 4.2.7. Empirically based classification of SLD
- 4.2.8. Empirical-clinical based Classification of SLD
- 4.2.9. Comorbidity of SLD
- 4.2.10. SLD, Not Only a Difficulty in the Acquisition and Development of Language

4.3. Linguistic Characteristics in Specific Language Disorder
- 4.3.1. Concept of Linguistic Capabilities
- 4.3.2. General Linguistic Characteristics
- 4.3.3. Linguistic Studies in SLD in Different Languages
- 4.3.4. General Alterations in Language Skills Presented by People with SLD
- 4.3.5. Grammatical Characteristics in SLD
- 4.3.6. Narrative Features in SLD
- 4.3.7. Pragmatic Features in SLD
- 4.3.8. Phonetic and Phonological Features in SLD
- 4.3.9. Lexical Features in SLD
- 4.3.10. Preserved Language Skills in SLD

4.4. Terminological Change
- 4.4.1. Changes in the Terminology of SLD
- 4.4.2. Classification According to DSM
- 4.4.3. Changes Introduced in the DSM
- 4.4.4. Consequences of Changes in Classification with the DSM.
- 4.4.5. New Nomenclature: Language Disorder
- 4.4.6. Characteristics of Language Disorder
- 4.4.7. Main Differences and Concordances between SLD and SL
- 4.4.8. Altered Executive Functions in SLD
- 4.4.9. Preserved Executive Functions in SL
- 4.4.10. Detractors of Terminology Change

4.5. Assessment in Specific Language Disorder
- 4.5.1. Speech-Language Evaluation: Prior Information
- 4.5.2. Early identification of SLD: Prelinguistic Predictors
- 4.5.3. General Considerations to take into account in the Speech Therapy Evaluation of SLD
- 4.5.4. Principles of Evaluation in Cases of SLD
- 4.5.5. The Importance and Objectives of Speech-Language Pathology Assessment in SLD
- 4.5.6. Evaluation Process of SLD
- 4.5.7. Assessment of Language, Communicative Skills and Executive Functions in SLD
- 4.5.8. Evaluation Instrument of SLD
- 4.5.9. Interdisciplinary Evaluation
- 4.5.10. Diagnosis of SLD

4.6. interventions in Specific Language Disorder
- 4.6.1. The Speech Therapy Intervention
- 4.6.2. Basic Principles of Speech Therapy Intervention
- 4.6.3. Environments and Agents of intervention in SLD
- 4.6.4. Intervention Model in Levels
- 4.6.5. Early Intervention in SLD
- 4.6.6. Importance of Intervention in SLD
- 4.6.7. Music Therapy in the intervention of SLD
- 4.6.8. Technological Resources in the Intervention of SLD
- 4.6.9. Intervention in the Executive Functions in SLD
- 4.6.10. Multidisciplinary Intervention in SLD

4.7. Elaboration of a Speech Therapy Intervention Program for Children with Specific Language Disorder
- 4.7.1. Speech Therapy Intervention Program
- 4.7.2. Approaches on SLD to Design an Intervention Program
- 4.7.3. Objectives and Strategies of SLD Intervention Programs
- 4.7.4. Indications to Follow in the Intervention of Children with SLD
- 4.7.5. Comprehension Treatment
- 4.7.6. Treatment of Expression in cases of SLD
- 4.7.7. Intervention in Reading and Writing
- 4.7.8. Social Skills Training in SLD
- 4.7.9. Agents and Timing of Intervention in Cases of SLD
- 4.7.10. SAACs in the Intervention in Cases of SLD

4.8. The School in Cases of Specific Language Disorder
- 4.8.1. The School in Child Development
- 4.8.2. School Consequences in Children with SLD
- 4.8.3. Schooling of Children with SLD
- 4.8.4. Aspects to Take into Account in School Intervention
- 4.8.5. Objectives of School Intervention in cases of SLD
- 4.8.6. Guidelines and Strategies for Classroom Intervention with children with SLD
- 4.8.7. Development and Intervention in Social Relationships within the School
- 4.8.8. Dynamic Playground Program
- 4.8.9. The School and the Relationship with other Intervention Agents.
- 4.8.10. Observation and Monitoring of School Intervention

4.9. The Family and its Intervention in Cases of Children with Specific Language Disorder
- 4.9.1. Consequences of SLD in the Family Environment
- 4.9.2. Family Intervention Models
- 4.9.3. General Considerations to be Taken into Account
- 4.9.4. The importance of Family Intervention in SLD
- 4.9.5. Family Orientations
- 4.9.6. Communication Strategies for the Family
- 4.9.7. Needs of Families of Children with SLD
- 4.9.8. The Speech Therapist in the Family Intervention
- 4.9.9. Objectives of the Family Speech Therapy Intervention in the SLD
- 4.9.10. Follow-up and Timing of the Family Intervention in SLD

4.10. Associations and Support Guides for Families and Schools of Children with SLD
- 4.10.1. Parent Associations
- 4.10.2. Information Guides
- 4.10.3. AVATEL
- 4.10.4. ATELMA
- 4.10.5. ATELAS
- 4.10.6. ATELCA
- 4.10.7. ATEL CLM
- 4.10.8. Other Associations
- 4.10.9. SLD Guides Aimed at the Educational Field
- 4.10.10. SLD Guides and Manuals Aimed at the Family Environment

## **Module 5.** Understanding Autism

5.1. Temporal Development in its Definition
- 5.1.1. Theoretical Approaches to ASD
  - 5.1.1.1. Early Definitions
  - 5.1.1.2. Evolution Throughout History
- 5.1.2. Current Classification of Autism Spectrum Disorder
  - 5.1.2.1. Classification According to DSM-IV
  - 5.1.2.2. DSM-V Definition

5.1.3. Table of Disorders Pertaining to ASD
- 5.1.3.1. Autism Spectrum Disorder
- 5.1.3.2. Asperger's Disorder
- 5.1.3.3. Rett's Disorder
- 5.1.3.4. Childhood Disintegrative Disorder
- 5.1.3.5. Pervasive Developmental Disorder

5.1.4. Comorbidity with other Pathologies
- 5.1.4.1. ASD and ADHD (Attention and/or Hyperactivity Disorder).
- 5.1.4.2. ASD AND HF (High Functioning)
- 5.1.4.3. Other Pathologies of Lower Associated Percentage

5.1.5. Differential Diagnosis of Autism Spectrum Disorder
- 5.1.5.1. Non-Verbal Learning Disorder
- 5.1.5.2. NPDD (Perturbing Disorder Not Predetermined)
- 5.1.5.3. Schizoid Personality Disorder
- 5.1.5.4. Affective and Anxiety Disorders
- 5.1.5.5. Tourette's Disorder
- 5.1.5.6. Representative Table of Specified Disorders

5.1.6. Theory of Mind
- 5.1.6.1. The Senses
- 5.1.6.2. Perspectives
- 5.1.6.3. False Beliefs
- 5.1.6.4. Complex Emotional States

5.1.7. Weak Central Coherence Theory
- 5.1.7.1. Tendency of Children with ASD to Focus their Attention on Details in Relation to the Whole
- 5.1.7.2. First Theoretical Approach (Frith, 1989)
- 5.1.7.3. Central Coherence Theory Today (2006)

5.1.8. Theory of Executive Dysfunction
- 5.1.8.1. What Do We Know as "Executive Functions"?
- 5.1.8.2. Planning
- 5.1.8.3. Cognitive Flexibility
- 5.1.8.4. Response Inhibition
- 5.1.8.5. Mentalistic Skills
- 5.1.8.6. Sense of Activity

5.1.9. Systematization Theory
5.1.9.1. Explanatory Theories put Forward by Baron-Cohen, S
5.1.9.2. Types of Brain
5.1.9.3. Empathy Quotient (EQ)
5.1.9.4. Systematization Quotient (SQ)
5.1.9.5. Autism Spectrum Quotient (ASQ)
5.1.10. Autism and Genetics
5.1.10.1. Potential Causes of the Disorder
5.1.10.2. Chromosomopathies and Genetic Alterations
5.1.10.3. Repercussions on Communication

5.2. Detection
5.2.1. Main Indicators in Early Detection
5.2.1.1. Warning Signs
5.2.1.2. Warning Signs
5.2.2. Communicative Domain in Autism Spectrum Disorder
5.2.2.1. Aspects to take into Account
5.2.2.2. Warning Signs
5.2.3. Sensorimotor Area
5.2.3.1. Sensory Processing
5.2.3.2. Dysfunctions in Sensory Integration
5.2.4. Social Development
5.2.4.1. Persistent Difficulties in Social Interaction
5.2.4.2. Restricted Patterns of Behavior
5.2.5. Evaluation Process
5.2.5.1. Developmental Scales
5.2.5.2. Tests and Questionnaires for Parents
5.2.5.3. Standardized Tests for Evaluation by the Professional
5.2.6. Data Collection
5.2.6.1. Instruments Used for Screening
5.2.6.2. Case Studies M-CHAT
5.2.6.3. Standardized Tests
5.2.7. In-session Observation
5.2.7.1. Aspects to Take into Account within the Session
5.2.8. Final Diagnosis
5.2.8.1. Procedures to be Followed
5.2.8.2. Proposed Therapeutic Plan
5.2.9. Preparation of the Intervention Process
5.2.9.1. Strategies for Intervention on ASD in Early Care
5.2.10. Scale for the Detection of Asperger's Syndrome
5.2.10.1. Stand-alone Scale for the Detection of Asperger Syndrome and High-Functioning Autism (HF) 5.3.

5.3. Identification of Specific Difficulties
5.3.1. Protocol to Be Followed
5.3.1.1. Factors to Consider
5.3.2. Needs Assessment Based on Age and Developmental Level
5.3.2.1. Protocol for Screening from 0 to 3 Years of Age
5.3.2.2. M-CHAT-R Questionnaire. (16-30 months)
5.3.2.3. Follow-up Interview M-CHAT-R/F
5.3.3. Fields of Intervention
5.3.3.1. Evaluation of the Effectiveness of Psychoeducational Intervention
5.3.3.2. Clinical Practice Guideline Recommendations
5.3.3.3. Main Areas of Potential Work
5.3.4. Cognitive Area
5.3.4.1. Mentalistic Skills Scale
5.3.4.2. What Is It? How Do We Apply this Scale in ASD?
5.3.5. Communication Area
5.3.5.1. Communication Skills in ASD
5.3.5.2. We Identify the Demand Based on Developmental Level
5.3.5.3. Comparative Tables of Development with ASD and Normotypical Development
5.3.6. Eating Disorders
5.3.6.1. Intolerance Chart
5.3.6.2. Aversion to Textures
5.3.6.3. Eating Disorders in ASD

5.3.7. Social Area
5.3.7.1. SCERTS (Social-Communication, Emotional Regulation, and Transactional Support)
5.3.8. Personal Autonomy
5.3.8.1. Daily Living Therapy
5.3.9. Competency Assessment
5.3.9.1. Strengths
5.3.9.2. Reinforcement-Based Intervention
5.3.10. Specific Intervention Programs
5.3.10.1. Case Studies and their Results
5.3.10.2. Clinical Discussion

5.4. Communication and Language in Autism Spectrum Disorder
5.4.1. Stages in the Development of Normotypical Language
5.4.1.1. Comparative Table of Language Development in Patients with and without ASD.
5.4.1.2. Specific Language Development in Autistic Children
5.4.2. Communication Deficits in ASD
5.4.2.1. Aspects to Take into Account in the Early Stages of Development
5.4.2.2. Explanatory Table with Factors to Take into Account During These Early Stages
5.4.3. Autism and Language Pathology
5.4.3.1. ASD and Dysphasia
5.4.4. Preventive Education
5.4.4.1. Introduction to Prenatal Infant Development
5.4.5. From 0 to 3 Years Old
5.4.5.1. Developmental Scales
5.4.5.2. Implementation and Monitoring of Individualized Intervention Plans (IIP).
5.4.6. CAT Means-Methodology
5.4.6.1. Nursery School (NS)
5.4.7. From 3 to 6 Years Old
5.4.7.1. Schooling in Normal Center
5.4.7.2. Coordination of the Professional with the Follow-up by the Pediatrician and Neuropediatrician
5.4.7.3. Communication Skills to be Developed within this Age Range.
5.4.7.4. Aspects to take into Account
5.4.8. School Age
5.4.8.1. Main Aspects to Take into Account
5.4.8.2. Open Communication with the Teaching Staff
5.4.8.3. Types of Schooling
5.4.9. Educational Environment
5.4.9.1. Bullying
5.4.9.2. Emotional Impact
5.4.10. Warning Signs
5.4.10.1. Guidelines for Action
5.4.10.2. Conflict Resolution

5.5. Communication Systems
5.5.1. Available Tools
5.5.1.1. TIC Tools for Children with Autism
5.5.1.2. Augmentative and Alternative Communication Systems (AACS)
5.5.2. Communication Intervention Models
5.5.2.1. Facilitated Communication (FC)
5.5.2.2. Verbal Behavioral Approach (VB)
5.5.3. Alternative and/or Augmentative Communication Systems
5.5.3.1. PEC's (Picture Exchange Communication System)
5.5.3.2. Benson Schaeffer Total Signed Speech System
5.5.3.3. Sign Language
5.5.3.4. Bimodal System
5.5.4. Alternative Therapies
5.5.4.1. Hotchpotch
5.5.4.2. Alternative Medicines
5.5.4.3. Cognitive-Behavioral
5.5.5. Choice of System
5.5.5.1. Factors to Consider
5.5.5.2. Decision Making

5.5.6. Scale of Objectives and Priorities to be Developed
5.5.6.1. Assessment, Based on the Resources Available to the Student, of the System Best Suited to their Capabilities
5.5.7. Identification of the Appropriate System
5.5.7.1. We Implement the Most Appropriate Communication System or Therapy Taking into Account the Strengths of the Patient.
5.5.8. Implementation
5.5.8.1. Planning and Structuring of the Sessions
5.5.8.2. Duration and Timing
5.5.8.3. Evolution and Estimated Short-Term Objectives
5.5.9. Monitoring
5.5.9.1. Longitudinal Evaluation
5.5.9.2. Re-evaluation Over Time
5.5.10. Adaptation Over Time
5.5.10.1. Restructuring of Objectives Based on Demanded Needs
5.5.10.2. Adaptation of the Intervention according to the Results Obtained.

5.6. Elaboration of an Intervention Program
5.6.1. Identification of Needs and Selection of Objectives
5.6.1.1. Early Care Intervention Strategies
5.6.1.2. Denver Model
5.6.2. Analysis of Objectives based on Developmental Levels
5.6.2.1. Intervention Program to Strengthen Communicative and Linguistic Areas
5.6.3. Development of Preverbal Communicative Behaviors
5.6.3.1. Applied Behavior Analysis
5.6.4. Bibliographic Review of Theories and Programs in Childhood Autism.
5.6.4.1. Scientific Studies with Groups of Children with ASD
5.6.4.2. Results and Final Conclusions based on the Proposed Programs.
5.6.5. School Age
5.6.5.1. Educational Inclusion
5.6.5.2. Global Reading as a Facilitator of Integration in the Classroom
5.6.6. Adulthood
5.6.6.1. How to Intervene/Support in Adulthood?
5.6.6.2. Elaboration of a Specific Program
5.6.7. Behavioral Intervention
5.6.7.1. Applied Behavior Analysis (ABA)
5.6.7.2. Training of Separate Trials
5.6.8. Combined Intervention
5.6.8.1. The TEACCH Model
5.6.9. Support for University Integration of Grade I ASD
5.6.9.1. Best Practices for Supporting Students in Higher Education
5.6.10. Positive Behavioral Reinforcement
5.6.10.1. Program Structure
5.6.10.2. Guidelines to Follow to Carry Out the Method

5.7. Educational Materials and Resources
5.7.1. What can we do as Speech Therapists?
5.7.1.1. Professional as an Active Role in the Development and Continuous Adaptation of Materials
5.7.2. List of Adapted Resources and Materials
5.7.2.1. What Should I Consider?
5.7.2.2. Brainstorming
5.7.3. Methods
5.7.3.1. Theoretical Approach to the Most Commonly Used Methods
5.7.3.2. Functionality Comparative Table with the Methods Presented
5.7.4. TEACCH Program
5.7.4.1. Educational Principles Based on this Method
5.7.4.2. Characteristics of Autism as a Basis for Structured Teaching
5.7.5. INMER Program
5.7.5.1. Fundamental Bases of the Program Main Function
5.7.5.2. Virtual Reality Immersion System for People with Autism
5.7.6. ICT-mediated Learning
5.7.6.1. Software for Teaching Emotions
5.7.6.2. Applications that favour Language Development
5.7.7. Development of Materials
5.7.7.1. Sources Used
5.7.7.2. Image Banks
5.7.7.3. Pictogram Banks
5.7.7.4. Recommended Materials

5.7.8. Free Resources to Support Learning
5.7.8.1. List of Reinforcement Pages with Programs to Reinforce Learning
5.7.9. SPC
5.7.9.1. Access to the Pictographic Communication System
5.7.9.2. Methodology
5.7.9.3. Main Function
5.7.10. Implementation
5.7.10.1. Selection of the Appropriate Program
5.7.10.2. List of Benefits and Disadvantages

5.8. Adapting the Environment to the student with Autism Spectrum Disorder
5.8.1. General Considerations to be Taken into Account
5.8.1.1. Possible Difficulties within the Daily Routine
5.8.2. Implementation of Visual Aids
5.8.2.1. Guidelines to Have at Home for Adaptation
5.8.3. Classroom Adaptation
5.8.3.1. Inclusive Teaching
5.8.4. Natural Environment
5.8.4.1. General Guidelines for Educational Response
5.8.5. Intervention in Autism Spectrum Disorders and other Severe Personality Disorders
5.8.6. Curricular Adaptations of the Center
5.8.6.1. Heterogeneous Groupings
5.8.7. Adaptation of Individual Curricular Needs
5.8.7.1. Individual Curricular Adaptation
5.8.7.2. Limitations
5.8.8. Curricular Adaptations in the Classroom
5.8.8.1. Cooperative Education
5.8.8.2. Cooperative Learning
5.8.9. Educational Responses to the Different Needs Demanded
5.8.9.1. Tools to be Taken into Account for Effective Teaching
5.8.10. Relationship with the Social and Cultural Environment
5.8.10.1. Habits-Autonomy
5.8.10.2. Communication and Socialization

5.9. School Context
5.9.1. Classroom Adaptation
5.9.1.1. Factors to Consider
5.9.1.2. Curricular Adaptation
5.9.2. School Inclusion
5.9.2.1. We All Add Up
5.9.2.2. How to Help from our Role as Speech-Language Therapist?
5.9.3. Characteristics of Students with ASD
5.9.3.1. Restricted Interests
5.9.3.2. Sensitivity to the Context and its Constraints
5.9.4. Characteristics of Students with Asperger's
5.9.4.1. Potentialities
5.9.4.2. Difficulties and Repercussions at the Emotional Level
5.9.4.3. Relationship with the Peer Group
5.9.5. Placement of the Student in the Classroom
5.9.5.1. Factors to be Taken into Account for Proper Student Performance
5.9.6. Materials and Supports to Consider
5.9.6.1. External Support
5.9.6.2. Teacher as a Reinforcement Element within the Classroom
5.9.7. Assessment of Task Completion Times
5.9.7.1. Application of Tools such as Anticipators or Timers
5.9.8. Inhibition Times
5.9.8.1. Reduction of Inappropriate Behavior Through Visual Support
5.9.8.2. Visual Schedules
5.9.8.3. Time-Outs
5.9.9. Hypo- and Hypersensitivity
5.9.9.1. Noise Environment
5.9.9.2. Stress-Generating Situations
5.9.10. Anticipation of Conflict Situations
5.9.10.1. Back to School Time of Entry and Exit
5.9.10.2. Canteen
5.9.10.3. Vacations

5.10. Considerations to Be Taken into Account With Families
- 5.10.1. Conditioning Factors of Parental Stress and Anxiety
  - 5.10.1.1. How Does the Family Adaptation Process Occur?
  - 5.10.1.2. Most Common Worries
  - 5.10.1.3. Anxiety Management
- 5.10.2. Information for Parents When a Diagnosis is Suspected
  - 5.10.2.1. Open Communication
  - 5.10.2.2. Stress Management Guidelines
- 5.10.3. Assessment Records for Parents
  - 5.10.3.1. Strategies for the Management of Suspected ASD in Early Care
  - 5.10.3.2. PEDs. Questions About Parents' Developmental Concerns
  - 5.10.3.3. Situation Assessment and Building a Bond of Trust with Parents
- 5.10.4. Multimedia Resources
  - 5.10.4.1. Table of Freely Available Resources
- 5.10.5. Associations of Families of People with ASD
  - 5.10.5.1. List of Recognized and Proactive Associations
- 5.10.6. Return of Therapy and Appropriate Evolution
  - 5.10.6.1. Aspects to Take into Account for Information Exchange
  - 5.10.6.2. Creation of Empathy
  - 5.10.6.3. Creation of a Circle of Trust between Therapist-Relatives-Patient
- 5.10.7. Return of the Diagnosis and Follow-up to the Different Healthcare Professionals
  - 5.10.7.1. Speech Therapist in their Active and Dynamic role.
  - 5.10.7.2. Contact with the Different Health Areas
  - 5.10.7.3. The Importance of Maintaining a Common Line
- 5.10.8. Parents, How to Intervene with the Child?
  - 5.10.8.1. Advice and Guidelines
  - 5.10.8.2. Family Respite
- 5.10.9. Generation of Positive Experiences in the Family Environment
  - 5.10.9.1. Practical Tips for Reinforcing Pleasant Experiences in the Family Environment
  - 5.10.9.2. Proposals for Activities that Generate Positive Experiences
- 5.10.10. Websites of Interest
  - 5.10.10.1. Links of Interest

## **Module 6.** Genetic Syndromes

6.1. Introduction to Genetic Syndromes
- 6.1.1. Introduction to Unit
- 6.1.2. Genetics
  - 6.1.2.1. Concept of Genetics
  - 6.1.2.2. Genes and Chromosomes
- 6.1.3. The Evolution of Genetics
  - 6.1.3.1. Basis of Genetics
  - 6.1.3.2. The Pioneers of Genetics
- 6.1.4. Basic Concepts of Genetics
  - 6.1.4.1. Genotype and Phenotype
  - 6.1.4.2. The Genome
  - 6.1.4.3. DNA
  - 6.1.4.4. RNA
  - 6.1.4.5. Genetic Code
- 6.1.5. Mendel's Laws
  - 6.1.5.1. Mendel's 1st Law
  - 6.1.5.2. Mendel's 2nd Law
  - 6.1.5.3. Mendel's 3rd Law
- 6.1.6. Mutations
  - 6.1.6.1. What are Mutations?
  - 6.1.6.2. Levels of Mutations
  - 6.1.6.3. Types of Mutations
- 6.1.7. Concept of Syndrome
- 6.1.8. Classification
- 6.1.9. The Most Frequent Syndromes
- 6.1.10. Final Conclusions

6.2. Down Syndrome
- 6.2.1. Introduction to Unit
  - 6.2.1.1. History of Down Syndrome
- 6.2.2. Concept of Down Syndrome
  - 6.2.2.1. What is Down Syndrome?
  - 6.2.2.2. Genetics of Down Syndrome

6.2.2.3. Chromosomal Alterations in Down Syndrome
6.2.2.3.1. Trisomy 21
6.2.2.3.2. Chromosomal Translocation
6.2.2.3.3. Mosaicism or Mosaic Trisomy
6.2.2.4. Prognosis of Down Syndrome
6.2.3. Etiology
6.2.3.1. The Origin of Down Syndrome
6.2.4. Prevalence
6.2.4.1. Prevalence of Down Syndrome in Other Countries
6.2.5. Characteristics of Down Syndrome
6.2.5.1. Physical Characteristics
6.2.5.2. Speech and Language Development Characteristics
6.2.5.3. Motor Developmental Characteristics
6.2.6. Comorbidity of Down Syndrome
6.2.6.1. What is Comorbidity?
6.2.6.2. Comorbidity in Down Syndrome
6.2.6.3. Associated Disorders
6.2.7. Diagnosis and Evaluation of Down Syndrome
6.2.7.1. The Diagnosis of Down Syndrome
6.2.7.1.1. Where is It Performed?
6.2.7.1.2. Who Performs It?
6.2.7.1.3. When it Can Be Performed
6.2.7.2. Speech Therapy Evaluation of Down Syndrome
6.2.7.2.1. Medical History
6.2.7.2.2. Areas to Consider
6.2.8. Speech Therapy Based Intervention
6.2.8.1. Aspects to take into Account
6.2.8.2. Setting Objectives for the Intervention
6.2.8.3. Material for Rehabilitation
6.2.8.4. Resources to be Used
6.2.9. Guidelines
6.2.9.1. Guidelines for the Person with Down Syndrome to Consider
6.2.9.2. Guidelines for the Family to Consider
6.2.9.3. Guidelines for the Educational Context
6.2.9.4. Resources and Associations
6.2.10. The Interdisciplinary Team
6.2.10.1. The Importance of the Interdisciplinary Team
6.2.10.2. Speech Therapy
6.2.10.3. Occupational Therapy
6.2.10.4. Physiotherapy
6.2.10.5. Psychology
6.3. Hunter Syndrome
6.3.1. Introduction to Unit
6.3.1.1. History of Hunter Syndrome
6.3.2. Concept of Hunter Syndrome
6.3.2.1. What is Hunter Syndrome?
6.3.2.2. Genetics of Hunter Syndrome
6.3.2.3. Prognosis of Hunter Syndrome
6.3.3. Etiology
6.3.3.1. The Origin of Hunter Syndrome
6.3.4. Prevalence
6.3.4.1. Hunter Syndrome in Other Countries
6.3.5. Main Impacts
6.3.5.1. Physical Characteristics
6.3.5.2. Speech and Language Development Characteristics
6.3.5.3. Motor Developmental Characteristics
6.3.6. Comorbidity of Hunter Syndrome
6.3.6.1. What is Comorbidity?
6.3.6.2. Comorbidity in Hunter Syndrome
6.3.6.3. Associated Disorders

6.3.7. Diagnosis and Evaluation of Hunter Syndrome
6.3.7.1. The Diagnosis of Hunter Syndrome
6.3.7.1.1. Where is It Performed?
6.3.7.1.2. Who Performs It?
6.3.7.1.3. When can it be Performed?
6.3.7.2. Speech Therapy Evaluation of Hunter Syndrome
6.3.7.2.1. Medical History
6.3.7.2.2. Areas to Consider
6.3.8. Speech Therapy Based Intervention
6.3.8.1. Aspects to take into Account
6.3.8.2. Setting Objectives for the Intervention
6.3.8.3. Material for Rehabilitation
6.3.8.4. Resources to be Used
6.3.9. Guidelines
6.3.9.1. Guidelines to Consider for the Person with Hunter Syndrome
6.3.9.2. Guidelines for the Family to Consider
6.3.9.3. Guidelines for the Educational Context
6.3.9.4. Resources and Associations
6.3.10. The Interdisciplinary Team
6.3.10.1. The Importance of the Interdisciplinary Team
6.3.10.2. Speech Therapy
6.3.10.3. Occupational Therapy
6.3.10.4. Physiotherapy
6.3.10.5. Psychology
6.4. Fragile X Syndrome
6.4.1. Introduction to Unit
6.4.1.1. History of Fragile X Syndrome
6.4.2. Concept of Fragile X Syndrome
6.4.2.1. What is Fragile X Syndrome?
6.4.2.2. Genetics of Fragile X Syndrome
6.4.2.3. Prognosis of Fragile X Syndrome
6.4.3. Etiology
6.4.3.1. The Origin of Fragile X Syndrome
6.4.4. Prevalence
6.4.4.1. Fragile X Syndrome in Other Countries
6.4.5. Main Impacts
6.4.5.1. Physical Characteristics
6.4.5.2. Speech and Language Development Characteristics
6.4.5.3. Characteristics in the Development of Intelligence and Learning
6.4.5.4. Social, Emotional, and Behavioral Characteristics
6.4.5.5. Sensory Characteristics
6.4.6. Comorbidity of Fragile X Syndrome
6.4.6.1. What is Comorbidity?
6.4.6.2. Comorbidity of Fragile X Syndrome
6.4.6.3. Associated Disorders
6.4.7. Diagnosis and Evaluation of Fragile X Syndrome
6.4.7.1. The Diagnosis of Fragile X Syndrome
6.4.7.1.1. Where is It Performed?
6.4.7.1.2. Who Performs It?
6.4.7.1.3. When It Can Be Performed
6.4.7.2. Logopedic Evaluation of Fragile X Syndrome
6.4.7.2.1. Medical History
6.4.7.2.2. Areas to Consider
6.4.8. Speech Therapy Based Intervention
6.4.8.1. Aspects to take into Account
6.4.8.2. Setting Objectives for the Intervention
6.4.8.3. Material for Rehabilitation
6.4.8.4. Resources to be Used
6.4.9. Guidelines
6.4.9.1. Guidelines to Consider for the Person with Fragile X Syndrome
6.4.9.2. Guidelines for the Family to Consider
6.4.9.3. Guidelines for the Educational Context
6.4.9.4. Resources and Associations
6.4.10. The Interdisciplinary Team
6.4.10.1. The Importance of the Interdisciplinary Team
6.4.10.2. Speech Therapy

6.4.10.3. Occupational Therapy
6.4.10.4. Physiotherapy

6.5. Rett Syndrome
6.5.1. Introduction to Unit
6.5.1.1. History of Rett Syndrome
6.5.2. Concept of Rett Syndrome
6.5.2.1. What is Rett Syndrome?
6.5.2.2. Genetics of Rett Syndrome
6.5.2.3. Prognosis of Rett Syndrome
6.5.3. Etiology
6.5.3.1. The Origin of Rett Syndrome
6.5.4. Prevalence
6.5.4.1. Rett Syndrome in Other Countries
6.5.4.2. Stages in The Development of Rett Syndrome
6.5.4.4.1. Stage I: Early Onset Stage
6.5.4.4.2. Stage II: Accelerated Destruction Stage
6.5.4.4.3. Stage III: Stabilization or Pseudo-Stationary Stage
6.5.4.4.4. Stage IV: Late Motor Impairment Stage
6.5.5. Comorbidity of Rett Syndrome
6.5.5.1. What is Comorbidity?
6.5.5.2. Comorbidity in Rett Syndrome
6.5.5.3. Associated Disorders
6.5.6. Main Impacts
6.5.6.1. Introduction
6.5.6.2. Physical Characteristics
6.5.6.3. Clinical Characteristics
6.5.7. Diagnosis and Evaluation of Rett Syndrome
6.5.7.1. The Diagnosis of Rett Syndrome
6.5.7.1.1. Where is It Performed?
6.5.7.1.2. Who Performs It?
6.5.7.1.3. When can it be Performed?
6.5.7.2. Speech Therapy Evaluation of Rett Syndrome
6.5.7.2.1. Medical History
6.5.7.2.2. Areas to Consider
6.5.8. Speech Therapy Based Intervention
6.5.8.1. Aspects to take into Account
6.5.8.2. Setting Objectives for the Intervention
6.5.8.3. Material for Rehabilitation
6.5.8.4. Resources to be Used
6.5.9. Guidelines
6.5.9.1. Guidelines to Consider for the Person with Rett Syndrome
6.5.9.2. Guidelines for the Family to Consider
6.5.9.3. Guidelines for the Educational Context
6.5.9.4. Resources and Associations
6.5.10. The Interdisciplinary Team
6.5.10.1. The Importance of the Interdisciplinary Team
6.5.10.2. Speech Therapy
6.5.10.3. Occupational Therapy
6.5.10.4. Physiotherapy

6.6. Smith-Magenis Syndrome
6.6.1. Smith-Magenis Syndrome
6.6.1.1. Introduction
6.6.1.2. Concept
6.6.2. Etiology
6.6.3. Epidemiology
6.6.4. Development according to Stages
6.6.4.1. Infants (up to 2 Years of Age)
6.6.4.2. Childhood (from 2 to 12 Years of Age)
6.6.4.2.1. Adolescence and Adulthood (from 12 Years of Age)
6.6.5. Differential Diagnosis
6.6.6. Clinical, Cognitive, Behavioral, and Physical Features of Smith-Magenis Syndrome
6.6.6.1. Clinical Characteristics
6.6.6.2. Cognitive and Behavioral Characteristics
6.6.6.3. Physical Characteristics
6.6.7. Speech Therapy Evaluation in Smith-Magens Syndrome

6.6.8. Speech Therapy Intervention in Smith-Magenis Syndrome
6.6.8.1. General Considerations for starting the Intervention
6.6.8.2. Stages of the Intervention Process
6.6.8.3. Communicative Aspects of Intervention
6.6.9. Speech Therapy Exercises for Smith-Magenis Syndrome
6.6.9.1. Auditory Stimulation Exercises: Sounds and Words
6.6.9.2. Exercises to Promote Grammatical Structures
6.6.9.3. Exercises to Increase Vocabulary
6.6.9.4. Exercises to Improve the Use of Language
6.6.9.5. Exercises for Problem Solving and Reasoning
6.6.10. Associations to Help Patients and Families of Smith-Magenis Syndrome
6.7. Williams Syndrome
6.7.1. Williams Syndrome
6.7.1.1. History of Williams Syndrome
6.7.1.2. Concept of Williams Syndrome
6.7.2. Etiology of Williams Syndrome
6.7.3. Epidemiology of Williams Syndrome
6.7.4. Diagnosis of Williams Syndrome
6.7.5. Speech Therapy Assessment of Williams Syndrome
6.7.6. Features of Williams Syndrome
6.7.6.1. Medical Aspects
6.7.6.2. Facial Features
6.7.6.3. Hyperacusis
6.7.6.4. Neuroanatomical Features
6.7.6.5. Language Characteristics
6.7.6.5.1. Early Language Development
6.7.6.5.2. Characteristics of Language in the WS from 4 Years of Age Onwards
6.7.6.6. Socio-Affective Characteristics in Williams Syndrome
6.7.7. Speech Therapy Intervention in Early Care in Children with Williams Syndrome
6.7.8. Speech Therapy Intervention at School with Williams Syndrome
6.7.9. Speech Therapy Intervention in Adulthood with Williams syndrome
6.7.10. Associations
6.8. Angelman Syndrome
6.8.1. Introduction to Unit
6.8.1.1. History of Angelman Syndrome
6.8.2. Concept of Angelman Syndrome
6.8.2.1. What is Angelman Syndrome?
6.8.2.2. Genetics of Angelman Syndrome
6.8.2.3. Prognosis of Angelman Syndrome
6.8.3. Etiology
6.8.3.1. The origin of Angelman Syndrome
6.8.4. Prevalence
6.8.4.1. Angelman Syndrome in Other Countries
6.8.5. Main Impacts
6.8.5.1. Introduction
6.8.5.2. Frequent Manifestations of Angelman Syndrome
6.8.5.3. Rare Manifestations
6.8.6. Comorbidity of Angelman Syndrome
6.8.6.1. What is Comorbidity?
6.8.6.2. Comorbidity in Angelman Syndrome
6.8.6.3. Associated Disorders
6.8.7. Diagnosis and Evaluation of Angelman Syndrome
6.8.7.1. The Diagnosis of Angelman Syndrome
6.8.7.1.1. Where is It Performed?
6.8.7.1.2. Who Performs It?
6.8.7.1.3. When can it be Performed?
6.8.7.2. Speech Therapy Evaluation of Angelman Syndrome
6.8.7.2.1. Medical History
6.8.7.2.2. Areas to Consider
6.8.8. Speech Therapy Based Intervention
6.8.8.1. Aspects to take into Account
6.8.8.2. Setting Objectives for the Intervention
6.8.8.3. Material for Rehabilitation
6.8.8.4. Resources to be Used

6.8.9. Guidelines
6.8.9.1. Guidelines to Consider for the Person with Angelman Syndrome
6.8.9.2. Guidelines for the Family to Consider
6.8.9.3. Guidelines for the Educational Context
6.8.9.4. Resources and Associations
6.8.10. The Interdisciplinary Team
6.8.10.1. The Importance of the Interdisciplinary Team
6.8.10.2. Speech Therapy
6.8.10.3. Occupational Therapy
6.8.10.4. Physiotherapy

6.9. Duchenne Disease
6.9.1. Introduction to Unit
6.9.1.1. History of Duchenne Disease
6.9.2. Concept of Duchenne Disease
6.9.2.1. What is Duchenne Disease?
6.9.2.2. Genetics of Duchenne Disease
6.9.2.3. Prognosis of Duchenne Disease
6.9.3. Etiology
6.9.3.1. The Origin of Duchenne Disease
6.9.4. Prevalence
6.9.4.1. Prevalence of Duchenne Disease in Other Countries
6.9.5. Main Impacts
6.9.5.1. Introduction
6.9.5.2. Clinical Manifestations of Duchenne Disease
6.9.5.2.1. Speech Delay
6.9.5.2.2. Behavioral Problems
6.9.5.2.3. Muscle Weakness
6.9.5.2.4. Stiffness
6.9.5.2.5. Lordosis
6.9.5.2.6. Respiratory Dysfunction
6.9.5.3. Most common Symptoms of Duchenne Disease
6.9.6. Comorbidity of Duchenne Disease
6.9.6.1. What is Comorbidity?
6.9.6.2. Comorbidity of Duchenne Disease
6.9.6.3. Associated Disorders
6.9.7. Diagnosis and Evaluation of Duchenne Disease
6.9.7.1. The Diagnosis of Duchenne Disease
6.9.7.1.1. Where is It Performed?
6.9.7.1.2. Who Performs It?
6.9.7.1.3. When can it be Performed?
6.9.7.2. Speech Therapy Evaluation of Duchenne Disease
6.9.7.2.1. Medical History
6.9.7.2.2. Areas to Consider
6.9.8. Speech Therapy Based Intervention
6.9.8.1. Aspects to take into Account
6.9.8.2. Setting Objectives for the Intervention
6.9.8.3. Material for Rehabilitation
6.9.8.4. Resources to be Used
6.9.9. Guidelines
6.9.9.1. Guidelines for the Person with Duchenne Disease to Consider
6.9.9.2. Guidelines for the Family to Consider
6.9.9.3. Guidelines for the Educational Context
6.9.9.4. Resources and Associations
6.9.10. The Interdisciplinary Team
6.9.10.1. The Importance of the Interdisciplinary Team
6.9.10.2. Speech Therapy
6.9.10.3. Occupational Therapy
6.9.10.4. Physiotherapy

6.10. Usher Syndrome
6.10.1. Introduction to Unit
6.10.1.1. History of Usher Syndrome
6.10.2. Concept of Usher Syndrome
6.10.2.1. What is Usher Syndrome?
6.10.2.2. Genetics of Usher Syndrome
6.10.2.3. Typology Usher Syndrome
6.10.2.3.1. Type I:
6.10.2.3.2. Type I:
6.10.2.3.3. Type III:
6.10.2.4. Prognosis of Usher Syndrome

6.10.3. Etiology
6.10.3.1. The Origin of Usher Syndrome
6.10.4. Prevalence
6.10.4.1. Usher Syndrome in Other Countries
6.10.5. Main Impacts
6.10.5.1. Introduction
6.10.5.2. Frequent Manifestations of Usher Syndrome
6.10.5.3. Rare Manifestations
6.10.6. Comorbidity of Usher Syndrome
6.10.6.1. What is Comorbidity?
6.10.6.2. Comorbidity in Usher Syndrome
6.10.6.3. Associated Disorders
6.10.7. Diagnosis and Evaluation of Usher Syndrome
6.10.7.1. The Diagnosis of Usher Syndrome
6.10.7.1.1. Where is It Performed?
6.10.7.1.2. Who Performs It?
6.10.7.1.3. When It Can Be Performed
6.10.7.2. Speech Therapy Evaluation of Usher Syndrome
6.10.7.2.1. Medical History
6.10.7.2.2. Areas to Consider
6.10.8. Speech Therapy Based Intervention
6.10.8.1. Aspects to take into Account
6.10.8.2. Setting Objectives for the Intervention
6.10.8.3. Material for Rehabilitation
6.10.8.4. Resources to be Used
6.10.9. Guidelines
6.10.9.1. Guidelines to Consider for the Person with Usher Syndrome
6.10.9.2. Guidelines for the Family to Consider
6.10.9.3. Guidelines for the Educational Context
6.10.9.4. Resources and Associations
6.10.10. The Interdisciplinary Team
6.10.10.1. The Importance of the Interdisciplinary Team
6.10.10.2. Speech Therapy
6.10.10.3. Occupational Therapy
6.10.10.4. Physiotherapy

## **Module 7.** Dysphemia and/or Stuttering: Assessment, Diagnosis, and Intervention

7.1. Introduction to the Module
7.1.2. Module Presentation
7.2. Dysphemia or Stuttering
7.2.1. History of Stuttering
7.2.2. Stuttering
7.2.2.1. Concept of Stuttering
7.2.2.2. Symptomatology of Stuttering
7.2.2.2.1. Linguistic Manifestations
7.2.2.2.2. Behavioral Manifestations
7.2.2.3. Bodily Manifestations
7.2.2.3.1. Characteristics of Stuttering
7.2.3. Classification
7.2.3.1. Tonic Stuttering
7.2.3.2. Clonic Stuttering
7.2.3.3. Mixed Stuttering
7.2.4. Other Specific Disorders of Fluency of Verbal Expression
7.2.5. Development of the Disorder
7.2.5.1. Preliminary Considerations
7.2.5.2. Levels of Development and Severity
7.2.5.2.1. Initial Phase
7.2.5.2.2. Borderline Stuttering
7.2.5.2.3. Initial Stuttering
7.2.5.2.4. Intermediate Stuttering
7.2.5.2.5. Advanced Stuttering

7.2.6. Comorbidity
7.2.6.1. Comorbidity in Dysphemia
7.2.6.2. Associated Disorders
7.2.7. Prognosis of Recovery
7.2.7.1. Preliminary Considerations
7.2.7.2. Key Factors
7.2.7.3. Prognosis According to the Moment of Intervention
7.2.8. The incidence and prevalence of Stuttering
7.2.8.1. Preliminary Considerations
7.2.9. Etiology of Stuttering
7.2.9.1. Preliminary Considerations
7.2.9.2. Physiological Factors
7.2.9.3. Genetic Factors
7.2.9.4. Environmental Factors
7.2.9.5. Psychosocial Factors
7.2.9.6. Linguistic Factors
7.2.10. Warning Signs
7.2.10.1. Preliminary Considerations
7.2.10.2. When to Evaluate?
7.2.10.3. Is it Possible to Prevent the Disorder?

7.3. Evaluation of Dysphemia
7.3.1. Introduction to Unit
7.3.2. Dysphemia or normal Dysfluencies?
7.3.2.1. Initial Considerations
7.3.2.2. What Are Normal Disfluencies?
7.3.2.3. Differences Between Dysphemia and Normal Dysfluencies
7.3.2.4. When To Act?
7.3.3. Objective of the Evaluation
7.3.4. Assessment Method:
7.3.4.1. Preliminary Considerations
7.3.4.2. Outline of the Evaluation Method

7.3.5. Collection of Information
- 7.3.5.1. Interview with Parents
- 7.3.5.2. Gathering Relevant Information
- 7.3.5.3. Medical History

7.3.6. Collecting Additional Information
- 7.3.6.1. Questionnaires for Parents
- 7.3.6.2. Questionnaires for Teachers

7.3.7. Evaluation of the Child
- 7.3.7.1. Observation of the Child
- 7.3.7.2. Questionnaire for the Child
- 7.3.7.3. Parent-Child Interaction Profile

7.3.8. Diagnosis
- 7.3.8.1. Clinical Judgment of the Information Collected
- 7.3.8.2. Prognosis
- 7.3.8.3. Types of Treatment
- 7.3.8.4. Treatment Objectives

7.3.9. Return
- 7.3.9.1. Return of Information to Parents
- 7.3.9.2. Informing the Child of the Results
- 7.3.9.3. Explain Treatment to the Child

7.3.10. Diagnostic Criteria
- 7.3.10.1. Preliminary Considerations
- 7.3.10.2. Factors that May Affect the Fluency of Speech
  - 7.3.10.2.1. Communication
  - 7.3.10.2.2. Difficulties in Language Development
  - 7.3.10.2.3. Interpersonal Interactions
  - 7.3.10.2.4. Changes
  - 7.3.10.2.5. Excessive Demands
  - 7.3.10.2.6. Self-Esteem
  - 7.3.10.2.7. Social Resources

7.4. User-centered Speech Therapy Intervention in Dysphemia: Direct Treatment

7.4.1. Introduction to Unit

7.4.2. Direct Treatment
- 7.4.2.1. Treatment Characteristics
- 7.4.2.2. Therapist Skills

7.4.3. Therapy Goals
- 7.4.3.1. Goals with the Child
- 7.4.3.2. Objectives with the Parents
- 7.4.3.3. Objectives with the Teacher

7.4.4. Objectives with the Child: Speech Control
- 7.4.4.1. Objectives
- 7.4.4.2. Techniques for Speech Control

7.4.5. Objectives with the Child: Anxiety Control
- 7.4.5.1. Objectives
- 7.4.5.2. Techniques for Anxiety Control

7.4.6. Objectives with the Child: Thought Control
- 7.4.6.1. Objectives
- 7.4.6.2. Techniques for Thoughts Control

7.4.7. Objectives with the Child: Emotion Control
- 7.4.7.1. Objectives
- 7.4.7.2. Techniques for Emotion Control

7.4.8. Objectives with the Child: Social and Communication Skills
- 7.4.8.1. Objectives
- 7.4.8.2. Techniques for the Promotion of Social and Communication Skills

7.4.9. Generalization and Maintenance
- 7.4.9.1. Objectives
- 7.4.9.2. Generalization and Maintenance Techniques

7.4.10. Recommendations for User Discharge

7.5. Speech Therapy Intervention in User-centered Dysphemia: Lidcombe Early Intervention Program

7.5.1. Introduction to Unit

7.5.2. Program Development
- 7.5.2.1. Who Developed It?
- 7.5.2.2. Where Was It Developed?

7.5.3. Is It Really Effective?
7.5.4. Fundamentals of the Lindcombe Program
7.5.4.1. Preliminary Considerations
7.5.4.2. Age of Application
7.5.5. Essential Components
7.5.5.1. Parental Verbal Contingencies
7.5.5.2. Stuttering Measures
7.5.5.3. Treatment in Structured and Unstructured Conversations
7.5.5.4. Scheduled Maintenance
7.5.6. Assessment
7.5.6.1. Evaluation Based on Lindcombe Program
7.5.7. Stages of the Lindcombe Program
7.5.7.1. Stage 1
7.5.7.2. Stage 2
7.5.8. Frequency of Sessions
7.5.8.1. Weekly Visits to the Specialist
7.5.9. Individualization in the Lindcombe Program
7.5.10. Final Conclusions
7.6. Speech Therapy Intervention in the Child with Dysphemia: Proposed Exercises
7.6.1. Introduction to Unit
7.6.2. Exercises for Speech Control
7.6.2.1. Self-made Resources
7.6.2.2. Resources Found on the Market
7.6.2.3. Technological Resources
7.6.3. Exercises for Anxiety Control
7.6.3.1. Self-made Resources
7.6.3.2. Resources Found on the Market
7.6.3.3. Technological Resources
7.6.4. Exercises for Thought Control
7.6.4.1. Self-made Resources
7.6.4.2. Resources Found on the Market
7.6.4.3. Technological Resources
7.6.5. Exercises for Emotion Control
7.6.5.1. Self-made Resources
7.6.5.2. Resources Found on the Market
7.6.5.3. Technological Resources
7.6.6. Exercises to improve of Social and Communication Skills
7.6.6.1. Self-made Resources
7.6.6.2. Resources Found on the Market
7.6.6.3. Technological Resources
7.6.7. Exercises that Promote Generalization
7.6.7.1. Self-made Resources
7.6.7.2. Resources Found on the Market
7.6.7.3. Technological Resources
7.6.8. How To Use the Exercises Properly?
7.6.9. Implementation Time For Each Exercise
7.6.10. Final Conclusions
7.7. The Family as Agent of Intervention and Support for the Child With Dysphemia
7.7.1. Introduction to Unit
7.7.2. The Importance of the Family in the Development of the Dysphemic Child
7.7.3. Communication Difficulties Encountered by the Dysphemic Child at Home.
7.7.4. How do Communication Difficulties in the Family Environment Affect the Dysphemic Child?
7.7.5. Types of Intervention with Parents
7.7.5.1. Early Intervention. (Brief Review)
7.7.5.2. Direct Treatment (Brief Review)
7.7.6. Early Intervention with Parents
7.7.6.1. Orientation Sessions
7.7.6.2. Daily Practice
7.7.6.3. Behavioral Records
7.7.6.4. Behavior Modification
7.7.6.5. Organization of the Environment
7.7.6.6. Structure of Sessions
7.7.6.7. Special Cases

7.7.7. Direct Treatment with Parents
7.7.7.1. Modifying Attitudes and Behaviors
7.7.7.2. Adapting Language to the Child's Difficulties
7.7.7.3. Daily Practice at Home
7.7.8. Advantages of Involving the Family in the Intervention
7.7.8.1. How Family Involvement Benefits the Child?
7.7.9. The Family as a Means of Generalization
7.7.9.1. The Importance of the Family in Generalization
7.7.10. Final Conclusions
7.8. The School as Agent of Intervention and Support for the Child With Dysphemia
7.8.1. Introduction to Unit
7.8.2. The involvement of the School During the Intervention Period
7.8.2.1. The Importance of the Involvement of the School
7.8.2.2. The Influence of the School Center on the Development of the Dysphemic Child
7.8.3. Intervention According to the Student's Needs
7.8.3.1. Importance of Taking into Account the Needs of the Student With Dysphemia
7.8.3.2. How to Establish the Needs of the Student?
7.8.3.3. Responsible for the Elaboration of the Student's Needs
7.8.4. Classroom Consequences of the Dysphemic Child
7.8.4.1. Communication with Classmates
7.8.4.2. Communication with Teachers
7.8.4.3. Psychological Repercussions of the Child
7.8.5. School Supports
7.8.5.1. Who Provides Them?
7.8.5.2. How Are They Carried Out?
7.8.6. The coordination of the Speech Therapist with the School Professionals
7.8.6.1. With Whom Does the Coordination Take Place?
7.8.6.2. Guidelines to Be Followed to Achieve Such Coordination
7.8.7. Orientations
7.8.7.1. Guidelines for the School to improve the Child's Intervention
7.8.7.2. Guidelines for the School to improve the Child's Self-Esteem
7.8.7.3. Guidelines for the School to improve the Child's Social Skills
7.8.8. The School as an Enabling Environment
7.8.9. Resources Available to the School
7.8.10. Final Conclusions
7.9. Associations and Foundations
7.9.1. Introduction to Unit
7.9.2. How Can Associations Help Families?
7.9.3. The Fundamental Role of Stuttering Associations for Families
7.9.4. The Help of Stuttering Associations and Foundations for Health Care and Educational Professionals
7.9.5. Stuttering Associations and Foundations Around the World
7.9.5.1. Argentine Association of Stuttering (AAT)
7.9.5.1.1. Association Information
7.9.6. Websites for General Information on Stuttering
7.9.6.1. American Stuttering Foundation
7.9.6.2. Speech-Therapy Space
7.9.7. Stuttering Information Blogs
7.9.7.1. Subject Blog
7.9.8. Speech Therapy Magazines Where Information Can be Obtained
7.9.8.1. Speech Therapy Space Magazine
7.9.8.2. Neurology Journal
7.9.10. Final Conclusions
7.10. Annexes
7.10.1. Guidelines for Dysphemia
7.10.2. Example of Anamnesis for the Assessment of Dysphemias
7.10.3. Fluency Questionnaire for Parents
7.10.4. Questionnaire for Parents of Emotional Responses to Stuttering 7.10.5.
7.10.5. Parent Record
7.10.6. Fluency Questionnaire for Teachers
7.10.7. Relaxation Techniques
7.10.7.1. Instructions for the Speech Therapist
7.10.7.2. Relaxation Techniques Adapted to Children
7.10.8. Discriminations Suffered by People that Stutter
7.10.9. Truths and Myths of Stuttering

## **Module 8.** Dysarthria in Children and Adolescents

8.1. Initial Considerations
- 8.1.1. Introduction to the Module
  - 8.1.1.1. Module Presentation
- 8.1.2. Module Objectives
- 8.1.3. History of Dysarthrias
- 8.1.4. Prognosis of Dysarthrias in Children and Adolescents
  - 8.1.4.1. The Prognosis of Child Development in Children with Dysarthrias
    - 8.1.4.1.1. Language Development in Children with Dysarthria
    - 8.1.4.1.2. Speech Development in Children with Dysarthria
- 8.1.5. Early Care in Dysarthria
  - 8.1.5.1. What is Early Care?
  - 8.1.5.2. How Does Early Care Help Dysarthria?
  - 8.1.5.3. The Importance of Early Care in Dysarthria Intervention
- 8.1.6. Prevention of Dysarthria
  - 8.1.6.1. How an it be Prevented?
  - 8.1.6.2. Are There any Prevention Programs?
- 8.1.7. Neurology in Dysarthria
  - 8.1.7.1. Neurological Implications in Dysarthria
    - 8.1.7.1.1. Cranial Nerves and Speech Production
    - 8.1.7.1.2. Cranial Nerves Involved in Phonorespiratory Coordination
    - 8.1.7.1.3. Motor Integration of the Brain Related to Speech
- 8.1.8. Dysarthria vs. Apraxia
  - 8.1.8.1. Introduction to Unit
  - 8.1.8.2. Apraxia of Speech
    - 8.1.8.2.1. Concept of Verbal Apraxia
    - 8.1.8.2.2. Characteristics of Verbal Apraxia
  - 8.1.8.3. Difference between Dysarthria and Verbal Apraxia
    - 8.1.8.3.1. Classification Table
  - 8.1.8.4. Relationship Between Dysarthria and Verbal Apraxia
    - 8.1.8.4.1. Is there a Relationship Between Both Disorders?
    - 8.1.8.4.2. Similarities Between Both Disorders
- 8.1.9. Dysarthria and Dyslalia
  - 8.1.9.1. What Are Dyslalias? (Short Review)
  - 8.1.9.2. Difference Between Dysarthria and Dyslalias
  - 8.1.9.3. Similarities Between Both Disorders
- 8.1.10. Aphasia and Dysarthria
  - 8.1.10.1. What is Aphasia? (In Brief)
  - 8.1.10.2. Difference Between Dysarthria and Infantile Aphasia
  - 8.1.10.3. Similarities Between Dysarthria and Infantile Aphasia

8.2. General Characteristics of Dysarthria
- 8.2.1. Conceptualization
  - 8.2.1.1. Concept of Dysarthria
  - 8.2.1.2. Symptomatology of Dysarthrias
- 8.2.2. General Characteristics of Dysarthrias
- 8.2.3. Classification of Dysarthrias According to the Site of the Lesion Caused
  - 8.2.3.1. Dysarthria due to Disorders of the Upper Motor Neuron
    - 8.2.3.1.1. Speech Characteristics
    - 8.2.3.1.2. Dysarthria due to Lower Motor Neuron Disorders
      - 8.2.3.1.2.2.1. Speech Characteristics
    - 8.2.3.1.3. Dysarthria due to Cerebellar Disorders
      - 8.2.3.1.3.1. Speech Characteristics
    - 8.2.3.1.4. Dysarthria due to Extrapyramidal Disorders
      - 8.2.3.1.4.1. Speech Characteristics
    - 8.2.3.1.5. Dysarthria due to Disorders of Multiple Motor Systems
      - 8.2.3.1.5.1. Speech Characteristics
- 8.2.4. Classification According to Symptoms
  - 8.2.4.1. Spastic Dysarthria
    - 8.2.4.1.1. Speech Characteristics
  - 8.2.4.2. Flaccid Dysarthria
    - 8.2.4.2.1. Speech Characteristics
  - 8.2.4.3. Ataxic Dysarthria
    - 8.2.4.3.1. Speech Characteristics

8.2.4.4. Dyskinetic Dysarthria
8.2.4.4.1. Speech Characteristics
8.2.4.5. Mixed Dysarthria
8.2.4.5.1. Speech Characteristics
8.2.4.6. Spastic Dysarthria
8.2.4.6.1. Speech Characteristics
8.2.5. Classification According to the Articulatory Intake
8.2.5.1. Generalized Dysarthria
8.2.5.2. Dysarthric State
8.2.5.3. Dysarthric Remnants
8.2.6. Etiology of Dysarthria in Children and Adolescents
8.2.6.1. Brain Lesion
8.2.6.2. Brain Tumor
8.2.6.3. Brain Tumor
8.2.6.4. Cerebral Accident
8.2.6.5. Other Causes
8.2.6.6. Drugs
8.2.7. Prevalence of Dysarthria in Children and Adolescents
8.2.7.1. Current Prevalence of Dysarthria
8.2.7.2. Changes in Prevalence Over the Years
8.2.8. Language Characteristics in Dysarthria
8.2.8.1. Are there Language Difficulties in Children with Dysarthria?
8.2.8.2. Characteristics of the Alterations
8.2.9. Speech Characteristics in Dysarthria
8.2.9.1. Are There Language Abnormalities in Children with Dysarthria?
8.2.9.2. Characteristics of the Alterations
8.2.10. Semiology of Dysarthria
8.2.10.1. How to detect Dysarthria?
8.2.10.2. Relevant Signs and Symptoms of Dysarthria

8.3. Classification of Dysarthria
8.3.1. Other Disorders in Children with Dysarthria
8.3.1.1. Motor Disturbances
8.3.1.2. Physiological Alterations
8.3.1.3. Communicative Disturbances
8.3.1.4. Alterations in Social Relations
8.3.2. Infantile Cerebral Palsy
8.3.2.1. Concept of Cerebral Palsy
8.3.2.2. Dysarthria in Infantile Cerebral Palsy
8.3.2.2.1. Consequences of Dysarthria in Acquired Brain Injury
8.3.2.3. Dysphagia
8.3.2.3.1. Concept of Dysphagia
8.3.2.3.2. Dysarthria in relation to Dysphagia
8.3.2.3.3. Consequences of Dysarthria in Acquired Brain Injury
8.3.3. Acquired Brain Injury
8.3.3.1. Concept of Acquired Brain Injury
8.3.3.2. Dysarthria in Relation to Acquired Brain Injury
8.3.3.2.1. Consequences of Dysarthria in Acquired Brain Injury
8.3.4. Multiple Sclerosis
8.3.4.1. Concept of Multiple Sclerosis
8.3.4.2. Dysarthria in Multiple Sclerosis
8.3.3.2.1 Consequences of Dysarthria in Acquired Brain Injury
8.3.5. Acquired Brain Injury in Children
8.3.5.1. Concept of Acquired Brain Injury in Children
8.3.5.2. Dysarthria in Infantile Acquired Brain Injury
8.3.5.2.1. Consequences of Dysarthria in Acquired Brain Injury
8.3.6. Psychological Consequences in Dysarthric Children
8.3.6.1. How Does Dysarthria Affect the Psychological Development of the Child?
8.3.6.2. Psychological Aspects Affected

8.3.7. Social Consequences in Dysarthric Children
8.3.7.1. Does it Affect the Social Development of Dysarthric Children?
8.3.8. Consequences on Communicative Interactions in Dysarthric Children
8.3.8.1. How Does Dysarthria Affect Communication?
8.3.8.2. Communicative Aspects Affected
8.3.9. Social Consequences in Dysarthric Children
8.3.9.1. How Does Dysarthria Affect Social Relationships?
8.3.10. Economic Consequences
8.3.10.1. Professional Intervention and the Economic Cost to the Family
8.4. Other classifications of Dysarthrias in Children and Adolescents
8.4.1. Speech-Language Evaluation and its Importance in Children with Dysarthria
8.4.1.1. Why should the Speech-Language Pathologist evaluate cases of Dysarthria?
8.4.1.2. Why evaluate cases of Dysarthria by the Speech-Language Pathologist?
8.4.2. Clinical Speech Therapy Evaluation
8.4.3. Evaluation and Diagnostic process
8.4.3.1. Medical History
8.4.3.2. Document Analysis.
8.4.3.3. Interviewing Family Members
8.4.4. Direct Exploration
8.4.4.1. Neurophysiological Examination
8.4.4.2. Exploration of the Trigeminal Nerve
8.4.4.3. Exploration of the Accessory Nerve
8.4.4.4. Examination of the Glossopharyngeal Nerve
8.4.4.5. Examination of the Facial Nerve
8.4.4.5.1. Examination of the Hypoglossal Nerve
8.4.4.5.2. Exploration of the Accessory Nerve
8.4.5. Perceptual Exploration
8.4.5.1. Breathing Exploration
8.4.5.2. Resonance
8.4.5.3. Oral Motor Control
8.4.5.4. Articulation
8.4.6. Other Aspects To Be Evaluated
8.4.6.1. Intelligibility
8.4.6.2. Automatic Speech
8.4.6.3. Reading
8.4.6.4. Prosody
8.4.6.5. Intelligibility/severity Scan
8.4.7. Assessment of the Dysarthric Child in the Family Context
8.4.7.1. Persons To Be Interviewed for the Evaluation of the Family Context
8.4.7.2. Relevant Aspects in the Interview
8.4.7.2.1. Some Important Questions to Ask in the Family Interview
8.4.7.3. Importance of the Assessment in the Family Context
8.4.8. Assessment of the Dysarthric Child in the School Context
8.4.8.1. Professionals to Interview in the School Context
8.4.8.1.1. The Tutor
8.4.8.1.2. The Hearing and Language Teacher
8.4.8.1.3. The School Counselor
8.4.8.2. The Importance of School Assessment in Children with Dysarthria.
8.4.9. Assessment of Dysarthric Children by Other Health Professionals
8.4.9.1. The Importance of Joint Assessment
8.4.9.2. Neurological Assessment
8.4.9.3. Physiotherapeutic Assessment
8.4.9.4. Otolaryngological Assessment
8.4.9.5. Psychological Assessment

8.4.10. Differential Diagnosis
8.4.10.1. How to Make the Differential Diagnosis in Children with Dysarthria?
8.4.10.2. Considerations in Establishing the Differential Diagnosis

8.5. Characteristics of Dysarthrias
8.5.1. The Importance of Intervention in Children Dysarthria
8.5.1.1. Consequences in Children Affected by Dysarthria
8.5.1.2. Evolution of Dysarthria through Intervention
8.5.2. Goals of Intervention for Children with Dysarthria
8.5.2.1. General Goals in Dysarthria
8.5.2.1.1. Psychological Goals
8.5.2.1.2. Motor Goals
8.5.3. Intervention Methods
8.5.4. Steps to be Carried Out During the Intervention
8.5.4.1. Agree on the Intervention Model
8.5.4.2. Establish the Sequencing and Timing of the Intervention
8.5.5. The Child as the Main Subject During the Intervention
8.5.5.1. Supporting the Child's Skills in Intervention
8.5.6. General Intervention Considerations
8.5.6.1. The importance of Motivational Involvement in Intervention
8.5.6.2. Affectivity During the Intervention
8.5.7. Proposal of Activities for Speech Therapy Intervention
8.5.7.1. Psychological Activities
8.5.7.2. Motor Activities
8.5.8. The Importance of the Joint Rehabilitation Process
8.5.8.1. Professionals Involved in Dysarthrias
8.5.8.1.1. Physiotherapist
8.5.8.1.2. Psychologist
8.5.9. Alternative and Augmentative Communication Systems as Support for Intervention
8.5.9.1. How Can These Systems Help Intervention with Children With Dysarthria?
8.5.9.2. Choice of System Type: Augmentative or Alternative?
8.5.9.3. Settings in Which its Use Will be Established
8.5.10. How to Establish the End of Treatment?
8.5.10.1. Criteria for Indicating the End of Rehabilitation
8.5.10.2. Fulfillment of Rehabilitation Objectives

8.6. Evaluation of Dysarthrias
8.6.1. Speech Therapy Interventions in Dysarthrias
8.6.1.1. Importance of Speech Therapy Intervention in Childhood and Adolescent Dysarthrias
8.6.1.2. What Does Speech Therapy Intervention in Dysarthria Consist of?
8.6.1.3. Objectives of the Speech Therapy Intervention
8.6.1.3.1. General Objectives of the Speech Therapy Intervention Program
8.6.1.3.2. Specific Objectives of the Speech Therapy Intervention Program
8.6.2. Swallowing Therapy in Dysarthria
8.6.2.1. Swallowing Difficulties in cases of Dysarthria
8.6.2.2. What does Swallowing Therapy Consist of?
8.6.2.3. Importance of the Therapy
8.6.3. Postural and Body Therapy in Dysarthria
8.6.3.1. Body Posture Difficulties in cases of Dysarthria
8.6.3.2. What does Postural and Body Therapy consist of?
8.6.3.3. The Importance of Therapy
8.6.4. Orofacial Therapy in Dysarthria
8.6.4.1. Orofacial Difficulties in Cases of Dysarthria
8.6.4.2. What does Orofacial Therapy consist of?
8.6.4.3. The Importance of Therapy

8.6.5. Breathing Therapy and Phonorespiratory Coordination in Dysarthria
8.6.5.1. Difficulties in Phonorespiratory Coordination in Cases of Dysarthria
8.6.5.2. What Does Therapy Consist Of?
8.6.5.3. The Importance of Therapy
8.6.6. Articulation Therapy in Dysarthria
8.6.6.1. Difficulties in Articulation in Cases of Dysarthria
8.6.6.2. What Does Therapy Consist Of?
8.6.6.3. The Importance of Therapy
8.6.7. Speech Therapy in Dysarthria
8.6.7.1. Phonatory Difficulties in Cases of Dysarthria
8.6.7.2. What Does Therapy Consist Of?
8.6.7.3. The Importance of Therapy
8.6.8. Resonance Therapy in Dysarthria
8.6.8.1. Difficulties in Resonance in cases of Dysarthria
8.6.8.2. What Does Therapy Consist Of?
8.6.8.3. The Importance of Therapy
8.6.9. Vocal Therapy in Dysarthria
8.6.9.1. Difficulties in Voice in Cases of Dysarthria
8.6.9.2. What Does Therapy Consist Of?
8.6.9.3. The Importance of Therapy
8.6.10. Prosody and Fluency Therapy
8.6.10.1. Difficulties in Prosody and Fluency in Cases of Dysarthria
8.6.10.2. What Does Therapy Consist Of?
8.6.10.3. The Importance of Therapy

8.7. Speech Therapy Exploration in Dysarthrias
8.7.1. Introduction
8.7.1.1. Importance of Developing a Speech Therapy Intervention Program for a Child with Dysarthria.
8.7.2. Initial Considerations for the Development of a Speech-language Intervention Program
8.7.2.1. Characteristics of Dysarthric Children
8.7.3. Decisions for the Planning of Speech Therapy Intervention
8.7.3.1. Method of Intervention to Be Performed
8.7.3.2. Consensus for the Sequencing of the Intervention Sessions: Aspects to Consider
8.7.3.2.1. Chronological Age
8.7.3.2.2. The Child's Extracurricular Activities
8.7.3.2.3. Schedules
8.7.3.3. Establishing Lines of Intervention
8.7.4. Objectives of the Speech Therapy Intervention Program for Dysarthria
8.7.4.1. General Objectives of the Speech Therapy Intervention Program
8.7.4.2. Specific Objectives of the Speech Therapy Intervention Program
8.7.5. Areas of Speech Therapy Intervention in Dysarthrias and Proposed Activities
8.7.5.1. Orofacial
8.7.5.2. Voice
8.7.5.3. Prosody
8.7.5.4. Speech
8.7.5.5. Language
8.7.5.6. Breathing
8.7.6. Materials and Resources for Speech Therapy Intervention
8.7.6.1. Proposal of Materials on the Market for Use in Speech Therapy Intervention with an Outline of the Material and its Uses
8.7.6.2. Images of the Materials Previously Proposed
8.7.7. Technological Resources and Didactic Materials for Speech Therapy Intervention
8.7.7.1. Software Programs for Intervention
8.7.7.1.1. PRAAT Program
8.7.8. Intervention Methods for Intervention in Dysarthria Intervention
8.7.8.1. Types of Intervention Methods
8.7.8.1.1. Medical Methods
8.7.8.1.2. Clinical Intervention Methods
8.7.8.1.3. Instrumental Methods
8.7.8.1.4. Pragmatic Methods
8.7.8.1.5. Behavioral-Logopedic Methods
8.7.8.2. Choice of the Appropriate Method of Intervention for the Case

8.7.9. Techniques of Speech Therapy Intervention and Proposed Activities
8.7.9.1. Breathing
8.7.9.1.1. Proposed Activities
8.7.9.2. Phonation
8.7.9.2.1. Proposed Activities
8.7.9.3. Articulation
8.7.9.3. Proposed Activities
8.7.9.4. Resonance
8.7.9.4.1. Proposed Activities
8.7.9.5. Speech Rate
8.7.9.5.1. Proposed Activities
8.7.9.6. Accent and Intonation
8.7.9.6.1. Proposed Activities
8.7.10. Alternative and/or Augmentative Communication Systems as a Method of Intervention in Cases of Dysarthria
8.7.10.1. What are AACS?
8.7.10.2. How can AACS Help Intervention with Children with Dysarthria?
8.7.10.3. How can AACS Help Communication of Children with Dysarthria?
8.7.10.4. Choice of a System Method according to the Child's Needs
8.7.10.4.1. Considerations for Establishing a Communication System
8.7.10.5. How To Use Communication Systems in Different Child Development Settings?

8.8. Speech Therapy Interventions in Dysarthrias
8.8.1. Introduction to the Unit in the Development of the Dysarthric Child
8.8.2. The Consequences of the Dysarthric Child in the Family Context
8.8.2.1. How is the Child Affected by Difficulties in the Home Environment?
8.8.3. Communication Difficulties in the Dysarthric Child's Home Environment.
8.8.1.1. What Barriers do they Encounter in the Home Environment?
8.8.4. The Importance of Professional Intervention in the Family Environment and the Family-centered Intervention Model
8.8.4.1. The Importance of the Family in the Development of the Dysphemic Child
8.8.4.2. How to Carry Out Family-Centered Intervention in Cases of Dysarthric Children?
8.8.5. Family Integration in Speech Therapy and School Intervention for Children with Dysarthria
8.8.5.1. Aspects to Consider in Order to Integrate the Family in the Intervention
8.8.6. Benefits of Integrating the Family in the Professional and School Intervention
8.8.6.1. Coordination with Health Professionals and the Benefits
8.6.6.2. Coordination with Educational Professionals and the Benefits
8.8.7. Advice for the Family Environment
8.8.7.1. Tips to facilitate oral Communication in the Dysarthric Child
8.8.7.2. Guidelines for the Relationship at Home with the Dysarthric Child
8.8.8. Psychological Support for the Family
8.8.8.1. Psychological Implications in the Family with Cases of Children with Dysarthria
8.8.8.2. Why Provide Psychological Support?
8.8.9. The Family as a Means of Generalization in Learning
8.8.9.1. The Importance of the Family for the Generalization in Learning
8.8.9.2. How Can the Family Support the Child's Learning?
8.8.10. Communication with the Child with Dysarthria
8.8.10.1. Communication Strategies in the Home Environment
8.8.10.2. Tips for Better Communication
8.8.10.2.1. Changes in the Environment
8.8.10.2.2. Alternatives to Oral Communication

8.9. Proposal of Exercise for Speech Therapy Intervention in Dysarthria
8.9.1. Introduction to Unit
8.9.1.1. The Period of Childhood Schooling in Relation to the Prevalence of Child and Adolescent Dysarthria
8.9.2. The Importance of the Involvement of the School During the Intervention Period
8.9.2.1. The School as a Means of Development of the Dysarthric Child
8.9.2.2. The Influence of the School on Child Development
8.9.3. School Supports, Who Offers Support to the Child at School and How?

8.9.3.1. The Hearing and Language Teacher
8.9.3.2. The Guidance Counselor
8.9.4. Coordination of the Rehabilitation Professionals with the Education Professionals
8.9.4.1. Who to coordinate With?
8.9.4.2. Steps for Coordination
8.9.5. Consequences in the Dysarthric Child's Classroom
8.9.5.1. Psychological Consequences in the Dysarthric Child
8.9.5.2. Communication with Classmates
8.9.6. Intervention According to the Student's Needs
8.9.6.1. Importance of Taking into Account the Needs of the Student with Dysarthria.
8.9.6.2. How to Establish the Needs of the Student?
8.9.6.3. Participants in the Development of the Learner's Needs
8.9.7. Orientations
8.9.7.1. Guidance for the School for Intervention with the Child with Dysarthria
8.9.8. Objectives of the Educational Center
8.9.8.1. General Objectives of School Intervention
8.9.8.2. Strategies to Achieve the Objectives
8.9.9. Methods of Intervention in the Classroom Strategies to Promote the Child's Integration
8.9.10. The Use of SAACs in the Classroom to Promote Communication
8.9.10.1. How Can SAACs Help in the Classroom with the Dysarthric Student?
8.10. Annexes

## **Module 9.** Understanding Hearing Impairments

9.1. The Auditory System: Anatomical and Functional Bases
9.1.1. Introduction to Unit
9.1.1.1. Preliminary Considerations
9.1.1.2. Concept of Sound
9.1.1.3. Concept of Noise
9.1.1.4. Concept of Sound Wave
9.1.2. The External Ear
9.1.2.1. Concept and Function of the External Ear
9.1.2.2. Parts of the External Ear
9.1.3. The Middle Ear
9.1.3.1. Concept and Function of the Middle Ear
9.1.3.2. Parts of the Middle Ear
9.1.4. The Inner Ear
9.1.4.1. Concept and Function of the Inner Ear
9.1.4.2. Parts of the Inner Ear
9.1.5. Hearing Physiology
9.1.6. How does Natural Hearing work?
9.1.6.1. Concept of Natural Hearing
9.1.6.2. Mechanism of Undisturbed Hearing
9.2. Hearing Loss
9.2.1. Hearing Loss
9.2.1.1. Concept of Hearing Loss
9.2.1.2. Symptoms of Hearing Loss
9.2.2. Classification of Hearing Loss According to Where the Lesion is Located
9.2.2.1. Transmission or Conduction Hearing Loss
9.2.2.2. Perceptual or Sensorineural Hearing Losses
9.2.3. Classification of Hearing Loss According to the Degree of Hearing Loss
9.2.3.1. Light or Mild Hearing Loss
9.2.3.2. Medium Hearing Loss
9.2.3.3. Severe Hearing Loss
9.2.3.4. Profound Hearing Loss
9.2.4. Classification of Hearing Loss According to Age of Onset
9.2.4.1. Prelocution Hearing Loss
9.2.4.2. Perlocution Hearing Loss
9.2.4.3. Postlocution Hearing Loss
9.2.5. Classification of Hearing Loss According to its Etiology
9.2.5.1. Accidental Hearing Loss
9.2.5.2. Hearing Loss due to the Consumption of Ototoxic Substances
9.2.5.3. Genetic Origin Hearing Loss
9.2.5.4. Other Possible Causes

9.2.6. Risk Factors for Hearing Loss
9.2.6.1. Aging
9.2.6.2. Loud Noises
9.2.6.3. Hereditary Factor
9.2.6.4. Recreational Sports
9.2.6.5. Others
9.2.7. Prevalence of Hearing Loss
9.2.7.1. Preliminary Considerations
9.2.7.2. Prevalence of Hearing Loss in the Rest of the Countries
9.2.8. Comorbidity of Hearing Loss
9.2.8.1. Comorbidity in Hearing Loss
9.2.8.2. Associated Disorders
9.2.9. Comparison of the Intensity of the Most Frequent Sounds
9.2.9.1. Sound Levels of Frequent Noises
9.2.9.2. Maximum Occupational Noise Exposure Allowed by Law
9.2.10. Hearing Prevention
9.2.10.1. Preliminary Considerations
9.2.10.2. The Importance of Prevention
9.2.10.3. Preventive Methods for Hearing Care
9.3. Audiology and Audiometry
9.4. Hearing Aids
9.4.1. Preliminary Considerations
9.4.2. History of Hearing Aids
9.4.3. What are Hearing Aids?
9.4.3.1. Concept of Hearing Aid
9.4.3.2. How does a Hearing Aid work?
9.4.3.3. Description of the Device
9.4.4. Hearing Aid Fitting and Fitting Requirements
9.4.4.1. Preliminary Considerations
9.4.4.2. Hearing Aid Fitting Requirements
9.4.4.3. How is a Hearing Aid Fitted?
9.4.5. When is it Not Advisable to Fit a Hearing Aid?
9.4.5.1. Preliminary Considerations
9.4.5.2. Aspects that Influence the Professional's Final Decision
9.4.6. The Success and Failure of Hearing Aid fitting
9.4.6.1. Factors Influencing the Success of Hearing Aid fitting
9.4.6.2. Factors Influencing the Failure of Hearing Aid fitting
9.4.7. Analysis of the Evidence on Effectiveness, Safety, and Ethical Aspects of the Hearing Aid
9.4.7.1. Hearing Aid Effectiveness
9.4.7.2. Hearing Aid Safety
9.4.7.3. Ethical Aspects of the Hearing Aid
9.4.8. Indications and Contraindications of Hearing Aids
9.4.8.1. Preliminary Considerations
9.4.8.2. Hearing Aid Indications
9.4.8.3. Hearing Aid Contraindications
9.4.9. Current Hearing Aid Models
9.4.9.1. Introduction
9.4.9.2. The Different Current Hearing Aid Models
9.4.10. Final Conclusions
9.5. Cochlear implants
9.5.1. Introduction to Unit
9.5.2. History of Cochlear Implantation
9.5.3. What are Cochlear Implants?
9.5.3.1. Concept of Cochlear Implant
9.5.3.2. How does a Cochlear Implant work?
9.5.3.3. Description of the Device
9.5.4. Requirements for Cochlear Implant Placement
9.5.4.1. Preliminary Considerations
9.5.4.2. Physical Requirements to Be Met by the User
9.5.4.3. Psychological Requirements to Be Met by the User

9.5.5. Implementation of Cochlear Implant
9.5.5.1. The Surgery
9.5.5.2. Implant Programming
9.5.5.3. Professionals Involved in the Surgery and in the Implant Programming
9.5.6. When is it not Advisable to Place a Cochlear Implant?
9.5.6.1. Preliminary Considerations
9.5.6.2. Aspects that Influence the Professional's Final Decision
9.5.7. Success and Failure of Cochlear Implantation
9.5.7.1. Factors Influencing the Success of Cochlear Implant placement
9.5.7.2. Factors Influencing Cochlear Implant Placement Failure
9.5.8. Analysis of the Evidence on Effectiveness, Safety, and Ethical Aspects of Cochlear Implantation
9.5.8.1. Effectiveness of Cochlear Implantation
9.5.8.2. Safety of Cochlear Implantation
9.5.8.3. Ethical Aspects of Cochlear Implantation
9.5.9. Indications and Contraindications of Cochlear Implantation
9.5.9.1. Preliminary Considerations
9.5.9.2. Indications of Cochlear Implantation
9.5.9.3. Contraindications of Cochlear Implantation
9.5.10. Final Conclusions
9.6. Speech Therapy Evaluation instruments in Hearing Impairments
9.6.1. Introduction to Unit
9.6.2. Elements to Take into Account During the Evaluation
9.6.2.1. Level of Care
9.6.2.2. Imitation
9.6.2.3. Visual Perception
9.6.2.4. Mode of Communication
9.6.2.5. Hearing
9.6.2.5.1. Reaction to Unexpected Sounds
9.6.2.5.2. Sound Detection What Sounds Do You Hear?
9.6.2.5.3. Identification and Recognition of Environmental and Speech Sounds

9.6.3. Audiometry and the Audiogram
- 9.6.3.1. Preliminary Considerations
- 9.6.3.2. Concept of Audiometry
- 9.6.3.3. Concept of Audiogram
- 9.6.3.4. The function of Audiometry and the Audiogram

9.6.4. First Part of the Evaluation: Anamnesis
- 9.6.4.1. General Development of the Patient
- 9.6.4.2. Type and Degree of Hearing Loss
- 9.6.4.3. Timing of Onset of Hearing Loss
- 9.6.4.4. Existence of Associated Pathologies
- 9.6.4.5. Mode of Communication
- 9.6.4.6. Use or Absence of Hearing Aids
  - 9.6.4.6.1. Date of Fitting
  - 9.6.4.6.2. Other Aspects

9.6.5. Second Part of the Evaluation: Otorhinolaryngologist and Prosthetist
- 9.6.5.1. Preliminary Considerations
- 9.6.5.2. Otolaryngologist's Report
  - 9.6.5.2.1. Analysis of the Objective Tests
  - 9.6.5.2.2. Analysis of the Subjective Tests
- 9.6.5.3. Prosthetist's Report

9.6.6. Second part of the Evaluation: Standardized Tests
- 9.6.6.1. Preliminary Considerations
- 9.6.6.2. Speech Audiometry
  - 9.6.6.2.1. Ling Test
  - 9.6.6.2.2. Name Test
  - 9.6.6.2.3. Early Speech Perception Test (ESP)
  - 9.6.6.2.4. Distinguishing Features Test
  - 9.6.6.2.5. Vowel Identification Test
  - 9.6.6.2.6. Consonant Identification Test
  - 9.6.6.2.7. Monosyllable Recognition Test
  - 9.6.6.2.8. Bi-syllable Recognition Test
  - 9.6.6.2.9. Phrase Recognition Test
    - 9.6.6.2.9.1. Open-choice Sentence Test with Support
    - 9.6.6.2.9.2. Test of Open-choice Sentences without Support
- 9.6.6.3. Oral Language Test/Tests
  - 9.6.6.3.1. PLON-R
  - 9.6.6.3.2. Reynell Scale of Language Development
  - 9.6.6.3.3. ITPA
  - 9.6.6.3.4. ELCE
  - 9.6.6.3.5. Monfort Induced Phonological Register
  - 9.6.6.3.6. MacArthur
  - 9.6.6.3.7. Boehm's Test of Basic Concepts
  - 9.6.6.3.8. BLOC

9.6.7. Elements to Be Included in a Speech Therapy Report on Hearing Impairment
- 9.6.7.1. Preliminary Considerations
- 9.6.7.2. Important and Basic Elements
- 9.6.7.3. Importance of the Speech Therapy Report in Auditory Rehabilitation

9.6.8. Evaluation of the Hearing-Impaired Child in the School Context
- 9.6.8.1. Professionals to Be Interviewed
  - 9.6.8.1.1. Tutor
  - 9.6.8.1.2. Professors
  - 9.6.8.1.3. Hearing and Speech Teacher
  - 9.6.8.1.4. Others

9.6.9. Early Detection
- 9.6.9.1. Preliminary Considerations
- 9.6.9.2. The importance of Early Diagnosis
- 9.6.9.3. Why is a Speech Therapy Evaluation More Effective When the Child is Younger?

9.6.10. Final Conclusions

9.7. Speech-Language Therapist Role in Hearing Impairment Intervention
- 9.7.1. Introduction to Unit
  - 9.7.1.1. Methodological Approaches, According to Perier's Classification (1987)
  - 9.7.1.2. Oral Monolingual Methods
  - 9.7.1.3. Bilingual Methods
  - 9.7.1.4. Mixed Methods
- 9.7.2. Are there Any Differences Between Rehabilitation after a Hearing Aid or Cochlear Implant?
- 9.7.3. Post-Implant Intervention in Prelingually Hearing-Impaired Children
- 9.7.4. Post-Implant Intervention in Postlocution Children
  - 9.7.4.1. Introduction to Unit
  - 9.7.4.2. Phases of Auditory Rehabilitation
    - 9.7.4.2.1. Sound Detection Phase
    - 9.7.4.2.2. Discrimination Phase
    - 9.7.4.2.3. Identification Phase
    - 9.7.4.2.4. Recognition Phase
    - 9.7.4.2.5. Comprehension Phase
- 9.7.5. Useful Activities for Rehabilitation
  - 9.7.5.1. Activities for the Detection Phase
  - 9.7.5.2. Activities for the Discrimination Phase
  - 9.7.5.3. Activities for the Identification Phase
  - 9.7.5.4. Activities for the Recognition Phase
  - 9.7.5.5. Activities for the Comprehension Phase
- 9.7.6. Role of the family in the Rehabilitation Process
  - 9.7.6.1. Guidelines for Families
  - 9.7.6.2. Is the Presence of the Parents in the Sessions Advisable?
- 9.7.7. The Importance of an Interdisciplinary Team During the Intervention
  - 9.7.7.1. Preliminary Considerations
  - 9.7.7.2. Why the Interdisciplinary Team is so Important
  - 9.7.7.3. The Professionals Involved in Rehabilitation
- 9.7.8. Strategies for the School Environment
  - 9.7.8.1. Preliminary Considerations
  - 9.7.8.2. Communication Strategies
  - 9.7.8.3. Methodological Strategies
  - 9.7.8.4. Strategies for Text Adaptation
- 9.7.9. Materials and Resources Adapted to the Speech Therapy Intervention in Audiology
  - 9.7.9.1. Self-Made Useful Materials
  - 9.7.9.2. Commercially Available Material
  - 9.7.9.3. Useful Technological Resources
- 9.7.10. Final Conclusions

9.8. Bimodal Communication
- 9.8.1. Introduction to Unit
- 9.8.2. What does Bimodal Communication Consist Of?
  - 9.8.2.1. Concept
  - 9.8.2.2. Functions
- 9.8.3. Elements of Bimodal Communication
  - 9.8.3.1. Preliminary Considerations
  - 9.8.3.2. Elements of Bimodal Communication
    - 9.8.3.2.1. Pantomimic Gestures
    - 9.8.3.2.2. Elements of Sign Language
    - 9.8.3.2.3. Natural Gestures
    - 9.8.3.2.4. "Idiosyncratic" Gestures
    - 9.8.3.2.5. Other Elements
- 9.8.4. Objectives and Advantages of the use of Bimodal Communication
  - 9.8.4.1. Preliminary Considerations
  - 9.8.4.2. Advantages of Bimodal Communication
    - 9.8.4.2.1. Regarding the Word at the Reception
    - 9.8.4.2.2. Regarding the Word in Expression
  - 9.8.4.3. Advantages of Bimodal Communication Over Other Augmentative and Alternative Communication Systems

9.8.5. When Should We Consider Using Bimodal Communication?
9.8.5.1. Preliminary Considerations
9.8.5.2. Factors to Consider
9.8.5.3. Professionals Making the Decision
9.8.5.4. The Importance of the Role of the Family
9.8.6. The Facilitating Effect of Bimodal Communication
9.8.6.1. Preliminary Considerations
9.8.6.2. The Indirect Effect
9.8.6.3. The Direct Effect
9.8.7. Bimodal Communication in the different Language Areas
9.8.7.1. Preliminary Considerations
9.8.7.2. Bimodal Communication and Comprehension
9.8.7.3. Bimodal Communication and Expression
9.8.8. Forms of Implementation of Bimodal Communication
9.8.9. Programs aimed at learning and implementing the Bimodal System
9.8.9.1. Preliminary Considerations
9.8.9.2. Introduction to Bimodal Communication Supported by Clic and NeoBook Authoring Tools
9.8.9.3. Bimodal 2000
9.8.10. Final Conclusions
9.9. The Figure of the Interpreter of Sign Language (ILSE)
9.9.1. Introduction to Unit
9.9.2. History of Interpretation
9.9.2.1. History of Oral Language Interpreting
9.9.2.2. History of Sign Language Interpreting
9.9.2.3. Sign Language Interpreting as a Profession
9.9.3. The Interpreter of Sign Language (ILSE)
9.9.3.1. Concept
9.9.3.2. ILSE Professional Profile
9.9.3.2.1. Personal Characteristics
9.9.3.2.2. Intellectual Characteristics
9.9.3.2.3. Ethical Characteristics
9.9.3.2.4. General Knowledge
9.9.3.3. The Indispensable Role of the Sign Language Interpreter
9.9.3.4. Professionalism in Interpreting
9.9.4. Interpreting Methods
9.9.4.1. Characteristics of Interpreting
9.9.4.2. The purpose of Interpretation
9.9.4.3. Interpreting as a Communicative and Cultural Interaction
9.9.4.4. Types of Interpretation:
9.9.4.4.1. Consecutive Interpretation
9.9.4.4.2. Simultaneous Interpretation
9.9.4.4.3. Interpreting in a Telephone Call
9.9.4.4.4. Interpreting Written Texts
9.9.5. Components of the Interpretation Process
9.9.5.1. Message
9.9.5.2. Perception
9.9.5.3. Linking Systems
9.9.5.4. Comprehension
9.9.5.5. Interpretation
9.9.5.6. Assessment
9.9.5.7. Human Resources Involved
9.9.6. List of the Elements of the Interpretation Mechanism
9.9.6.1. Moser's Hypothetical Model of Simultaneous Interpretation
9.9.6.2. Colonomo's Model of Interpreting Work
9.9.6.3. Cokely's Interpretation Process Model
9.9.7. Interpretation Techniques
9.9.7.1. Concentration and Attention
9.9.7.2. Memory
9.9.7.3. Note Taking
9.9.7.4. Verbal Fluency and Mental Agility
9.9.7.5. Resources for Lexical Building

9.9.8. ILSE Fields of Action
9.9.8.1. Services in General
9.9.8.2. Specific Services
9.9.8.3. Organization of ILS services in other European Countries
9.9.9. Ethical Standards
9.9.9.1. The ILSE Code of Ethics
9.9.9.2. Fundamental Principles
9.9.9.3. Other Ethical Principles
9.9.10. Sign Language Interpreter Associations
9.9.10.1. ILS Associations in Europe
9.9.10.2. ILS Associations in the Rest of the World

## **Module 10.** Psychological Knowledge of Interest in the Speech-Language Pathology Field

10.1. Child and Adolescent Psychology
10.1.1. First Approach to Child and Adolescent Psychology
10.1.1.1. What Does the Area of Knowledge of Child and Adolescent Psychology Study?
10.1.1.2. How has it Evolved Over the Years?
10.1.1.3. What Are the Different Theoretical Orientations that a Psychologist Can Follow?
10.1.1.4. The Cognitive-Behavioral Model
10.1.2. Psychological Symptoms and Mental Disorders in Childhood and Adolescence
10.1.2.1. Difference Between Sign, Symptom, and Syndrome
10.1.2.2. Definition of Mental Disorder
10.1.2.3. Classification of Mental Disorders: DSM 5 and ICD-10
10.1.2.4. Difference Between Psychological Problem or Difficulty and Mental Disorder
10.1.2.5. Comorbidity
10.1.2.6. Frequent Problems Object of Psychological Attention
10.1.3. Skills of the Professional Working with Children and Adolescents
10.1.3.1. Essential Knowledge
10.1.3.2. Main Ethical and Legal Issues in Working With Children and Adolescents
10.1.3.3. Personal Characteristics and Skills of the Professional
10.1.3.4. Communication Skills
10.1.3.5. The Game in Consultation
10.1.4. Main Procedures in Psychological Assessment and Intervention in Childhood and Adolescence
10.1.4.1. Decision Making and Help Seeking in Children and Adolescents
10.1.4.2. Interview
10.1.4.3. Establishment of Hypotheses and Assessment Tools
10.1.4.4. Functional Analysis and Explanatory Hypotheses of the Difficulties
10.1.4.5. Establishment of Objectives
10.1.4.6. Psychological Intervention
10.1.4.7. Monitoring
10.1.4.8. The Psychological Report: Key Aspects
10.1.5. Benefits of Working with Other Persons Related to the Child
10.1.5.1. Fathers and Mothers
10.1.5.2. Education Professionals
10.1.5.3. Speech Therapist
10.1.5.4. The Psychologist
10.1.5.5. Other Professionals
10.1.6. The Interest of Psychology from the point of view of a Speech-Language Pathologist
10.1.6.1. The Importance of Prevention
10.1.6.2. The influence of Psychological Symptoms on Speech Therapy Rehabilitation
10.1.6.3. The Relevance of Knowing How to Detect Possible Psychological Symptoms
10.1.6.4. Referral to the Appropriate Professional

10.2. Internalizing Problems: Anxiety
- 10.2.1. Concept of Anxiety
- 10.2.2. Detection: Main Manifestations
  - 10.2.2.1. Emotional Dimension
  - 10.2.2.2. Cognitive Dimension
  - 10.2.2.3. Psychophysiological Dimension
  - 10.2.2.4. Behavioral Dimension
- 10.2.3. Anxiety Risk Factors
  - 10.2.3.1. Individual
  - 10.2.3.2. Contextual
- 10.2.4. Conceptual Differences
  - 10.2.4.1. Anxiety and Stress
  - 10.2.4.2. Anxiety and Fear
  - 10.2.4.3. Anxiety and Phobia
- 10.2.5. Fears in Childhood and Adolescence
  - 10.2.5.1. Difference Between Developmental Fears and Pathological Fears
  - 10.2.5.2. Developmental Fears in Infants
  - 10.2.5.3. Developmental Fears in the Preschool Stage
  - 10.2.5.4. Developmental Fears in the School Stage
  - 10.2.5.5. The Main Fears and Worries in the Adolescent Stage
- 10.2.6. Some of the Main Anxiety Disorders and Problems in Children and Adolescents
  - 10.2.6.1. School Rejection
    - 10.2.6.1.1. Concept
    - 10.2.6.1.2. Delimitation of Concepts: Anxiety, Rejection, and School Phobia
    - 10.2.6.1.3. Main Symptoms
    - 10.2.6.1.4. Prevalence
    - 10.2.6.1.5. Etiology
  - 10.2.6.2. Pathological Fear of the Dark
    - 10.2.6.2.1. Concept
    - 10.2.6.2.2. Main Symptoms
    - 10.2.6.2.3. Prevalence
    - 10.2.6.2.4. Etiology
  - 10.2.6.3. Separation Anxiety
    - 10.2.6.3.1. Concept
    - 10.2.6.3.2. Main Symptoms
    - 10.2.6.3.3. Prevalence
    - 10.2.6.3.4. Etiology
  - 10.2.6.4. Specific Phobia
    - 10.2.6.4.1. Concept
    - 10.2.6.4.2. Main Symptoms
    - 10.2.6.4.3. Prevalence
    - 10.2.6.4.4. Etiology
  - 10.2.6.5. Social Phobia
    - 10.2.6.5.1. Concept
    - 10.2.6.5.2. Main Symptoms
    - 10.2.6.5.3. Prevalence
    - 10.2.6.5.4. Etiology
  - 10.2.6.6. Panic Disorder
    - 10.2.6.6.1. Concept
    - 10.2.6.6.2. Main Symptoms
    - 10.2.6.6.3. Prevalence
    - 10.2.6.6.4. Etiology
  - 10.2.6.7. Agoraphobia
    - 10.2.6.7.1. Concept
    - 10.2.6.7.2. Main Symptoms
    - 10.2.6.7.3. Prevalence
    - 10.2.6.7.4. Etiology
  - 10.2.6.8. Generalized Anxiety Disorder
    - 10.2.6.8.1. Concept
    - 10.2.6.8.2. Main Symptoms
    - 10.2.6.8.3. Prevalence
    - 10.2.6.8.4. Etiology

10.2.6.9. Obsessive Compulsive Disorder
10.2.6.9.1. Concept
10.2.6.9.2. Main Symptoms
10.2.6.9.3. Prevalence
10.2.6.9.4. Etiology
10.2.6.10. Post-Traumatic Stress Disorder
10.2.6.10.1. Concept
10.2.6.10.2. Main Symptoms
10.2.6.10.3. Prevalence
10.2.6.10.4. Etiology
10.2.7. Possible Interference of Anxious Symptomatology in Speech Therapy Rehabilitation
10.2.7.1. In Articulation Rehabilitation
10.2.7.2. In Literacy Rehabilitation
10.2.7.3. In Voice Rehabilitation
10.2.7.4. In Dysphemia Rehabilitation
10.3. Internalizing Type Problems: Depression
10.3.1. Concept
10.3.2. Detection: Main Manifestations
10.3.2.1. Emotional Dimension
10.3.2.2. Cognitive Dimension
10.3.2.3. Psychophysiological Dimension
10.3.2.4. Behavioral Dimension
10.3.3. Depression Risk Factors
10.3.3.1. Individual
10.3.3.2. Contextual
10.3.4. Evolution of Depressive Symptomatology Throughout Development
10.3.4.1. Symptoms in Children
10.3.4.2. Symptoms in Adolescents
10.3.4.3. Symptoms in Adults
10.3.5. Some of the Major Disorders and Problems of Childhood and Adolescent Depression
10.3.5.1. Major Depressive Disorder
10.3.5.1.1. Concept
10.3.5.1.2. Main Symptoms
10.3.5.1.3. Prevalence
10.3.5.1.4. Etiology
10.3.5.2. Persistent Depressive Disorder
10.3.5.2.1. Concept
10.3.5.2.2. Main Symptoms
10.3.5.2.3. Prevalence
10.3.5.2.4. Etiology
10.3.5.3. Disruptive Mood Dysregulation Disorder
10.3.5.3.1. Concept
10.3.5.3.2. Main Symptoms
10.3.5.3.3. Prevalence
10.3.5.3.4. Etiology

10.3.6. Interference of Depressive Symptomatology in Speech Therapy Rehabilitation
- 10.3.6.1. In Articulation Rehabilitation
- 10.3.6.2. In Literacy Rehabilitation
- 10.3.6.3. In Voice Rehabilitation
- 10.3.6.4. In Dysphemia Rehabilitation

10.4. Externalizing Type Problems: the Main Disruptive Behaviors and their Characteristics
- 10.4.1. Factors that Contribute to the Development of Behavioral Problems
  - 10.4.1.1. In Childhood
  - 10.4.1.2. In Adolescence
- 10.4.2. Disobedient and Aggressive Behavior
  - 10.4.2.1. Disobedience
    - 10.4.2.1.1. Concept
    - 10.4.2.1.2. Manifestations
  - 10.4.2.2. Aggressiveness
    - 10.4.2.2.1. Concept
    - 10.4.2.2.2. Manifestations
    - 10.4.2.2.3. Types of Aggressive Behaviors
- 10.4.3. Some of the Main Dhild and Adolescent Conduct Disorders
  - 10.4.3.1. Oppositional Defiant Disorder
    - 10.4.3.1.1. Concept
    - 10.4.3.1.2. Main Symptoms
    - 10.4.3.1.3. Facilitating Factors
    - 10.4.3.1.4. Prevalence
    - 10.4.3.1.5. Etiology

10.4.3.2. Conduct Disorder
10.4.3.2.1. Concept
10.4.3.2.2. Main Symptoms
10.4.3.2.3. Facilitating Factors
10.4.3.2.4. Prevalence
10.4.3.2.5. Etiology
10.4.4. Hyperactivity and Impulsivity
10.4.4.1. Hyperactivity and its Manifestations
10.4.4.2. Relationship Between Hyperactivity and Disruptive Behavior
10.4.4.3. Evolution of Hyperactive and Impulsive Behaviors Throughout Development
10.4.4.4. Problems Associated with Hyperactivity/Impulsivity
10.4.5. Jealousy
10.4.5.1. Concept
10.4.5.2. Main Manifestations
10.4.5.3. Possible Causes
10.4.6. Behavioral Problems at Mealtime or Bedtime
10.4.6.1. Common Bedtime Problems
10.4.6.2. Usual Problems at Mealtimes
10.4.7. Interference of Behavioral problems in Speech Therapy Rehabilitation
10.4.7.1. In Articulation Rehabilitation
10.4.7.2. In Literacy Rehabilitation
10.4.7.3. In Voice Rehabilitation
10.4.7.4. In Dysphemia Rehabilitation

10.5. Attention
10.5.1. Concept
10.5.2. Brain Areas Involved in Attentional Processes and Main Characteristics.
10.5.3. Classification of Attention
10.5.4. Influence of Attention on Language
10.5.5. Influence of Attention Deficit on Speech Rehabilitation
10.5.5.1. In Articulation Rehabilitation
10.5.5.2. In Literacy Rehabilitation
10.5.5.3. In Voice Rehabilitation
10.5.5.4. In Dysphemia Rehabilitation
10.5.6. Specific Strategies to Promote Different Types of Care
10.5.6.1. Tasks that Favor Sustained Attention
10.5.6.2. Tasks that Favor Selective Attention
10.5.6.3. Tasks that Favor Divided Attention
10.5.7. The Importance of Coordinated Intervention with Other Professionals
10.6. Executive Functions
10.6.1. Concept
10.6.2. Brain areas Involved in Executive Functions and Main Characteristics
10.6.3. Components of Executive Functions
10.6.3.1. Verbal Fluency
10.6.3.2. Cognitive Flexibility
10.6.3.3. Planning and Organization
10.6.3.4. Inhibition
10.6.3.5. Decision Making
10.6.3.6. Reasoning and Abstract Thinking

10.6.4. Influence of the Executive Functions on Language
10.6.5. Specific Strategies for training Executive Functions
10.6.5.1. Strategies that Favor Verbal Fluency
10.6.5.2. Strategies that Favor Cognitive Flexibility
10.6.5.3. Strategies that Promote Planning and Organization
10.6.5.4. Strategies that Favor Inhibition
10.6.5.5. Strategies that Favor Decision Making
10.6.5.6. Strategies that Favor Reasoning and Abstract Thinking
10.6.6. The Importance of Coordinated Intervention with Other Professionals
10.7. Social Skills II: Related Concepts
10.7.1. Social Skills
10.7.1.1. Concept
10.7.1.2. The Importance of Social Skills
10.7.1.3. The Different Components of Social Skills
10.7.1.4. The Dimensions of Social Skills
10.7.2. Communication.
10.7.2.1. Communication Difficulties
10.7.2.2. Effective Communication
10.7.2.3. Components of Communication
10.7.2.3.1. Characteristics of Verbal Communication
10.7.2.3.2. Characteristics of Non-Verbal Communication and its Components
10.7.3. Communicative Styles
10.7.3.1. Inhibited Style
10.7.3.2. Aggressive Style
10.7.3.3. Assertive Style
10.7.3.4. Benefits of an Assertive Communication Style
10.7.4. Parental Educational Styles
10.7.4.1.Concepto
10.7.4.2. Permissive-Indulgent Educational Style
10.7.4.3. Negligent Permissive Style
10.7.4.4. Authoritative Educational Style
10.7.4.5. Democratic Educational Style
10.7.4.6. Consequence of the different Educational Styles in Children and Adolescents
10.7.5. Emotional Intelligence
10.7.5.1. Intrapersonal and Interpersonal Emotional Intelligence
10.7.5.2. Basic Emotions
10.7.5.3. The Importance of Recognizing Emotions in Oneself and Others
10.7.5.4. Emotional Regulation
10.7.5.5. Strategies to Favor an Adequate Emotional Regulation
10.7.6. Self-Esteem
10.7.6.1. Concept of Self-Esteem
10.7.6.2. Difference Between Self-Concept and Self-Esteem
10.7.6.3. Characteristics of Self-Esteem Deficit
10.7.6.4. Factors Associated with Self-Esteem Deficit
10.7.6.5. Strategies to Promote Self-esteem
10.7.7. Empathy
10.7.7.1. Concept of Empathy
10.7.7.2. Is Empathy the Same as Sympathy?
10.7.7.3. Types of Empathy
10.7.7.4. Theory of Mind
10.7.7.5. Strategies to Promote Empathy
10.7.7.6. Strategies to Work on Theory of Mind

10.8. Social Skills II: Specific Guidelines for Handling Different Situations
- 10.8.1. Communicative Intention
  - 10.8.1.1. Factors to Take into Account when Starting a Conversation
  - 10.8.1.2. Specific Guidelines for Initiating a Conversation
- 10.8.2. Entering an Initiated Conversation
  - 10.8.2.1. Specific Guidelines for Entering an Initiated Conversation
- 10.8.3. Maintaining the Dialogue
  - 10.8.3.1. Active Listening
  - 10.8.3.2. Specific Guidelines for Maintaining Conversations
- 10.8.4. Conversational Closure
  - 10.8.4.1. Difficulties Encountered in Closing Conversations
  - 10.8.4.2. Assertive Style in Conversational Closure
  - 10.8.4.3. Specific Guidelines for Closing Conversations in Different Circumstances
- 10.8.5. Making Requests
  - 10.8.5.1. Non-Assertive Ways of Making Requests
  - 10.8.5.2. Specific Guidelines for Making Requests in an Assertive Manner
- 10.8.6. Rejection of Requests
  - 10.8.6.1. Non-Assertive Ways of Rejecting Requests
  - 10.8.6.2. Specific Guidelines for Rejecting Requests in an Assertive Manner
- 10.8.7. Giving and Receiving Compliments
  - 10.8.7.1. Specific Guidelines for Giving Compliments
  - 10.8.7.2. Specific Guidelines for Accepting Compliments in an Assertive Manner
- 10.8.8. Responding to Criticism
  - 10.8.8.1. Non-Assertive Ways of Responding to Criticism
  - 10.8.8.2. Specific Guidelines for Reacting Assertively to Criticism
- 10.8.9. Asking for Behavioral Changes
  - 10.8.9.1. Reasons for Requesting Behavioral Changes
  - 10.8.9.2. Specific Strategies for Requesting Behavioral Changes
- 10.8.10. Interpersonal Conflict Management
  - 10.8.10.1. Types of Conflicts
  - 10.8.10.2. Non-Assertive Ways of Dealing With Conflicts
  - 10.8.10.3. Specific Strategies for Dealing Assertively with Conflicts

10.9. Strategies for Behavior Modification in Consultation and for Increasing the Motivation of the Youngest Children in Consultation
- 10.9.1. What are Behavior Modification Techniques?
- 10.9.2. Techniques Based on Operant Conditioning
- 10.9.3. Techniques for the Initiation, Development, and Generalization of Appropriate Behaviors
  - 10.9.3.1. Positive Reinforcement
  - 10.9.3.2. Token Economy
- 10.9.4. Techniques for the Reduction or Elimination of Inappropriate Behaviors
  - 10.9.4.1. Extinction
  - 10.9.4.2. Reinforcement of Incompatible Behaviors
  - 10.9.4.3. Response Cost and Withdrawal of Privileges
- 10.9.5. Punishment
  - 10.9.5.1. Concept
  - 10.9.5.2. Main Disadvantages
  - 10.9.5.3. Guidelines for the Application of Punishment
- 10.9.6. Motivation
  - 10.9.6.1. Concept and Main Characteristics
  - 10.9.6.2. Types of Motivation
  - 10.9.6.3. Main Explanatory Theories
  - 10.9.6.4. The Influence of Beliefs and Other Variables on Motivation
  - 10.9.6.5. Main Manifestations of Low Motivation
  - 10.9.6.6. Guidelines to Promote Motivation in Consultation

10.10. School Failure: Study Habits and Techniques from a Speech Therapy and Psychological Point of View
- 10.10.1. Concept of School Failure
- 10.10.2. Causes of School Failure
- 10.10.3. Consequences of School Failure in Children
- 10.10.4. Influencing Factors in School Success



10.10.5. The Aspects that We Must Take Care of to Obtain a Good Performance
- 10.10.5.1. Sleep
- 10.10.5.2. Nutrition
- 10.10.5.3. Physical Activity

10.10.6. The Role of Parents

10.10.7. Some Guidelines and Study Techniques that Can Help Children and Adolescents
- 10.10.7.1. The Study Environment
- 10.10.7.2. The Organization and Planning of the Study
- 10.10.7.3. Calculation of Time
- 10.10.7.4. Underlining Techniques
- 10.10.7.5. Schemes
- 10.10.7.6. Mnemonic rules
- 10.10.7.7. Review
- 10.10.7.8. Breaks

*This Professional Master's Degree provides you with the most widely used techniques for the management of patients with specific disorders of fluency of verbal expression"*

06

# Methodology

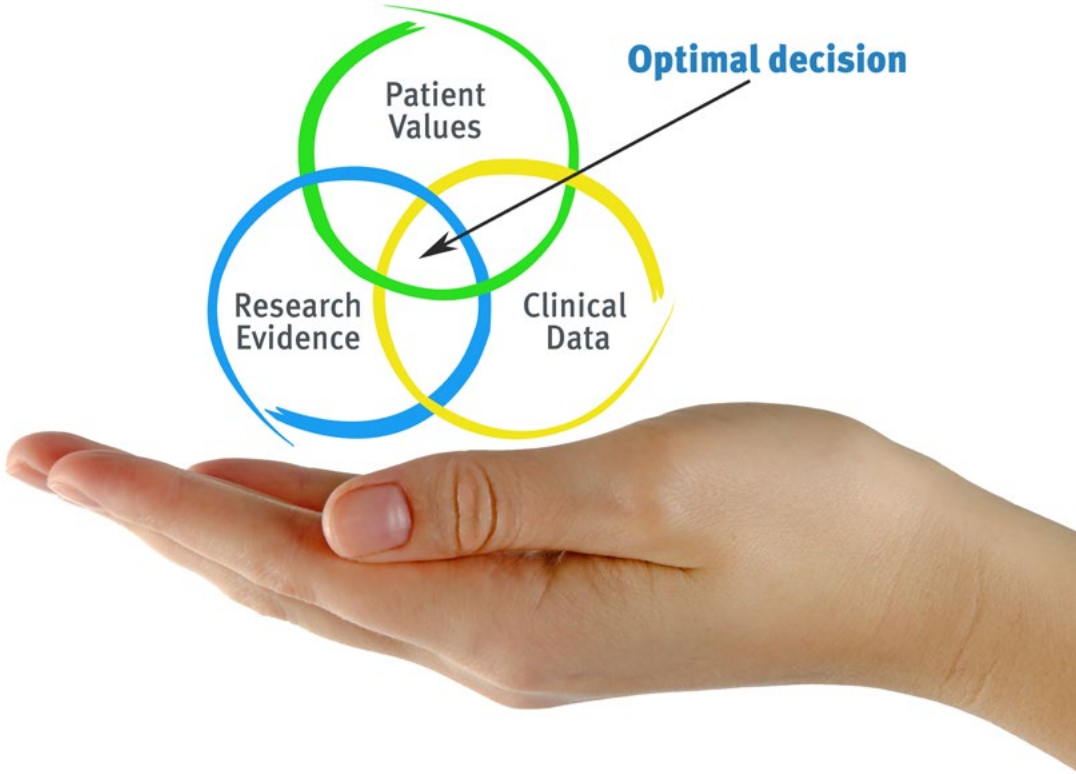
This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*




According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"*

**The effectiveness of the method is justified by four fundamental achievements:**

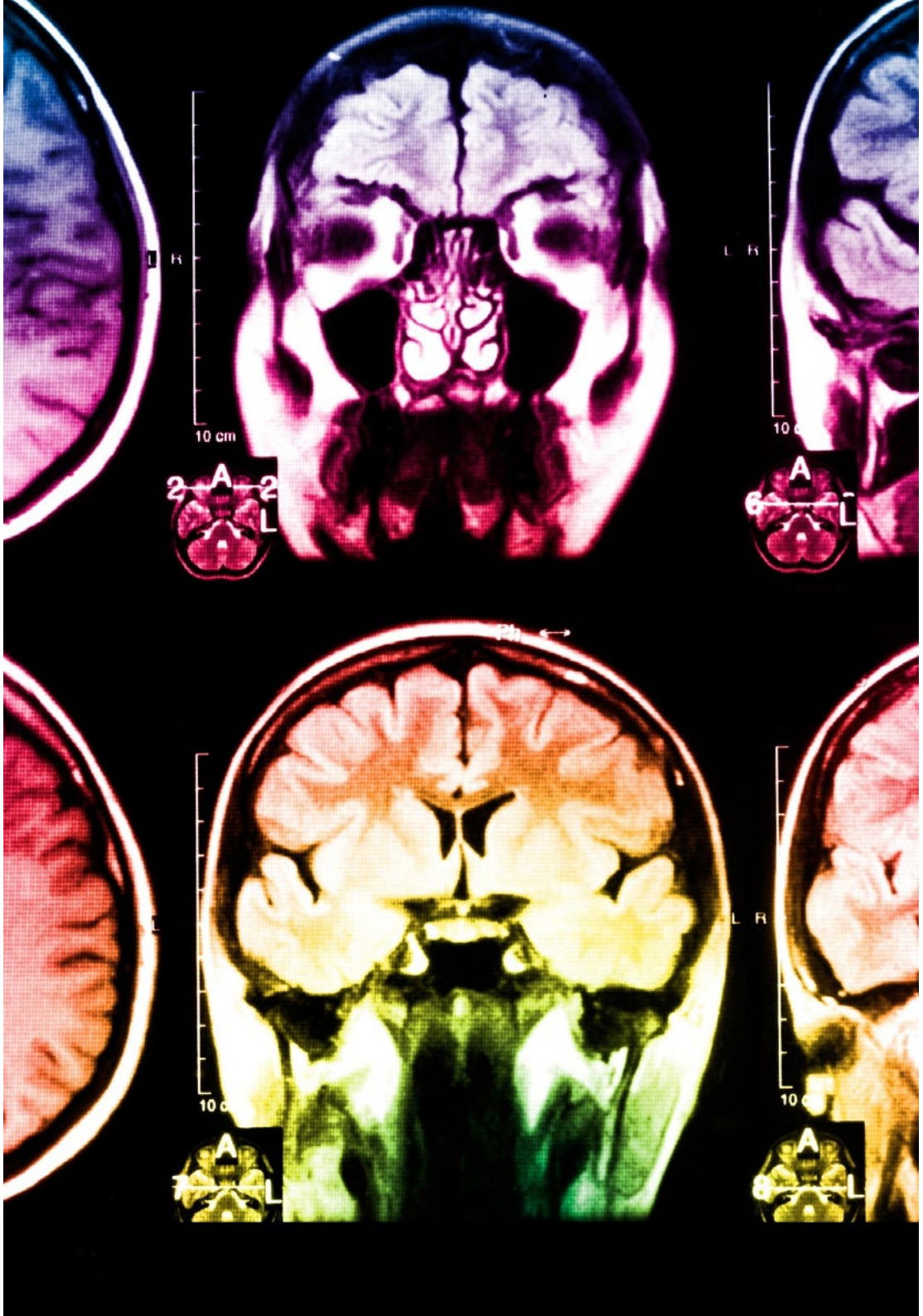
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

*Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.

**This program offers the best educational material, prepared with professionals in mind:**

### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then adapted in audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high-quality pieces in each and every one of the materials that are made available to the student.

### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.

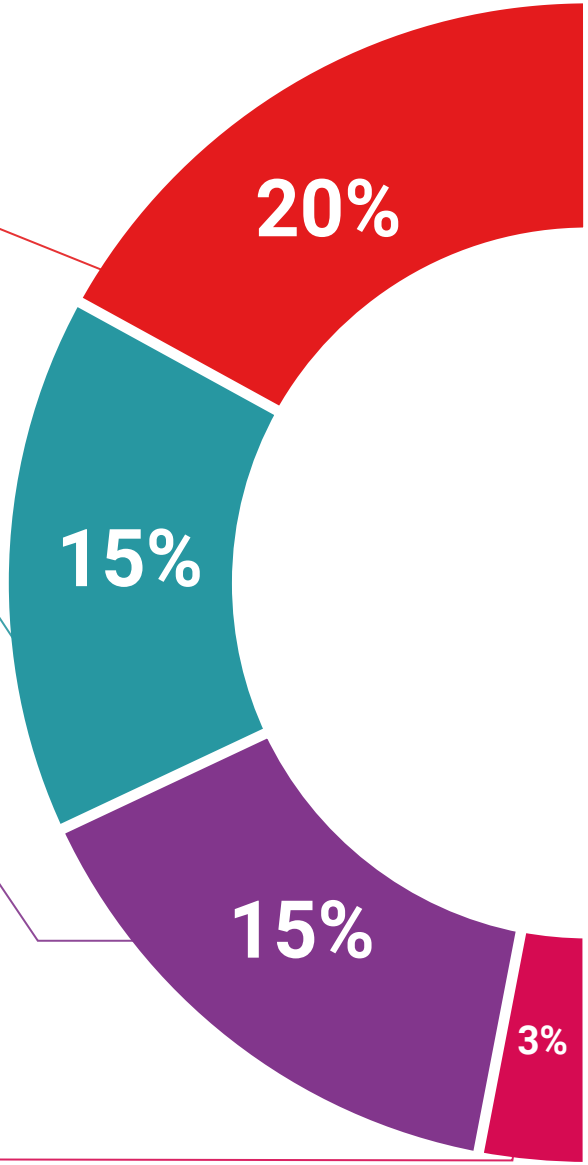
### Interactive Summaries

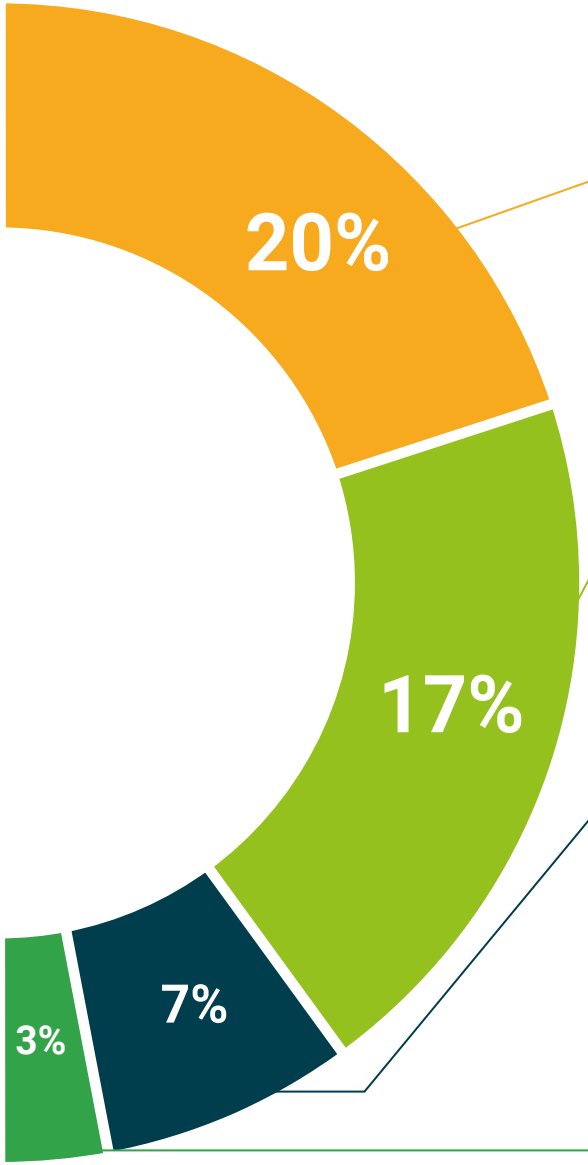
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.






### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.

07

# Certificate

The Professional Master's Degree in Medical Approach to Speech, Language, and Communication Disorders guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree diploma issued by TECH Technological University.

*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

This **Professional Master's Degree in Medical Approach to Speech, Language, and Communication Disorders** contains the most complete and up-to-date educational program on the market.

After passing the assessments, the student will receive their corresponding **Professional Master's Degree** diploma issued by **TECH Technological University** via tracked delivery*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Professional Master's Degree in Medical Approach to Speech, Language, and Communication Disorders**

Official Nº of Hours: **1,500 h.**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Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE

in

Medical Approach to Speech,Language and Communication Disorders

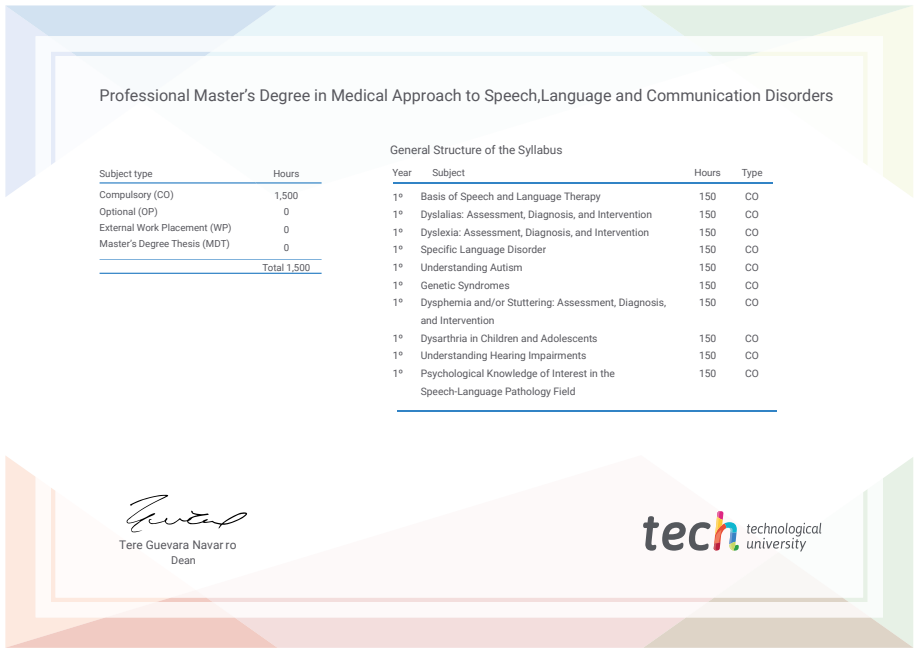
This is a qualification awarded by this University, equivalent to 1,500 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates


Professional Master's Degree in Medical Approach to Speech,Language and Communication Disorders

General Structure of the Syllabus

| Subject type | Hours |
|---|---|
| Compulsory (CO) | 1,500 |
| Optional (OP) | 0 |
| External Work Placement (WP) | 0 |
| Master's Degree Thesis (MDT) | 0 |
| | Total 1,500 |

| Year | Subject | Hours | Type |
|---|---|---|---|
| 1º | Basis of Speech and Language Therapy | 150 | CO |
| 1º | Dyslalias: Assessment, Diagnosis, and Intervention | 150 | CO |
| 1º | Dyslexia: Assessment, Diagnosis, and Intervention | 150 | CO |
| 1º | Specific Language Disorder | 150 | CO |
| 1º | Understanding Autism | 150 | CO |
| 1º | Genetic Syndromes | 150 | CO |
| 1º | Dysphemia and/or Stuttering: Assessment, Diagnosis, and Intervention | 150 | CO |
| 1º | Dysarthria in Children and Adolescents | 150 | CO |
| 1º | Understanding Hearing Impairments | 150 | CO |
| 1º | Psychological Knowledge of Interest in the Speech-Language Pathology Field | 150 | CO |

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*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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# Professional Master's Degree

## Medical Approach to Speech, Language, and Communication Disorders

Modality:**Online**

Duration: **12 months.**

Certificate: **TECH Technological University**

Official Nº of hours: **1,500 h.**

# Professional Master's Degree

## Medical Approach to Speech, Language, and Communication Disorders

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