

A report on the development and clinical application of “Lexipontix”, a new therapy programme for school age CWS.

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“Lexipontix” – Theoretical Background

“Lexipontix” is a structured stuttering therapy programme for school-age children based on:

- Cognitive Behavioural Therapy
(Beck,1967)
- Parent-Child Interaction Therapy
(Zisser & Eyberg, 2010; Kelman & Nicholas, 2008).
- Solution Focused Brief Therapy
(Berg,1999; De Shazer,1985; De Shazer et al, 2007)
- Fluency Shaping and Block Modification
(Ingham & Andrews, 1973; Van Riper, 1971; 1973)



Hey! I'm Lexipontix

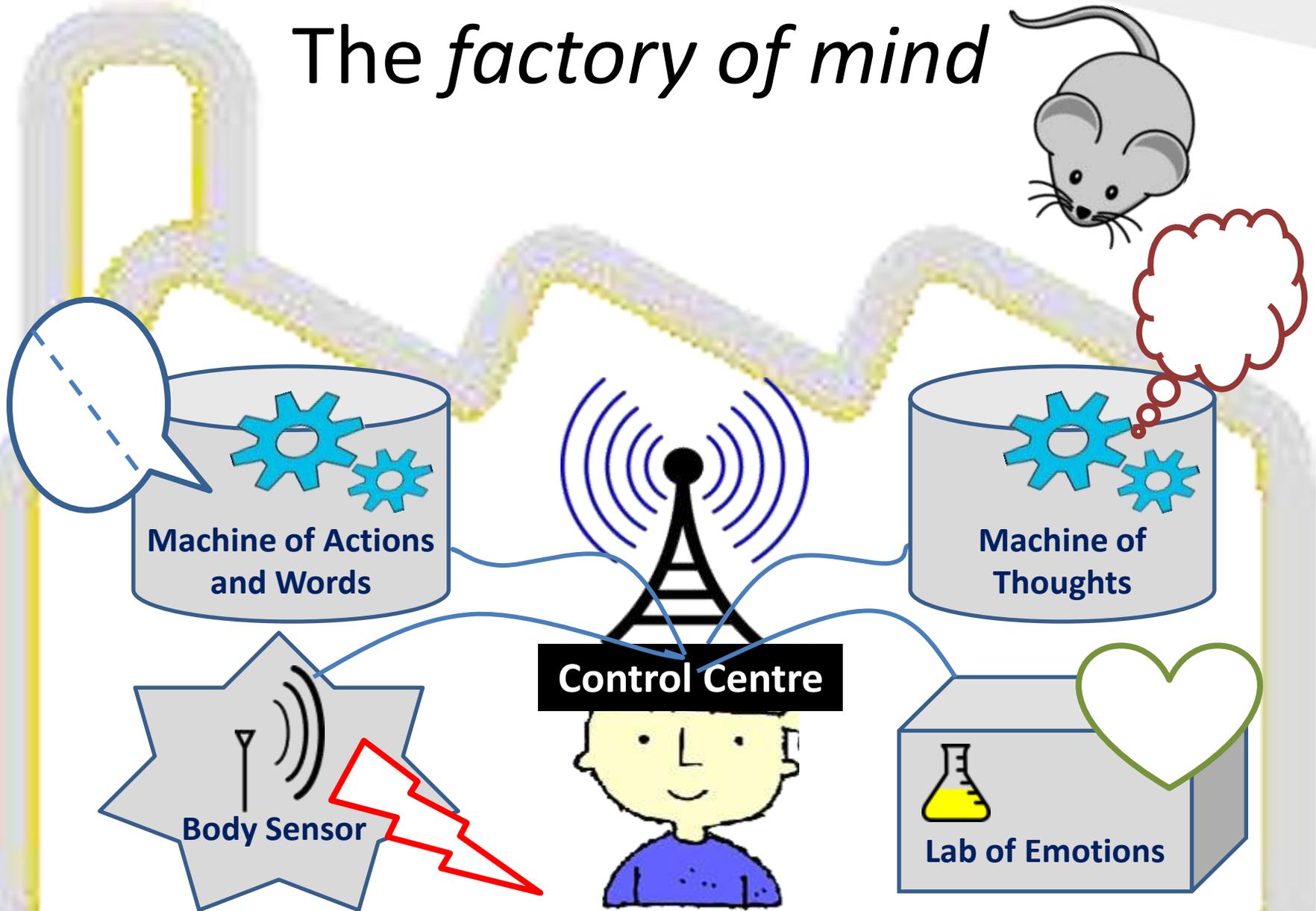
Word / Lexicon

mouse

Lexipontix = Lexis + Pontix



The *factory of mind*





Interpretation of the Stuttering event



Stuttering occurs when Lexipontix:
is trying to intrude into the factory of mind
(anticipating a stuttering event)
sabotages one of the factory machines
(experiencing of a stuttering event)
invades the control centre of the factory
(communicative outcome of a stuttering event)





Therapeutic Alliance

Parents, as part of the alliance, are allocated their own aims. They are empowered to:

- **achieve a shared understanding of their child's difficulty**
(cognitive level)
- **empathize by recognizing child's thoughts and emotions**
(emotional level)
- **act as fluency and communication facilitators**
(behavioural level)

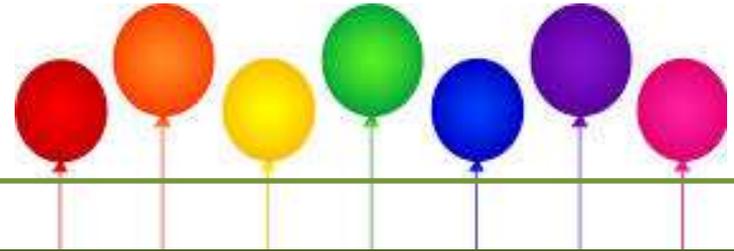
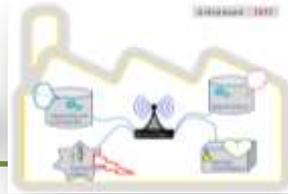
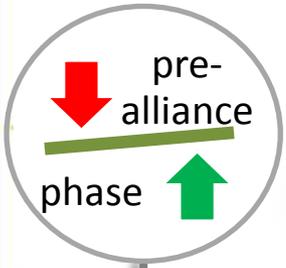


Towards “Communication Restructuring”



Lexipontix is kept under control.
Invasions have no significant impact on the functioning
of the factory of mind.

Programme Structure & Content



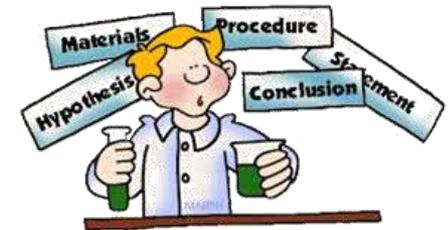
Sessions: 1 → 2 → 3 → 4 → 5 → 6 → 7 → 8 → 9 → 10 → 11 → 12

PHASE A

Core Structure

modules

Alliances - Tools - Missions - Experiments



PHASE B

Sessions: 13 + → → → → →



Lexipontix *Core* and *Modular* Structure

core structure sessions 1 to 5 modular structure sessions 6 to 12 time line

**S
E
T
U
P**

Assessment review
Discussion of
• therapy stages
• alliance roles

**P
C
I**

Alliance empowering strategies
Alliance interaction strategies

**C
B
T**

LXPNTX & CBT concepts
Identification of cognitive cycles
Cognitive Distortions
Talking Back

**S
P
E
E
C
H**

Stuttering behaviour
• concepts
• identification
Voluntary stuttering

Alliance interaction strategies

Alliance empowering strategies

• Reassessment
• Evaluation & Reflection
• Q & A
• Action plan

Talking back

Cognitive distortions

Alliance network extension

Behavioural experiments

Problem solving

Easy onset
Airplane talk

Reframing of NATs – NAT Modifier

Pause
Bus talk

Missions (red tools)

Cancellation
In-block
Pre-block
modification

Prolonged speech
Parkour talk

Missions (yellow tools)

Additional modular therapy

Review in 1, 3, 12 months



The PCI Component of Lexipontix

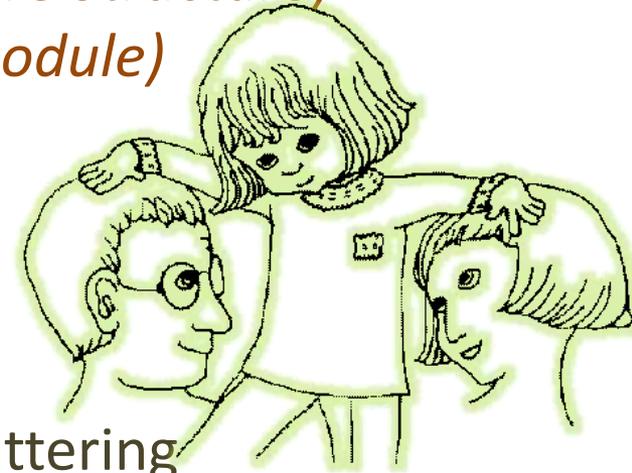
(Eyberg, et al, 1999; Eyberg, 2005; Kelman & Nicholas, 2008)

“Alliance Interaction Strategies”

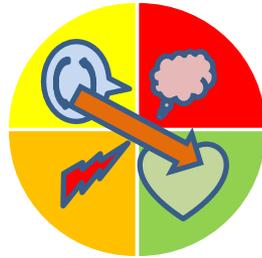
- child takes the lead in play (*Core Structure*)
- child regulates/leads the alliance (*Core Structure*)
- communication rate modification (*module*)
- linguistic modifications (*module*)

“Alliance Empowering Strategies”

- special time (*Core Structure*)
- praise (*Core Structure*)
- desensitization / openness about stuttering (*Core Structure & module*)
- turn taking (*module*)



“Alliance Network Expansion” (*module*)



The CBT Component

Red tools



CBT components in the Core Structure

- identification of feelings and attitudes
- identification of Negative Automatic Thoughts (NATs)
- initial processing of NATs by means of "talking back"
- identification and challenging cognitive distortions

CBT Modules

- problem solving
- behavioral experiments
- talking back
- reframing of NATs by means of modification



Ο Νίκος αναφέρει την ευγενική γειτονιά και πρόκειται να της πει «καλημέρα».
Ο Νίκος λέει: «Θα προσπαθήσω την επόμενη φορά να μην είμαι τόσο ευγενικός».





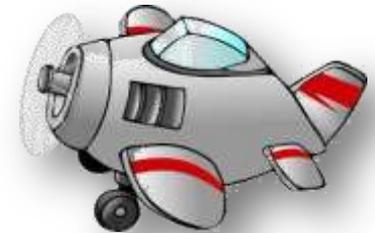
The Speech Control Component

Yellow Tools



Speech Control Modules

- "Parkour Talk" → *Prolonged Speech*
- "Airplane Talk" → *Easy onset*
- "Bus Talk" → *Pause*
- "Rebound Talk" → *Cancellations*
- "Instant Parkour Talk" → *Pull outs*
- "Cassandra Talk" → *Pre-block modification*





Steps of Development

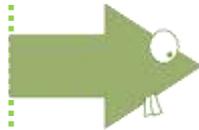
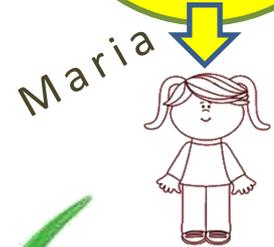
- review of literature and related clinical practices
- external review and consultation on the CBT components
- peer review
- clinical trial
 - ✓ detailed therapy notes
 - ✓ written reflection
 - ✓ consumer feedback
 - ✓ pre- and post- therapy formal assessments
 - ✓ pre- and post- therapy informal assessments and interviews
 - ✓ evaluation questionnaires
- feedback on the clinical application by external therapists





5 Clinical Trials in total

time



G.Fourlas & D.Marousos



Pre-, In- and Post-therapy Data Collection

Infomal

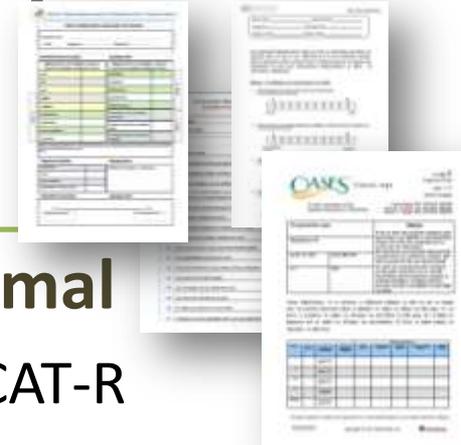
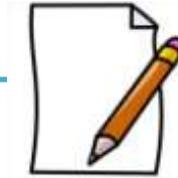
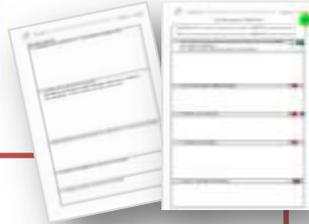
- questionnaires
- parent interview
- child interview
- subjective scales
- *“body functions” assessment protocol*

On-going

- detailed therapy notes
- extensive written reflection
- parental/child feedback

Formal

- CAT-R
- OASES-S 2010 (7-12)
- Palin Parent Rating Scales
- *“body functions” assessment protocol*

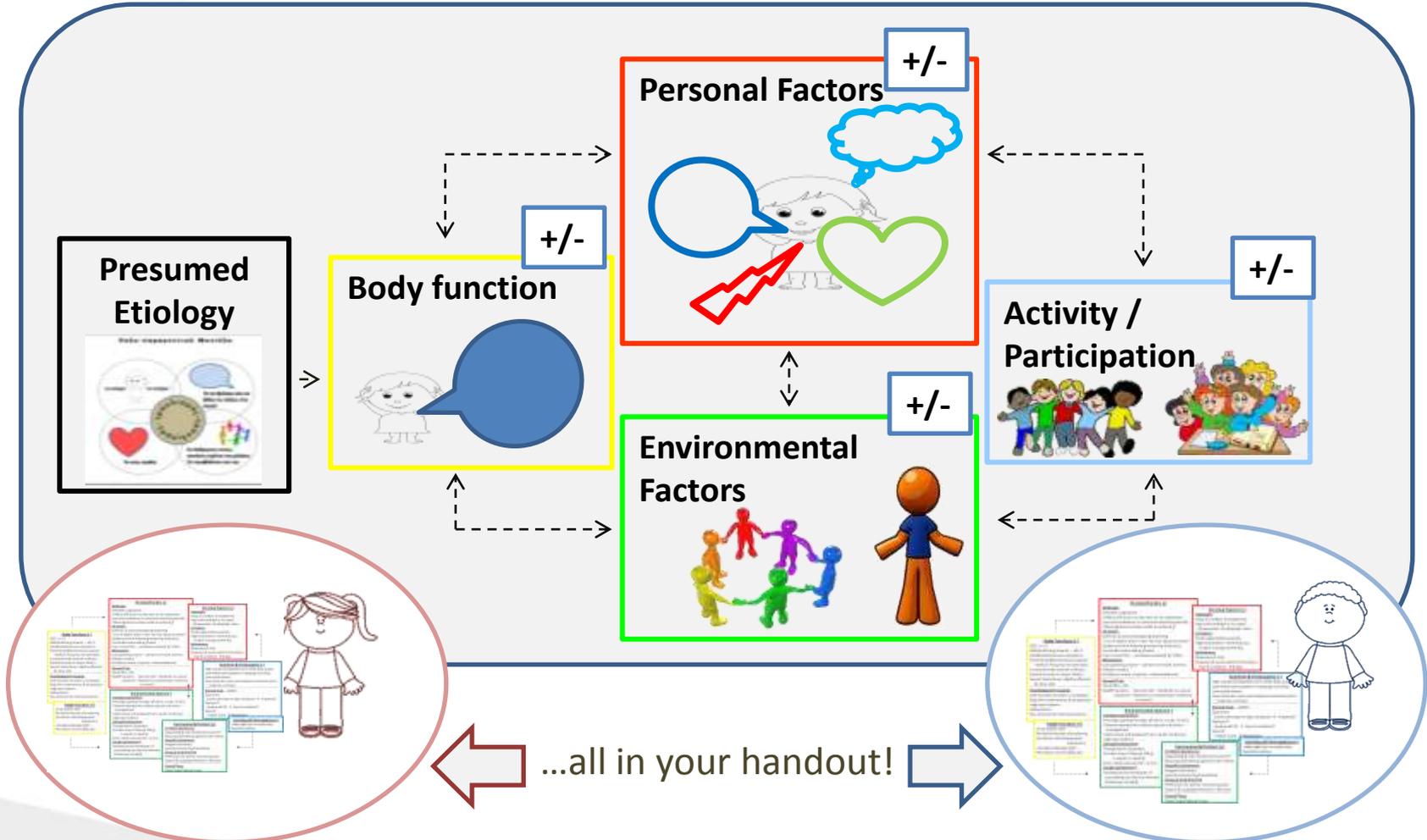




The Formulation Chart

Fourlas & Marousos, 2014 (based on Yaruss & Quesal, 2004; WHO, 2001)

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Treatment Goal

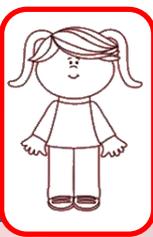
“Communication Restructuring”

The therapeutic process that leads a person

- ✓ to reconstrue his communicative role
- ✓ to alter the definition of communicative success and failure
- ✓ to respond in a functional and meaningful way to the demands of a communicative event



Fourlas & Marousos, 2014



Treatment Plan

core structure sessions 1 to 5

modular structure sessions 6 to 12

time line

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Additional modular therapy

Review in 1, 3, 12 months

Programme

Development

Implementation

Outcome

Discussion

Treatment Plan

core structure sessions 1 to 5

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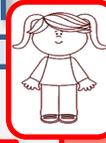
Alliance empowering strategies
Alliance interaction strategies

Alliance interaction strategies

Alliance empowering strategies

**C
B
T**

LXPNTX & CBT concepts
Identification of cognitive cycles
Cognitive Distortions
Talking Back



Talking back

Cognitive distortions



network extension

Behavioural exper

Problem solv



**S
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Stuttering behaviour
• concepts
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Voluntary stuttering



Easy onset
Airplane talk



Minimizing of
NATs – NAT
Modifier

Pause
Bus talk



Missions
(red



Cancellation
In-block
Pre-block
modification

Prolong
speed
Parkour talk



tools)

Additional modular therapy

Review in 1, 3, 12 months

G.Fourlas & D.Marousos

Programme

Development

Implementation

Outcome

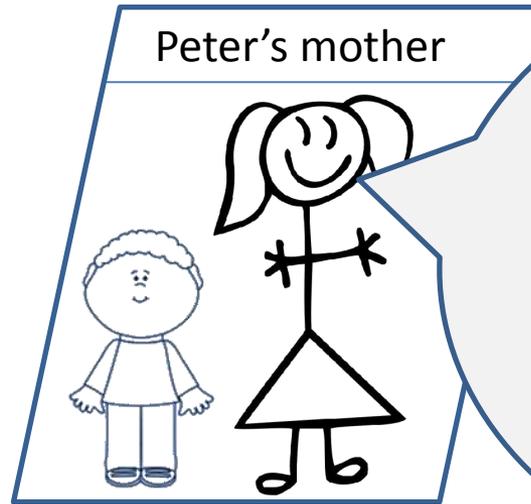
Discussion



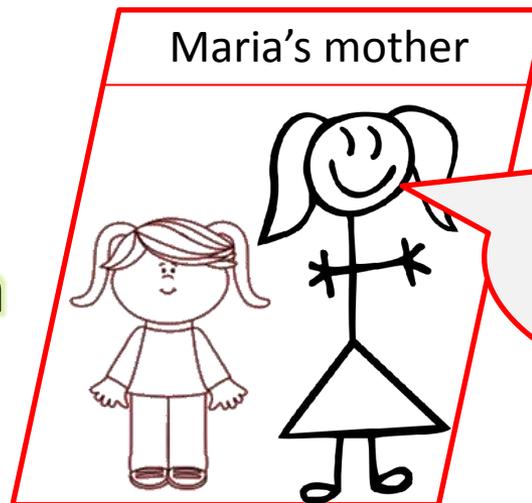
Post Therapy Data Informal Procedures

Parents

focused on communication rather than speech per se and improved their communication skills



I came to realize the importance of having some exclusive, special time with my child. This facilitated our communication

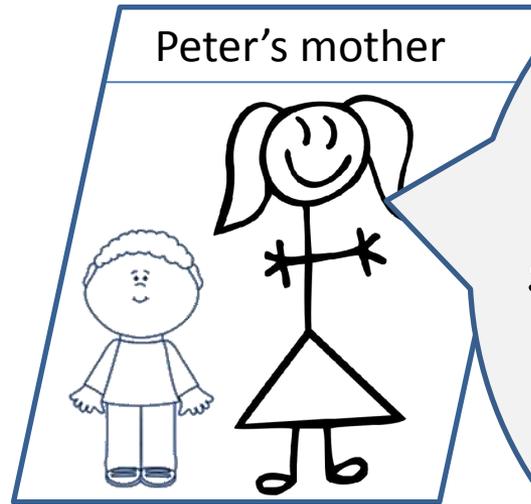


I longed such a relaxed communication with my daughter

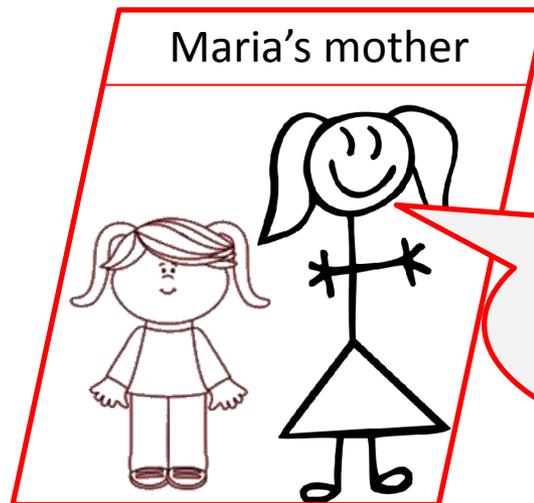


Post Therapy Data Informal Procedures

Parents
increased their
knowledge for
their child's
stuttering and
its
management



I liked it. It was humorous, fun and entertaining. I learnt a lot about stuttering and now I do not care that much whether he stutters or not. I just do not notice any more

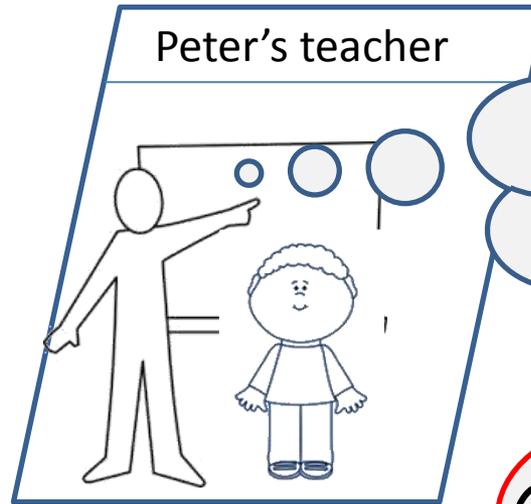


I now understand better my child's difficulty

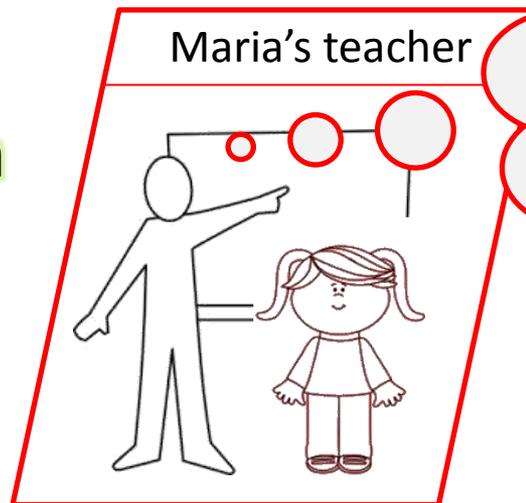


Post Therapy Data Informal Procedures

Teachers
recognized
significant
changes in
children
communication



He is happier, more sociable and willing to participate in the lesson

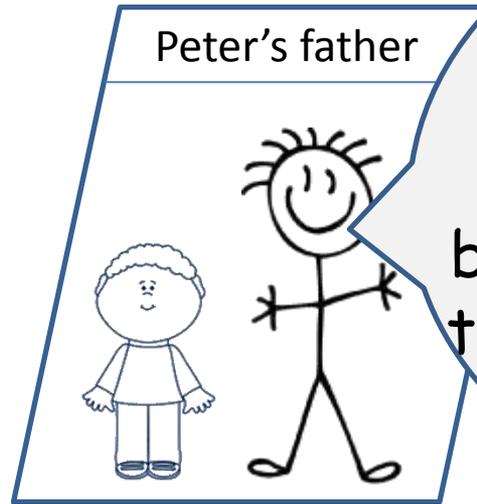


Changes in confidence, willingness to participate and speech

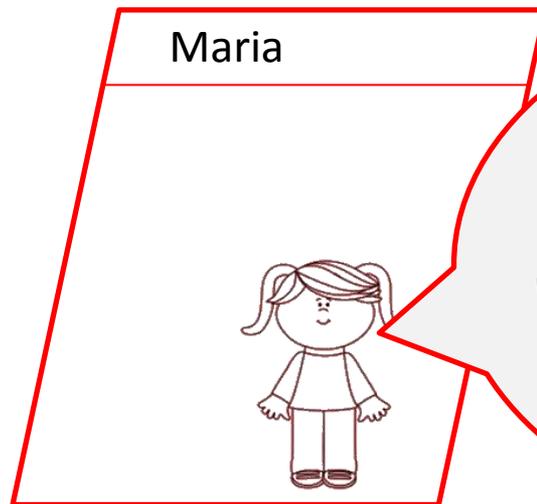


Post Therapy Data Informal Procedures

Both
Children
improved
significantly in
their speech
fluency and
confidence



His fluency has significantly improved and I am much more relaxed now. In the beginning, I didn't believe that the programme could help us. I was rather skeptical



I now have my yellow and red tools to use. I can always say what I want to say and I have realized significant changes in my speech



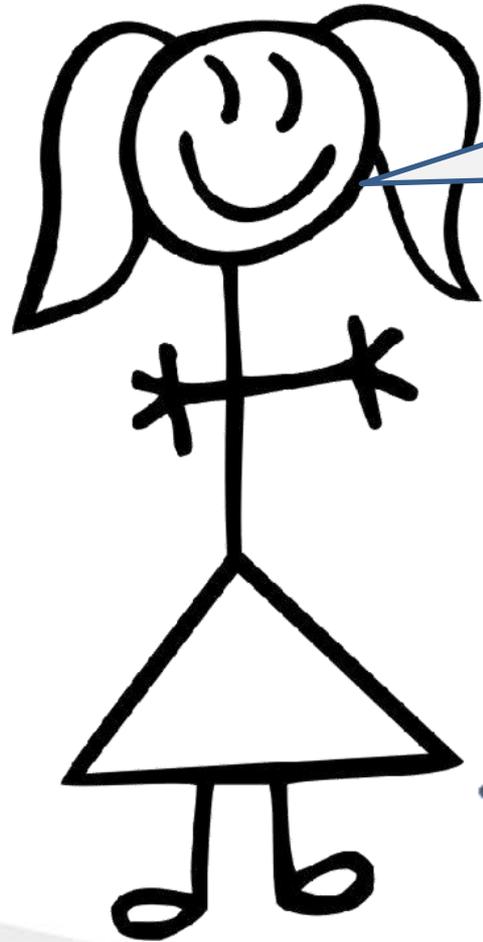
Post Therapy Data Informal Procedures

To collaborate, to praise and reinforce... All those things I had forgotten to use!
I think that the programme helped us all see some things quite differently. My husband now hugs and kisses the kids. He treats children better and has stopped scolding and shouting at them!

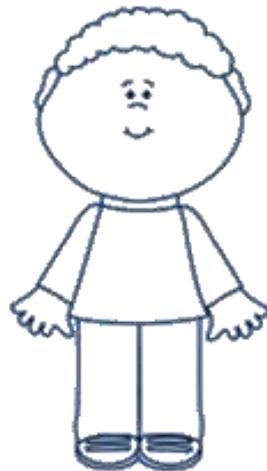
Family Relationships
were improved and strengthened



Post Therapy Data Informal Procedures



My child was introvert and closed to himself but now he is talking all the time!



Peter

became more talkative

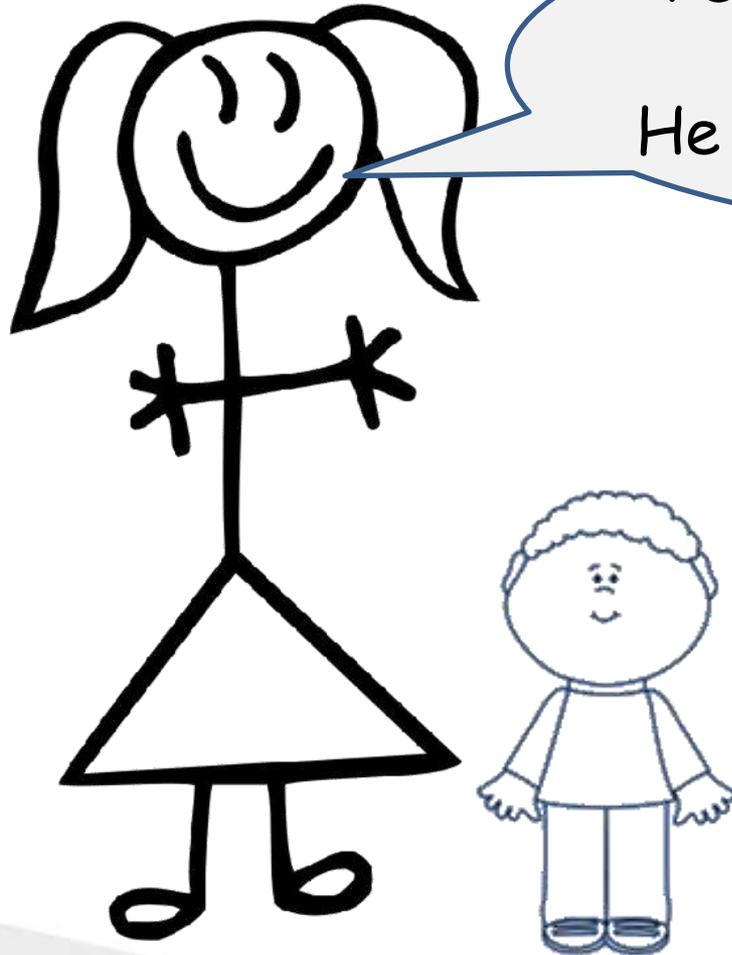


Post Therapy Data Informal Procedures

Peter has become more relaxed
and assertive.
He doesn't avoid other people any
more

Peter

became more outgoing and
courageous.
He even asked his mother to
participate in the school
parade next year.
A life dream outside his
comfort zone

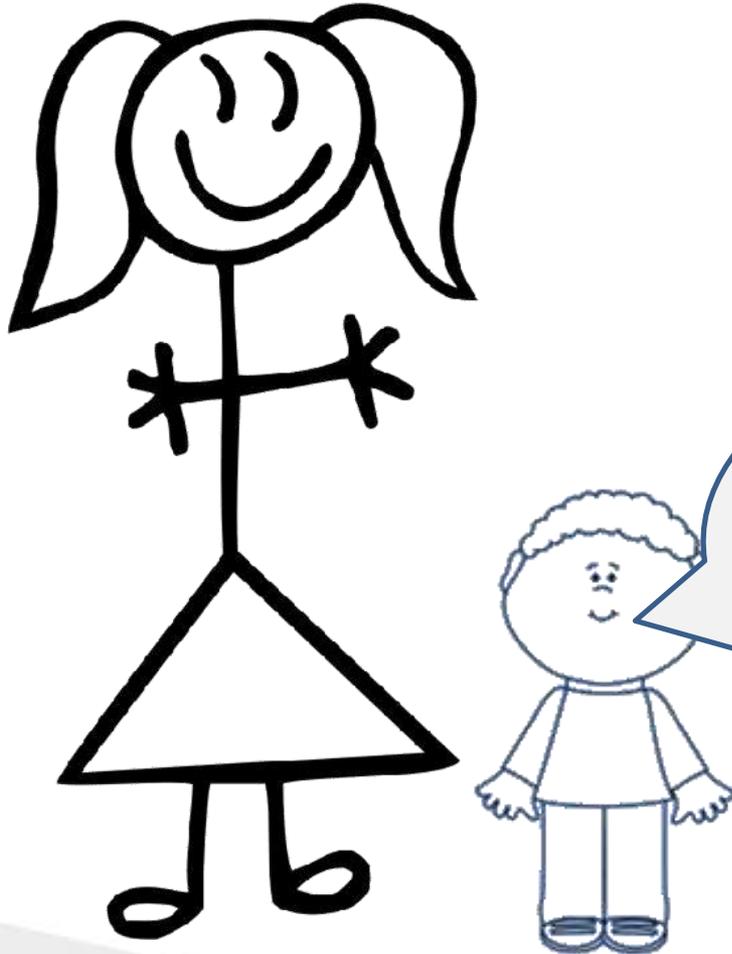




Post Therapy Data Informal Procedures

Peter

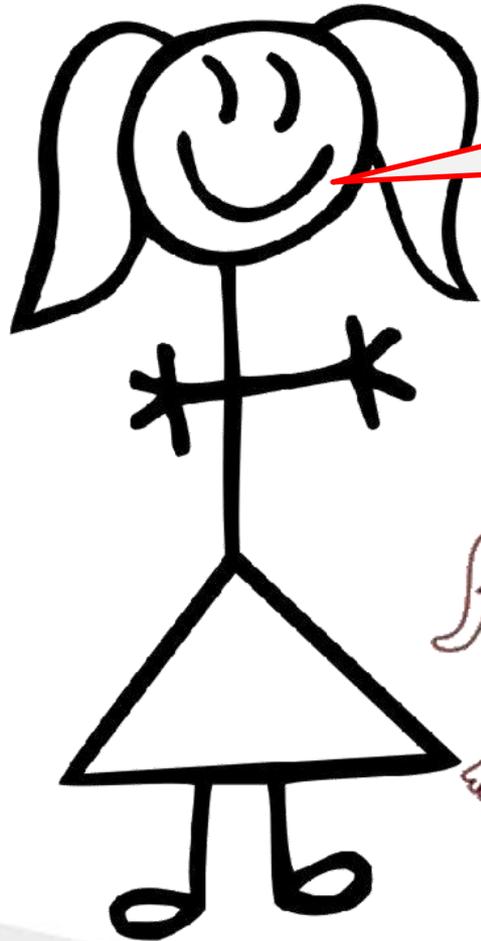
feels happier and more
sociable



My classmates have changed.
All of them!
They are more friendly.
I like feeling accepted by
my friends.



Post Therapy Data Informal Procedures



She talks and feels much better now. She doesn't cry at nights thinking of school reading

Maria

Improved in fluency & psychological well being



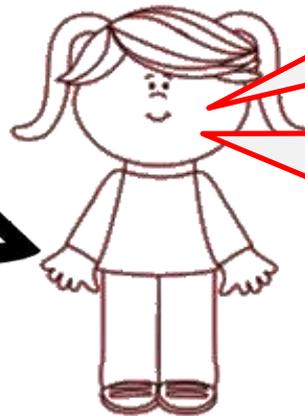
My unhappiness had gone. I now have my tools and I know how to control Lexipontix!



Post Therapy Data Informal Procedures

Maria

Has undertaken a more optimistic perspective in envisaging future



Pre-Th

I think stuttering will worsen and I won't be able to speak at all!



I think that using my yellow and red tools I will overcome my difficulty

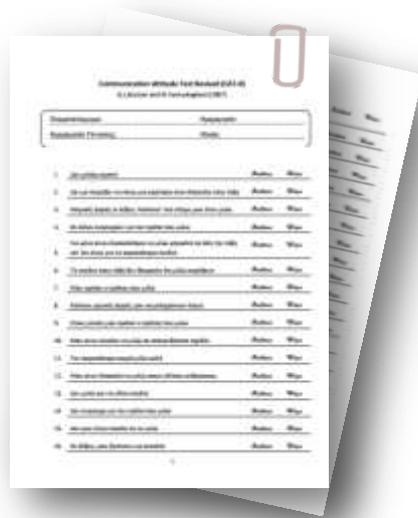
Post-Th



Post Therapy Data Formal Procedures



CAT-R

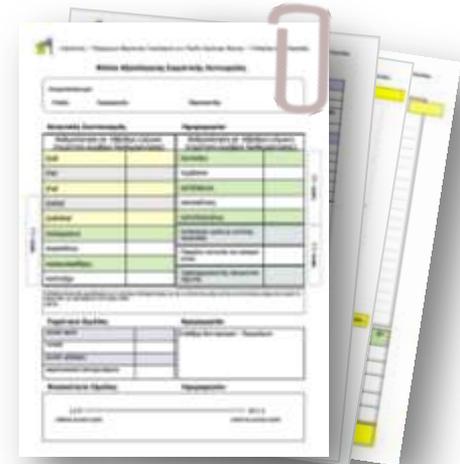
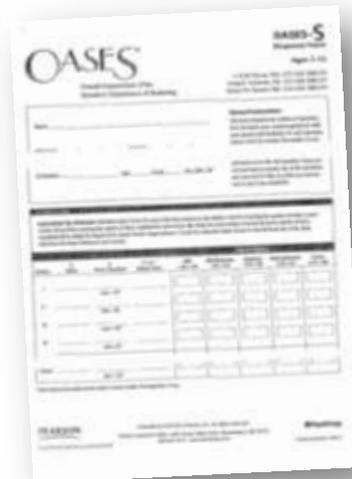


Palin PRS



*“body functions”
assessment
protocol*

OASES-S



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Post Therapy Data - Formal Procedures

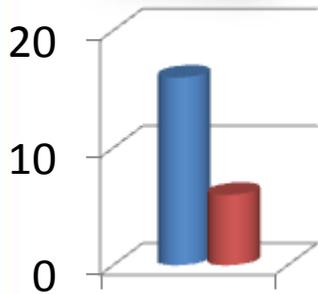


Peter

	Pre-therapy	Post-therapy
CAT-R	16	6
OASES-S	2.82 (Moderate)	1.45 (Mild)
% SS	3.3	2
SR	4	2

Pre-Th
Post-Th

CAT-R



CAT-R

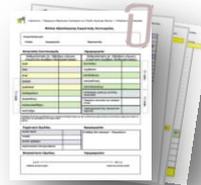
OASES-S

Section	A Patients	B Items Completed	A x B = Impact Score	Mild 1.00-1.49	Mild/Moderate 1.50-2.99	Moderate 2.25-2.99	Moderate/Severe 3.00-3.74	Severe 3.75-5.00
I	37 → 32	11 → 15	3.36 → 2.13	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
II	59 → 22	20 → 20	2.95 → 1.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III	36 → 21	15 → 15	2.4 → 1.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV	23 → 12	9 → 10	2.56 → 1.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Total)	155 → 87	55 → 60	2.82 → 1.45	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

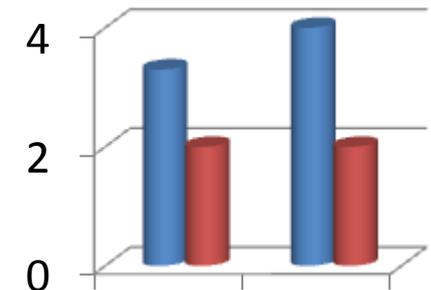


Section I Section II Section III Section IV Total Score

Fluency Measures



Taken from "Body Functions" assessment protocol



% SS SR

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Post Therapy Data - Formal Procedures

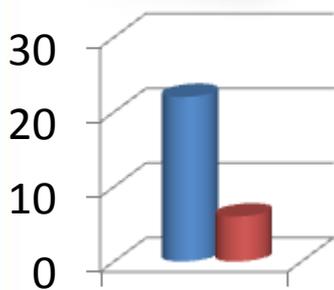


Maria

	Pre-therapy	Post-therapy
CAT-R	22	6
OASES-S	2.7 (Moderate)	1.97 (Mild/Mod)
% SS	3	1
SR	4	2

Pre-Th
Post-Th

CAT-R



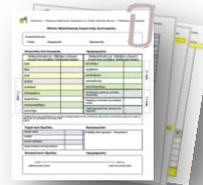
CAT-R

OASES-S

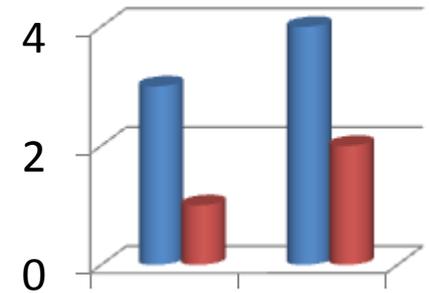
Section	A Points	B Items Completed	A + B = Impact Score	MSI 1.00-1.49	MSI/Moderate 1.50-2.24	Moderate 2.25-3.99	Moderate/Severe 3.00-3.74	Severe 3.75-5.00
I	47 → 38	15 → 15	3.13 → 2.53			✓	✓	
II	60 → 37	20 → 20	3 → 1.85		✓		✓	
III	35 → 29	15 → 15	2.3 → 1.93		✓	✓		
IV	20 → 14	10 → 10	2 → 1.4	✓	✓			
Total	162 → 118	60 → 60	2.7 → 1.97		✓	✓		



Fluency Measures



Taken from "Body Functions" assessment protocol



% SS SR

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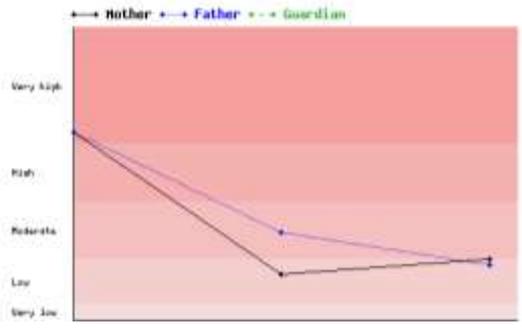
Palin PRS

— Mother
— Father

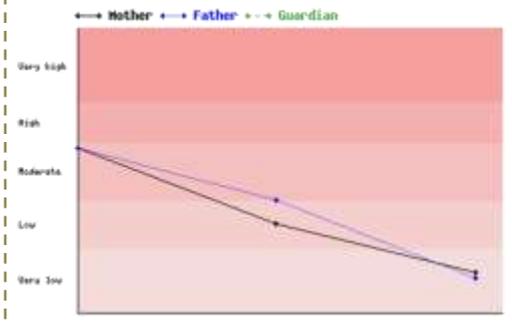


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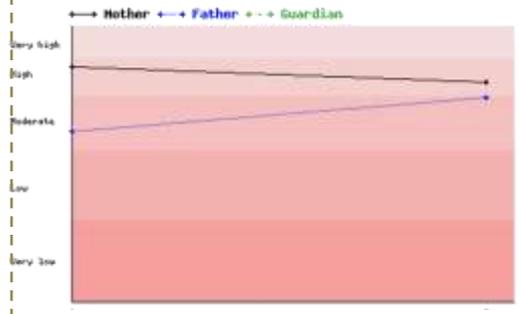
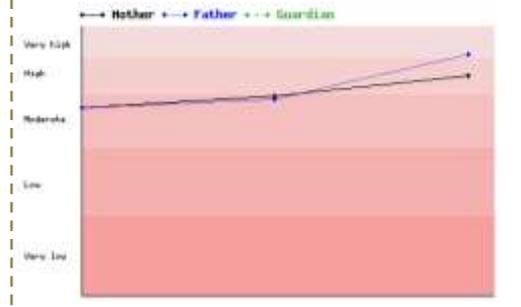
Factor 1 Impact on the Child



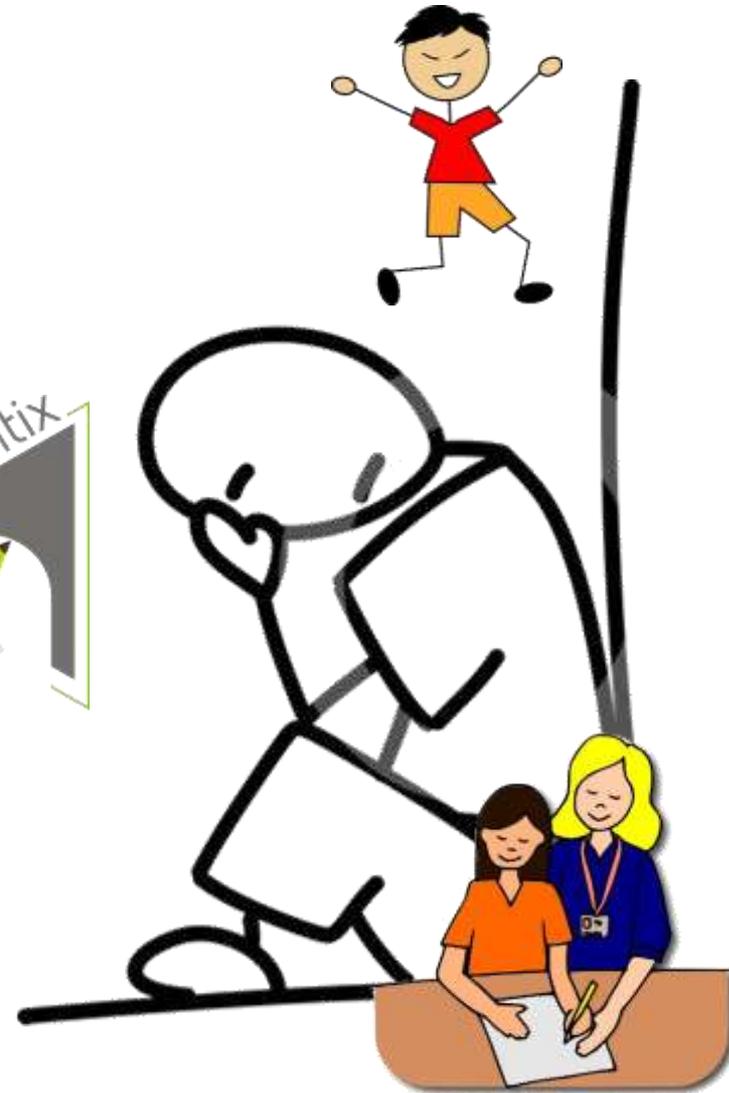
Factor 2 Severity of the stutter and impact on parents



Factor 3 Parent's Knowledge and confidence in managing the stammer



A Common experience...







Time for Questions & Answers

A report on the development and clinical application of “Lexipontix”, a new therapy programme for school age CWS.

10th ODC 2014 ppt presentation text

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Slide 1: (introductory slide) ***A report on the development and clinical application of “Lexipontix”, a new therapy programme for school age CWS.***

Programme	Development	Implementation	Outcome	Discussion
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Slide 2: "Lexipontix" - Theoretical Background

“Lexipontix” is a structured therapy programme for school age children who stutter.

It is based on theoretical principles and clinical practices of Cognitive Behavioural Therapy, PCI therapy, SFBT, fluency shaping and Block modification. Therapy addresses the overall stuttering experience of the child. Parents and child are engaged in therapy as equal partners. Therapy is built on a theme, it is fun, it makes sense and it is about exploring and producing meaningful changes.

Slide 3: Hey! I'm Lexipontix

“Lexipontix” is a naughty mouse. Its name is a combination of the words “lexis” and “pontix” (mouse). It means the mouse of the words or lexicon.

Slide 4: The factory of mind

“Lexipontix” intrudes into the “*factory of mind*” in order to “invade” the factory or “*sabotage*” the factory machines. There are four interrelated factory components that work synergistically in communication. “*The machine of thoughts*”, the “*lab of emotions*”, the “*body sensors*” and the “*machine of actions and words*”. For example, while Lexipontix invades the factory of mind the thought “*I mustn't stammer, they will think I am*

stupid" is produced by the machine of thoughts, which triggers fear in the lab of emotions. The body sensor is sensitive to any physical reactions (such as muscular tension) and the machine of actions and words will either avoid speaking or stammer.

Components in the factory of mind correspond to the well known Beck's Cognitive Behavioural Therapy concepts: “Thoughts”, “Emotions”, “Somatic reactions”, and “Behaviours”. The factory is regulated by the “control centre”. This is the central control panel of the machines. It continuously receives and sends information, keeping all factory components in equilibrium.

Slide 5: Interpretation of the stuttering event

Stuttering occurs when Lexipontix:

- Attempts to intrude into the factory of mind. This corresponds to the anticipation of a stuttering event.
- Sabotages any of the factory machines. This corresponds to the experience of a stuttering event.
- Invades the control centre of the factory. This is the communicative outcome of a stuttering event such as an overt stuttering characteristic or the avoidance of a word or the fear associated with a speaking situation.

Lexipontix is a well known “visitor” representing both internal and external “threats”. The former corresponds to the organic and personal factors of stuttering the latter to the impact of environmental and communicative variables on fluency. Against Lexipontix is a superhero, the CWS. As therapy progresses the child is empowered to identify her own “super” role in therapy, her “super powers”, potentials and skills which she uses against “Lexipontix”.

Slide 6: Therapeutic Alliance

Like most super-heroes the child has a supporting network of friends or co-workers. This is the therapeutic alliance which the child gradually builds and broadens. Parents, as part of the alliance, are allocated their own cognitive, emotional and behavioural therapy aims. They are empowered to:

- achieve a shared understanding of their child's difficulty (cognitive level)

- empathize by recognizing child's thoughts and emotions (emotional level)
- act as fluency and communication facilitators (behavioural level)

Slide 7: Towards "Communication Restructuring"

Lexipontix is to be kept under control rather than being fought or eliminated. This aim is compatible to the nature of stuttering and the CBT orientation of the programme.

Slide 8: Programme Structure & Content

The programme develops in two phases. Phase A lasts for 12 weeks. Then progress is assessed and additional therapy may be proposed according to individual needs in phase B. The programme consists of a *Core Structure* and several optional *Modules*. Modules are distinct entities adjacent to the Core Structure. This adaptable modular structure provides the programme with the necessary flexibility to meet individual needs.

For children with low motivation and parents with unrealistic outcome expectations or low engagement readiness, a preliminary, preparatory phase may precede the programme. We call this phase "*Pre-alliance Phase*".

Slide 9: Lexipontix Core & Modular Structure

Here is a schematic presentation of the Core Structure & Modules of the programme. The blue parts are the PCI components the red parts are the CBT modules and the yellow parts the Speech Control modules.

Slide 10: The PCI component of Lexipontix

- "*Alliance Interaction Strategies*"
 - child leads in play (Core Structure)
 - child regulates/leads the alliance (Core Structure)
 - communication rate modification (module)
 - linguistic modifications (module)
- "*Alliance Empowering Strategies*"
 - special time(Core Structure)
 - praise(Core Structure)
 - desensitization / openness about stuttering (Core Structure & module)
 - turn taking (module)

- “Alliance Network Expansion” (module)

PCI components are introduced from day one in the Core Structure in the form of *Alliance Interaction Strategies* and *Alliance Empowering Strategies*. PCI components are also available in a modular form for those children and families who may benefit from additional indirective interaction management practices. In addition special time is introduced for:

- preparing the ground for family board games
- strengthening the alliance relationships
- building up a safe and desensitized environment for practicing with *yellow tools* and *red tools*. (tools for speech and tools for thoughts and emotions respectively)

The child progressively recruits more members in the alliance, expanding the *alliance network*.

Slide 11: The CBT component

In the Core Structure of the programme the CBT component involves:

- identification of feelings and attitudes
- identification of Negative Automatic Thoughts (NATs)
- initial processing of NATs by means of "talking back"
- identification and challenging of cognitive distortions

Games and therapy activities have been developed to serve these aims. Certain CBT clinical practices have been developed as autonomous clinical tools and modules. These are:

- problem solving
- behavioral experiments
- talking back
- reframing of NATs by means of modification

Slide 12: The Speech Control Component

In Lexipontix we adopt a stand point that focuses on functional speech control. Children learn to identify which technique serves best the communicative demands of a specific communicative event. Yet, they learn how to make use of the techniques in “*Missions*” and “*Behavioural Experiments*” in order to challenge cognitions and to control emotional reactions. Missions are collaboratively designed actions for practicing *Red* and *Yellow Tools* in real-life communicative events.

Both fluency shaping and stuttering modification techniques are included in the programme. Different speech techniques constitute separate modules.

The following modules have been incorporated:

- “*ParkourTalk*” - Prolonged speech
- “*Airplane Talk*” - Easy onset
- “*Bus Talk*” – Pause
- “*Rebound*” – cancellations
- “*Instant Parkour Talk*” - pull outs
- “*Cassandra Talk*” - pre-block modification

Labels for the techniques are not fixed. Children are encouraged to negotiate and set up their own jargon.

We will know move on to speak about the development of the programme

Programme	Development	Implementation	Outcome	Discussion
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Slide 13: Steps of Development

- review of literature and related clinical practices.
- external review and consultation on the CBT components.
- peer review
- clinical trial
 - detailed therapy notes
 - written reflection
 - consumer feed back
 - pre and post therapy formal assessments
 - pre and post therapy informal assessments and interviews
 - evaluation questionnaires
- feedback on the clinical application of therapy components by external therapists

The steps followed for the development of the programme are briefly stated here. In an earlier paper presented in the ECSF symposium in fluency in Antwerp in March 2014, we discussed the development process, some of the issues emerged during development and the amendments made to the programme. We invite you to read the paper or see a video presentation at www.lexipontix.gr

Programme	Development	Implementation	Outcome	Discussion
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Slide 14: 5 Clinical Trials in total

Five families were involved in clinical trials. Only two children will be discussed. A 10 years old boy, Peter and a 11 year old girl, Maria. Both attended to the most recent version of the programme, set as the only selection criterion.

Both children had been stuttering since the age of 4 years. Peter had never received speech and language therapy before. Maria attended a fluency programme for 18 months, and she was off therapy for the last 2 years.

Slide 15: Pre-, In- and Post- therapy Data Collection

Pre-, in- and post- therapy data was collected by means of informal and formal procedures:

- informal questionnaires, parent and child interviews, subjective scales and an assessment protocol on “*body functions*” were used to collect data for the *Formulation Chart*. Formulation chart, based on a revised ICF model, is a schematic representation of the formulation process.
- detailed therapy notes, extensive written reflection and parental / child feedback were used to evaluate the programme in terms of content, structure and timing.
- formal assessments were used to describe treatment outcomes in objective measures.
 - Parent interview including case history
 - Child's interview
 - CAT-R
 - OASES-S 2010 (7-12)
 - Palin Parent Rating Scales

Slide 16: Maria's & Peter's *Formulation charts*

For both children, stuttering was considered "mild" in terms of %SS and Severity Rating Scales and “moderate” in terms of the overall disability

Overt stuttering characteristics mainly involved repetitions for Peter and blocks for Maria.

Both children were shy and introvert. Maria was more of a perfectionist and presents with good introspection ability. Peter, tended to rationalize his answers and demonstrated aggressive behaviour at times.

Both children were experiencing difficulties in socialization. Maria reported moments of isolation and Peter reported conflicts with his classmates. Maria had high achievement at school and increased difficulty with reading aloud in class. Peter had limited participation in the classroom.

Both children had developed negative personal reactions to their stuttering at a cognitive, affective and behavioural level. These were more prevailing and established in Maria's case.

Both children were living in supportive family environments. Parental concern was high for both, and there were frequent prompts for fluent speech. Maria had an open attitude to stuttering. Unlike Peter, she frequently discussed stuttering with her mother. Peter’s family was experiencing problems with behaviour management and they were rather (over) protective. In Maria's family, expectations for Maria were high. Both children were occasionally teased from other children at school.

Slide 17: Treatment goal - Communication Restructuring

Lexipontix aims to "*Communication Restructuring*" (Fourlas & Marousos, 2014). We define Communication Restructuring as the therapeutic process that leads a person:

- to reconstrue his communicative role
- to alter the definition of communicative success and failure
- to respond in a functional and meaningful way to the demands of a communicative event

In order to reach the above aim the programme was individualized and the appropriate modules were selected

Slide 18: Treatment plan: Core Structure

The PCI component of the Core Structure helped in setting up the alliance. Concepts, jargon and the theme of the programme were introduced at this stage. Games were used for the identification of feelings and attitudes as well as for the exploration of cognitive cycles. An open and desensitized attitude was initiated by introducing voluntary

stuttering board games. In the Core Structure children were also helped to identify and challenge cognitive distortions and NATS by making use of the “*Talking Back*” tool.

Slide 19: Treatment plan: Modular structure

The Core Structure was followed by a period of 7 sessions, in which selected modules were applied.

For Peter the “*problem solving*” module was selected to address issues of locus of control due to low levels of independence and parental overprotectiveness

The “*Behavioural Experiments*” as well as the “*Negative Automatic Thought-Modifier (NAT-M)*” modules, were selected for Maria to challenge her well established negative attitudes.

Only one speech module (*yellow tool*) was introduced to Peter. On the contrary Maria needed more speech modules to deal with her well established silent blocks.

Both children would benefit from an objective attitude towards stuttering. For this the “*Alliance Network Extension*” module was implemented for both. Peter, being more hesitant socially, needed to invest more time in that module. The “*Missions*” module was applied for the same reasons.

Programme	Development	Implementation	Outcome	Discussion
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Slide 20: Post Therapy Data: Informal procedures

Here is a summary of the main changes reported in parental reflections and reassessment interviews.

At the end of 12 weeks:

- Parents focused on communication rather than speech per se and improved their communication skills. Peter's mother reports: "I came to realize the importance of having some exclusive, special time with my child. This facilitated our communication". Maria's mother reports "I longed such a relaxed communication with my daughter"

Slide 21: Post Therapy Data: Informal procedures

- Parents increased their knowledge for their child's stuttering and its management. Peter's mother reports "I liked it. It was humorous, fun and entertaining. "I learnt a lot about stuttering and now I do not care that much whether he stutters or not. I just do not notice". Maria's mother reports "I now understand better my child's difficulty".

Slide 22: Post Therapy Data: Informal procedures

- Teachers recognized significant changes in children's communication. Maria's teachers noticed changes in Maria's confidence, willingness to participate and speech. Peter's teachers conveyed to parents that he is happier, more sociable and willing to participate in the lesson.

Slide 23: Post Therapy Data: Informal procedures

- Both children improved significantly in their speech fluency and confidence. Maria mentions: "I now have my yellow and red tools to use. I can always say what I want to say and I have realized significant change in my speech". Peter's father admits: "His fluency has significantly improved and I am much more relaxed now. In the beginning, I didn't believe that the programme could help us. I was rather skeptical"

Slide 24: Post Therapy Data: Informal procedures

Looking a bit closer at the Peter's case we can see that...

- Family relationships were improved and strengthened. His mother reports "To collaborate, to praise and reinforce... all those things I had forgotten to use". "I think that the programme helped us all see some things quite differently". "My husband now hugs and kisses the kids. He treats children better and has stopped scolding and shouting at them".

Slide 25: Post Therapy Data: Informal procedures

- Peter became more talkative. His mother reports "My child was introvert and closed to himself but now he is talking all the time"

Slide 26: Post Therapy Data: Informal procedures

- Peter generally became more outgoing and courageous. He even asked his mother to participate in the school parade next year. This was a life dream for Peter, yet laying outside his comfort zone. Mother reports: "Peter has become more relaxed and assertive. He doesn't avoid other people".

Slide 27: Post Therapy Data: Informal procedures

- Peter feels happier and more sociable. Having difficulty realizing change in himself, he attributes it to his environment. He reports "my classmates have changed. All of them! They are friendly. I like feeling accepted by my friends"

Slide 28: Post Therapy Data: Informal procedures

Looking more closely at Maria's case we could say that...

- Parents report improvements in fluency and in psychological well being. Mother reports: "She talks and feels much better now. She doesn't cry at nights thinking of school reading". Maria herself reports: "My unhappiness has gone. I now have my tools and I know how to control lexipontix!"

Slide 29: Post Therapy Data: Informal procedures

- Maria has undertaken a more optimistic perspective in envisaging future. Having said in the initial interview: "I think stuttering will worsen and I won't be able to speak at all" she mentions: "I think that using my yellow and red tools I will overcome my difficulty"

Slide 29: Post Therapy Data: Formal Procedures

The above outcomes correspond to the formal test results. Let's take a quick look at them.

Slide 30: Post Therapy Data: Formal Procedures (Peter)

For Peter...

an attitudinal change is shown in CAT-R scores.

In OASES there is a transition from "Moderate" to "Mild" impact and there is a drop in post-therapy fluency measures.

Slide 31: Post Therapy Data: Formal Procedures (Maria)

A similar tendency appears in Maria's post-therapy scores

Slide 32: Palin-PRS

Palin Parent Rating Scales along with written reports submitted by parents indicated the positive effects of the programme in the family.

Maria is the most recent case and it is our experience with lexipontix that parents need extra time to consolidate and acknowledge change

Programme	Development	Implementation	Outcome	Discussion
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Slide 33: A common experience

It is a common experience among clinicians who work with school age children who stutter to feel devalued, frustrated and depowered by the lack of progress as well as by relapse. In many cases children are able to speak fluently in therapy but unable to generalize. They may be oversensitive to listener's evaluation and make unhelpful thoughts about communication despite their progress in fluency. Sometimes focus on fluency makes speech techniques part of the problem rather than part of the solution. Parents report themselves unable to help, many times they are trapped to unhelpful roles such as urging for the use of speech techniques and challenge therapy and the skills of the clinician.

(Click)

Lexipontix introduced an alternative approach to stuttering therapy merging well known and evidenced based theories and clinical practices into a coherent whole that makes sense. It makes sense for the child, parents and the clinician.

Emerging evidence from those who participate in the programme is in favor of the above comments.

Slide 36: Children reports: Video

Let's now watch a short video with children talking about their experience with Lexipontix

Slide 37: "Thank you" slide