

# Comprehensive Intervention in People with Down Syndrome

| Palha, M. | Andrade, D. | Pinto, M. | Condeço, T. | Cotrim, L. | Martins, S. |  
| Barateiro, R. | Costa, F. |

Portuguese Down Syndrome Association - Child Developmental Centre Differences  
www.appt21.org.pt | geral@appt21.org.pt

The Portuguese Association for Trisomy 21 (APPT21) was founded on the 1st of October 1990 with the mission to provide healthcare to children stricken with this genetic disorder.

In the 90's, the remarkable successes achieved with the introduction of the most up-to-date evaluation and intervention methods in trisomy 21 led us to apply them to other disabilities.

The institution started to work on a broader range of pathologies and developing specific Intervention Programs to meet the needs.

Today is one of the most innovative and up-to-date child development centres in Europe, thanks to the work of a devoted multi-disciplinary team of professionals:

•developmental paediatricians, child neurologists, child psychiatrists, public health practitioners, epidemiologists, educational psychologists, clinical psychologists, special education teachers, occupational therapists and speech/language therapists.

Nowadays, the team works at the DIFERENÇAS Child Development Centre – an autonomous branch of the APPT21 - providing a service to more than 9.000 children, (over 1200 under direct weekly intervention, both at home and at the Centre) the remainder being under indirect support (due to geographical limitations).

Besides development consultations, reliable evaluations methods, specialized diagnostic instruments, the Centre also implements specific Intervention Programs to address every type of development disorder, to help educators, therapists and parents of children with developmental disabilities.



All with differences, but all princes and princesses



All different, but all very beautiful!!!

## Achieved Work Projects within the field of Research & Development

**Phenomenology of Child Development (Computer Program designed to integrate clinical symptoms and signs in Child Development)**

**Computer Program designed to integrate clinical symptoms and signs in Child Development.**

“Learning to Move” is an audio-visual teaching tool, where organized sets of activities and strategies were purposefully designed to develop the fine and gross motor skills of children with Special Education Needs. It's a multimedia guide whereby the development of fine and gross motor skills are achieved through a range of activities. Step-by-step instructions are given regarding the strategies that best suit the objective to be reached.

**Augmentative Speech: Structured Program for sign language training**

The "Sign Language Workshop" offers a wide range of examples of initially functional and ultimately symbolic gestures, intended to be an essential support for parents and therapists working with children with Down syndrome in early intervention in order to promote early interactions and communicative skills. Each sign is depicted in different formats: text, sound, image, and video. 3 language options are available: Portuguese, English and Spanish.

**Structured Program for Motor skills training (in collaboration with Aveiro's University)**

**Structured Programs to Develop Communication/Language skills:**  
- Augmentative Speech: Structured Program for sign language training (In collaboration with the Aveiro's University)  
- Structured Program for training Communication skills with the aid of pictures.  
- Structured Program for training Motor-Verbal Programming.  
- Structured Program for training Auditive Discrimination

The "Learn to Read to Support Language" Program was designed to improve working memory, vocabulary acquisition, sentence building, semantic understanding, textual understanding, access to the curriculum and functional reading and writing. An educational software was also developed as well as a set of worksheets.

"Mimocas Games" – educational software designed to meet the motivational skills and visual abilities of children with Down syndrome.

Phonological Awareness Intervention Program, is based on strategies that draw on memory and visual processing skills.

Find the letters by hear the bit sounds  
Read through the syllables visual recognition

The main purpose of the Number Skills Intervention Program is to support those working with children and youngsters with Trisomy 21, in order to promote number skills in a family and educational environment. An educational software, "Mimocas Numbers", was also developed as well as a set of worksheets.

Structured Program for training autonomy

Structured Program for training Social skills

**Structured Programs for Teaching Reading Skills:**  
- Phonological awareness  
- Rhyming  
- Recall Memory  
- Reading Comprehension

Structured Program for training Visual Discrimination/Perception

Structured Program for Teaching Grammar

Structured Program for training early Maths skills

Structured Program for training Semantic skills

**Structured Programs for Teaching Writing skills:**  
- Early writing skills  
- Graphomotor skills  
- Orthography

Structured program for training speech skills (discourse abilities)

Atelier for conception and production of educational materials

Structured Program for training Social skills

Behaviour Intervention

Events and Workshops

Family group therapy

Methods and Study Techniques

Structured Program for Attention Control

Strategies for Sexual Education

Career Counselling and job finding

Structured Program for training autonomy

Social Intervention

Classroom Strategies

"Written Words" – enhancing handwriting skills and curriculum access

This structured program is aimed at teaching writing and handwriting skills through enhancing perceptive, graphomotor, morpho-syntactic and linguistics skills.

Example from stage II. Some steps to write the child's first name.

Individually tailored resources: according to child's interests, motivation, abilities and educational needs.

Other initiatives

- Support to pregnant women bearing a fetus diagnosed with Trisomy 21
- Organized leisure activities for holidays and week ends
- Legal advise
- Training workshops



**Parent's Group 21**  
"Our mission: help all parents to be able to believe that their children can surmount all obstacles and rise above any expectation".



**Family / Community Support**

- Breaking the news
- Parents mutual support groups
- Advice on rights, benefits and available support
- Contacts with other parents' associations

In defense of their rights:

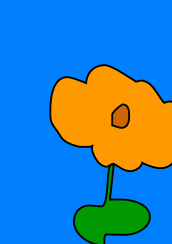
- Full Integration – at school
- In the community
- Make leisure activities and sport opportunities available
- The right to housing
- The right to sexuality
- The right to a family
- The right to bear children

*DIFERENÇAS CENTRE IN NUMBERS*

+ 9.000 children, with and without developmental co-morbidity, under intervention countrywide  
+ 1.500 children under regular direct intervention (institution and/or home)  
+ 1.200 children with Trisomy 21 in direct and indirect intervention programs – one of the largest casuistic in the world  
+500 children with cognitive impairments  
+ 1000 children with Asperger S. and other Autism Spectrum Disorders  
+ 1500 children with Dyslexia and other Learning Disorders  
+ 700 children with Speech/Language Disorders  
+ 2000 children with Hyperactivity and Attention Deficit Disorders.

POSTER DOWNLOAD AVAILABLE AT WWW.APPT21.ORG.PT/POSTERS/COMP\_INTERV.PDF

Copyright © 2009.



Portuguese Down Syndrome Association

Santarém High School of Management

Communication & Art Department Aveiro's University

Portuguese Department for Rehabilitation of Disabled People

Calouste Gulbenkian Foundation

Diferenças - Child Development Centre

Nasturtium - Education, Health and Wellbeing

JANSSEN-CILAG