RESTART DCM

RESTART-DCM Method

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Content

1 Introduction

Within the scope of the research project 'Cost-effectiveness of the Demands and Capacities Model (DCM) based treatment compared to the Lidcombe programme', more generally known as the RESTART-study (De Sonneville-Koedoot, Stolk, Rietveld, Franken, 2015), a treatment protocol was developed in 2007 based on the DCM treatment model. The aim was for all the speech therapists (-fluency experts)[1] participating in the project to follow a similar treatment approach that was based on the DCM. Almost 15 years later, this protocol was ripe for revision. Some parts were unduly linked specifically to this research project or solely applied to the Dutch situation. The contents of other sections needed to be updated, such as the appendix for parents containing information about stuttering. The experience of conducting workshops on this treatment method made it clear that certain parts of the protocol needed to be differently formulated or structured. Needless to say, the description of this method is not a substitute for workshops. In a RESTART-DCM workshop (basic workshop and advanced workshops), participants receive hands-on training in the skills required to work together with parents on the defined treatment goals. Speech therapists who have attended a workshop have access to extra materials on the RESTART-DCM website.

1.1 What is RESTART-DCM?

In the course of the 1970s, several researchers started developing treatment methods for young children who stutter that were based on the idea that stuttering is the consequence of an imbalance: a young child who starts to stutter has at that moment insufficient Capacities for the production of fluent speech in light of the imposed speech-related Demands (internal and external). This idea has been formalized in the Demands and Capacities Model (DCM, among others, Starkweather, 1987; Starkweather et al., 1990; Starkweather & Franken, 1991; Starkweather & Givens-Ackerman, 1997). The therapy based on this treatment model aims to achieve a balance between the communication Demands on toddlers or pre-schoolers who stutter (developmental ages 2–6) and the child's motoric, linguistic, socio-emotional and/or cognitive skills and Capacities.

Compared to the original DCM-therapy (Starkweather et al., 1990), the RESTART approach differs in that (1) the structure of the treatment has been tightened, (2) a specific method has been added for reducing Emotional Demands, (3) the Capacities training has been broadened, to include, among others, the speech motor training programme developed by Riley & Riley (1985) and (4) the *modelling* of the therapeutic goals for parents is now an essential element in the RESTART-DCM therapy method. A RESTART-DCM approach can therefore never be confined to merely providing *advice* to the parents. Depending on what is found to be necessary, the focus of the speech (stuttering) therapy provided will be to work with the parents on bringing about changes in speech behaviour and on skills training.

[1] For the sake of clarity, the term speech therapist will further be used throughout the text. The masculine pronouns he and him will be used with reference to the child and the feminine pronouns she and her for the speech therapist.

1.2 General overview of RESTART-DCM

The RESTART-DCM approach follows a fixed structure. First, the *assessment* is scheduled, which includes a parent interview, a parent-child interaction analysis and child assessment (see Paragraph 2, The assessment). Once the assessment has been completed, a *parent conference* is scheduled at which the parent(s) is (are) informed in detail of the assessment findings. In addition, parent-child special time and the logbook are introduced (see Paragraph 3, The first parent conference). This parent conference 'bridges" the assessment and RESTART-DCM therapy.

The RESTART-DCM *therapy* is structured into 3 phases (I–III). Each therapy program starts with Phase 1 (see Paragraph 5, Phase I: Reducing the Demands). The goal of Phase 1 is to reduce the Demands imposed by the people in the child's communication environment or self-imposed by the child himself. Conditions are created on a structural (more frequent) basis, providing "a fluency enhancing environment" in which the child can speak fluently according to his Capacities at that moment, initiating a learning process. The Demands that apply to the specific child in question are reduced through counselling and training of the parents, and other important figures with influence on the child. Phase II of the therapy (see Paragraph 6, Phase II: Increasing the Capacities) consists of explicit training of the child's Capacities for fluent speech. This is added to Phase I, if needed. Hence, while training the Capacities of the child, the speech therapist will also maintain the progress made during Phase 1 with regard to reducing Demands. To this end, throughout the treatment she will ensure the Demands level is reduced when communicating with the child – until explicitly fading this out. During Phase II of the program, reducing the Demands on the child's communication in daily life will remain a fixed point of discussion in a therapy session. Phase III (see Paragraph 7, Phase III: Working more directly on fluency) occurs when reducing Demands (Phase I) and increasing the child's Capacities (Phase II) have proven not to be sufficient to overcome the stuttering. In Phase III of the treatment, a more direct approach will be used to improve speech fluency. This, too, will take the form of modelling. The child gains experience with slightly different types of speech as part of a game.

Note: The modifications in speech behaviour that parents are taught during Phase I are temporary adjustments. These are intended to enable the child to achieve a better balance between Demands and Capacities. The modifications, such as articulating exceptionally slowly, may feel abnormal to parents. Indeed, they are 'abnormal': it is therapy: the adjustments are necessary in connection with the child's reduced Capacities for speech fluency and tapered off under supervision at the end of the treatment.

Moreover, within each of these 3 phases, 4 domains are systematically covered: Motoric, Linguistic, Emotional and Cognitive. A fixed order is maintained within the first two phases in addressing the domains: Motoric, Linguistic, Emotional and finally, the Cognitive domain. Only the (elements within the) domains that are relevant to the child in question are addressed. Moreover, each session in Phase I and II has a fixed structure (see 4.2 The structure of a treatment session). The way in which the parent transfers the behavioural changes learned during the practice periods (Special Time) into everyday speech situations also follows a more or less fixed pattern (see 4.3 The transfer of the reduction of Demands during Phase I).

2 The assessment

The goal of the extensive assessment performed prior to starting treatment is to gain insight into the Capacities of the child and the Demands placed on the child, both by his environment and self-imposed. Based on the assessment, hypotheses are formulated regarding an imbalance between the Capacities and Demands, the result of the inadequate Capacities of the child for fluent speech and the (resultant) excessive Demands imposed by the environment and the child. These hypotheses enable the pressure points in the communication to be charted. Treatment goals may then be formulated based on the interpretation of the obtained data.

2.1 Assessment parent(s)

As a rule, first an interview with the parents is scheduled. During this session, the following aspects are covered:

- Case history – medical – stuttering
- Cause of stuttering, according to the parents
- Thoughts and emotions in relation to stuttering (of parent and child)
- Child's temperament
- Perceived Severity and Burden of stuttering (for example, with the help of a VAS-score)
- A very brief description of the DC model, illustrated with a figure (see Appendix 4)
- Explanation of what the assessment will further comprise (video interaction analysis and assessment of the child)
- Possibly additional questionnaires for parents (for example, about their child's temperament) or the environment (for example, the teacher or playgroup/day-care leaders).

2.2 Video interaction analysis

Parent and child are invited for a parent-child interaction session. Should the case history (see above) indicate that observation of the interaction with both parents and possibly with (a) sibling(s) would be beneficial to identifying the pressure points in the communication, these may then be invited to take part in the assessment. Should their participation later prove to be important, this can be arranged at a later stage.

A video recording is made of two different play situations: a free, unstructured situation and a more structured situation; the video recording will take around 15 minutes in total.

Parent(s) and child are asked to play together, just as they normally would do at home. They are given materials for free play (Playmobil), and play together for ±7–8 minutes while being videotaped. They are subsequently given a number of puzzles at various skill levels and a ±7–8 minute video recording is made of them while doing the puzzles.

The recorded parent-child interaction session is analysed and scored with the help of the Parent-Child Interaction Form (see Appendix 1). The left-hand column shows the relevant Demand: M (Motoric), L (Linguistic), E (Emotional) or C (Cognitive). In the right-hand column, the extent to which or the frequency with which this behaviour occurs or is observed during the interaction is noted. It is recommended, particularly if the speech therapist has relatively little experience in assessing parent-child interactions, to transcribe two five-minute sections of the interaction session. This will allow, for example, the number of open questions, the turn-taking behaviour, the adequacy of both the parent's and the child's reactions to easily be determined. The speed of articulation of the parent(s) and of the child is always measured and calculated.

2.3 Assessment of child

The child always undergoes formalised standardized speech language testing, even if there are no concerns or doubts about his language development. In order to determine the balance between Capacities and Demands, it is important to establish whether the mismatch is the result of reduced Capacity (weaker speech language development) or of increased Demand (stronger language development or imbalance within the language profile). To identify a possible imbalance in language skills, language comprehension and production are tested at both word and sentence level. Speech sound production is tested phonologically and phonetically.

If the scores are not anticipated to be reliable due, for example, to avoidance behaviour on the part of the child, this component will be analysed later (during the treatment).

More stutter specific tests will include:

- Oral Motor Assessment Scale OMAS (Riley & Riley, 1985)
- KiddyCAT (Vanryckeghem & Brutten, 2007)
- SSI-4 (Riley, 2009).

Further information is gathered by the speech therapist, based on what the parents have said during the case history interview, about the child's awareness of his stuttering. This may be accomplished by asking the child questions or by observing the child's reactions to voluntary stuttering by the speech therapist. In addition, the child's response to changes (an increase or decrease) in the pressure to communicate may be observed during a brief trial session.

2.4 The overview form assessment RESTART-DCM

On this form (see Appendix 2), the primary points from the case history are described and the results of the assessment are noted. The form has 3 parts:

- **Part 1** contains the key information elicited from the general history and the relevant information from a medical perspective. A summary of the stutter-specific points in the history is also included.

— **Part 2** provides an overview of the assessment data. First, the data relating to the stuttering and the SSI-4 severity score is presented. This is followed by the assessment data regarding the Demands and Capacities within the scope of the 4 domains. It is helpful to maintain the following order when writing these out:

  - First, the test data from the assessment of the child are written down in the Capacities section.
  - Next, the information obtained from the analysis of the parent-child interaction session is filled in for the corresponding Demand (shown in the left-hand column on the parent-child interaction form). Relevant information derived from supplementary questionnaires for the parent/teacher is also filled in.
  - Next, prior to proceeding to Part 3 of the form (the treatment goals), first, *hypotheses concerning the pressure points in communication* are formulated on behalf of the treatment plan. To do so, we examine the assessed Capacities of the child in the light of the corresponding Demands. A few examples:
  - A child with a high score on the test components for expressive language skills. This is recorded as follows: strong expressive language is assigned to Capacity – Linguistic domain. On the overview form, strong expressive language skills is also noted down under the *(internal) Motoric Demands*, as longer sentences require more motor planning and tend to be uttered more quickly. Using longer sentences, therefore, places a higher Demand on the child's Motoric Capacities. The parental language input observed during the parent-child interaction for a child who has strong expressive language skills will often also be characterised by complex language. This is recorded as an (external) Demand in the Linguistic Domain. However, even if no complex parental language is observed during the parent-child interaction, this is nonetheless noted as a possible concern, because parents expose their child to language and (unconsciously) stimulate language growth.
  - The opposite situation: a child with low scores on the test components for expressive language skills. This is noted down as weak expressive *Capacities in the Linguistic Domain*. Age appropriate parental language input is marked down as a Demand in the Linguistic domain, as this input must be offset against the existing weaker language Capacities of the child.
  - An emotionally reactive ("temperamental") child that, for example, stays happy, angry or sad for an extended period. This is noted down under weaker *Capacity in the Emotional domain* (insufficiently capable of emotional regulation). The corresponding Demand is then explored: does the environment react in such a way as to curb the triggering of this intense emotion (without the child suppressing the emotion)? If not, there is also a heightened *Demand in the Emotional Domain*, which is then marked in the relevant column.

— In **Part 3**, the treatment goals are formulated based on the hypotheses developed regarding the communication pressure exerted by the Demands and Capacities. All the notes marked down in the different domains are the indications for treatment.

3 The first parent conference

After the assessment has been completed and the assessment overview form has been filled in, a parent conference (at which the child is not present) is conducted with the following goals:

a. To provide verbal and written information about stuttering (see Appendix 3)
b. To present the results of the assessment
c. Introduction of the fifteen-minute parent-child Special Time
d. Introduction of the logbook.

ad a. The goal is to arrive at a situation where the parents realize that stuttering arises from both inherited/congenital factors and from developmental factors. Owing to this, the child currently has limited Capacities to achieve fluent speech. Otherwise completely normal Demands on communication may therefore simply be too high for this child. Bearing this in mind, the parents are asked to, with the help of the therapy, strongly reduce the communication pressure in order that the child can remain within the bounds of his Capacities for fluent speech. Only then can the Capacities of the child be strengthened. Generally, this makes it possible to attain a balance, where the Capacities weigh more heavily (are stronger) than the Demands. This favourable balance will allow fluent speech to be established.

ad b. During the interview with the parents, the assessment results are shown in a visualisation of the DC model and explained (see Appendix 4). The main findings are summarised and a number of illustrative examples provided (in order to avoid overloading the parents with information). Showing parents a child's low score on the OMAS (decreased speech motor Capacities), for example, can make it easier for them to understand why a lower speech rate in the environment can be beneficial.

This explanation of the DC model, specifically in relation to the child, creates a basis for cooperating with the parent. A parent who is able to establish a fluency enhancing environment to support the development of the child – who perceives this as a positive step rather than as a rectification of something that the parent had been doing wrong – will generally conduct the therapy in an active and constructive way. Additional information can be provided during the course of treatment per domain when the relevant domain is addressed. Note: It is important to continue to check throughout the treatment whether the parents continue to implement the exercises within the context of the DC model. It is therefore important to regularly come back to this after the initial parent interview later during the treatment.

ad c. The fifteen-minute parent-child Special Time is explained to the parents. The idea is that the parent must set aside a period of 15 minutes *minimally* five days a week to spend with the child, 1:1, giving the child their undivided attention. This is the first assignment to do at home: establishing these Special Times over the coming week. Special Time is the time in which the parent trains specific skills to alleviate the Demands. In Phase II of the therapy, this time is used for exercises designed to increase the child's Capacities for fluent speech.

ad d. The parent is also asked to start keeping a logbook, in which the parent takes notes about the Special Times. The speech therapist and the parent will also note down details during the treatment sessions. In the first week, the parent will only note down the time, length and the play materials used. Starting from the first session at which the child is also present, both therapist and parent will take notes during the treatment sessions. When the parent starts practicing the modifications in the way he or she communicates with the child, he or she also records which specific change was practiced and the result. In time, the parents will no longer take notes during every Special Time. They will instead provide a broad description of the exercises performed during the past week, including the reactions of the parent and the child to the changed behaviour of the parent. Questions and observations may also be added.

In the logbook, a parent can track the severity of the stuttering, using, for example, the 8 point scale of Yairi & Ambrose (Yairi & Ambrose, 1999) or the 10 point scale used in the Lidcombe Programme (Onslow et al., 2020). In some cases, parents start out with a daily score, but later using a typical score for the entire past week (possibly together with the week's worst score) will suffice. Parents who are excessively focused on their child's disfluent speech may be asked to write down every day five fluent sentences spoken by the child. In virtually every case, the parents will discover that, most of the time, their child actually speaks more fluently than they thought.

4 RESTART-DCM treatment

4.1 General aspects

The three phases and four domains of RESTART-DCM treatment have been described above (see 1.2 General overview of RESTART-DCM). At the beginning, the parents and the child will undergo one hour of therapy a week. The frequency of the sessions may vary throughout the treatment, depending on how it goes. During the maintenance phase, session lengths are reduced to a half an hour. As a rule, after four sessions with parent and child, another parent interview is held at which the child is not present. Both parents are invited to attend. This session provides an opportunity to discuss topics relating to the child's stuttering that are preferably not discussed when the child is present. There is room for the parent(s) to show the painful emotions they are experiencing, to talk about feelings of guilt or to express the burden of feeling responsible for the child's recovery from stuttering. Another common topic of discussion is the role of or way in which each parent separately may perform the therapy. Parenting issues may also come up, insofar as these have a bearing on the stuttering. These sessions with the parents only are scheduled as long as deemed advisable/necessary.

4.2 The structure of a treatment session

Each session follows a fixed pattern:

- The speech therapist models a modified speech behaviour while engaging in play with the child; the parent observes and notes down observations in the logbook.
- The parent attempts to apply the behaviour modelled by the therapist while playing with the child.
- The speech therapist and the parent briefly review the parent's attempt.
- The speech therapist describes how the parent will be applying the modified behaviour over the coming week at home.
- The speech therapist/fluency expert summarises what is expected during the coming week.
- At the end, there is time for questions, further discussion, problem-solving regarding the practice sessions implementation/transfer at home.
- Starting with the second session together with the child, each session commences with:
    - The parent showing, while playing with the child, how the aspects of the therapy were practiced over the past week.
    - While the child is allowed to continue to play, the speech therapist and the parent discuss the logbook, the therapy aspects of the previous week and the demonstration at the start of the session.

As is evident from the above, the parent learns modified speech behaviours by training and practicing these together with the speech therapist during the therapy sessions. We once again emphasise that a *RESTART treatment programme will at no time ever consist of giving advice only*. The speech therapist models the modified speech behaviour and practices this together with the parent. The parent practices the new speech behaviour at home during the Special Times. A parent is only asked to do start doing this after the speech therapist is convinced that the parent is able to apply the modified speech behaviour correctly. Sometimes several sessions may be required to teach a parent a particular speech behaviour modification.

4.3 The transfer of Lowering Demands during Phase I

Ultimately, the aim of the therapy is to effect a decrease of the Demands in daily communication. However, this is something that is worked towards only gradually. It costs conscious effort to modify (automated) speech habits. For this reason, the parent is taught to apply first, during the Special Times, the modified speech behaviour (e.g., reducing the articulation rate) practiced during the treatment session. As soon as this is the case, the parent is asked to implement this modified behaviour during the daytime as well, rather than just during the Special Times. To begin with, one fixed daily situation is selected. The parent is asked about what could be a suitable first, daily situation. Examples are: when getting dressed in the morning, at bedtime, in the bathroom, on the way to school, at snack time, during dinner. The number of situations in which the parent communicates using the modified behaviour is gradually increased.

The Special Time continues to be the time to practice a *new* behaviour modification. A new modified behaviour is added during the Special Time, alongside the previously mastered behaviour modification. For example: learning to lengthen the response time latencies when speaking at a reduced articulation rate. Although the slower articulation rate has already been implemented in one or several everyday situations, this is not yet the case for the longer response time latency. Implementation of this change is first practised during the Special Times, at a moment when the parent can focus wholly on doing so. Once the additional behaviour has been mastered, the parent will also start implementing this in his speech behaviour with the child in the selected everyday situation(s) outside of the 15-minute Special Times. During these everyday situations, the parent will, for example, adopt both a slow articulation rate and long response time latency. This will free up the Special Times to start practicing a new element. This element is chosen by the speech therapist based on the child's specific indications and is once again learned and practiced as a further *supplement*. This might, for example, be a more equal number of turns.

The speech therapist may sometimes have doubts about how the parent is implementing the treatment in daily life. A good option in that case is to ask the parent to make videos on a regular basis of specific transfer situations. The parent and speech therapist can view these recordings together during a treatment session. Constructive feedback provided by the speech therapist and talking this through from a problem-solving perspective can help the parent in transferring the modified speech behaviour to everyday life.

5 Phase I: Reducing Demands

The assessment may reveal more than one indication per domain within the different domains. The domains are *always addressed in a fixed order*, as described in the below. Treatment is started with the first indication in the Motoric domain. Transfer occurs in accordance with the pattern described in the above.

It is possible that by achieving one modified behaviour, another indication will spontaneously disappear. For example, in some cases, the indication for speaking in shorter sentences (more in step with the child's level of grammatical ability), is achieved spontaneously when the parent reduces his or her articulation rate. The slower rate invokes the use of shorter sentences. Another possibility is that treatment may no longer be indicated, for example after reducing the Demands in the Motoric and Linguistic domains. These modifications may cause the fluency of the child to improve to such an extent that further treatment is no longer indicated (see Paragraph 7, Tapering off the therapy).

Only those Demands that are relevant for the parent and the child in question are treated. The speech therapist translates all treatment indications as far as possible into exercises, to enable the parent to gain practical experience with each specific modified behaviour. Asking parents to forego, and/or practicing with the parents the suppression of, specific behaviour will generally have little effect (e.g. "try not to ask questions"). It is more productive to model an alternative to the behaviour (e.g. "use statements when you speak").

5.1 Reducing Motoric Demands

COMMON INDICATIONS:

- The parent articulates faster than the child does in fluent sentences.
- The child articulates relatively fast (> 3.5 syllables per second).
- Parent and/or child use brief interaction times or the one interrupts the other.
- The family has a chronically high pace of life/is rushed.
- The family habitually speaks at a rapid pace at moments when time is short.

(Refer inter alia to the video interaction analysis, paragraphs 2c, d, 4c and 5.)

GOAL:

To reduce time pressure and speech rate to decrease the chance that the child's planning and execution of his speech and language production will outpace the scope of his Capacities at such moments.

POSSIBLE BEHAVIOURAL CHANGES ON THE PART OF THE PARENT:

- Speaking with calm, relaxed and fluent speech movements in a natural manner with the child. The rule of thumb for finding the right speed is the following: the articulation rate of the child during fluent utterances that flow smoothly. In a young child, this will rarely exceed 3.5 syllables per second. If there are no smooth, fluent utterances and the child speaks at a relatively rapid rate, the parent must learn to speak at a lower articulation rate through his or her own internal model.

This may take quite some practice. Some children unconsciously lower their own speech rate when their parent speaks more slowly, while other children continue speaking at their normal speed; however, they may well be able to relax more when speaking. Lowering the child's articulation rate is not a goal! Note: in discussions with the parents, reference is made to speech rate rather than articulation rate for simplicity's sake.

- Implementing long response time latency (approximately 1–2 seconds), definitely **no** overlapping in speech turn-taking.
- Allowing the child enough time to tell his story. If there is not enough time, the parent signals that this is not a good time for the story; he/she puts off the story-telling until a later, more suitable moment.
- Reacting non-verbally in order to promote calm turn-taking, for example by offering a stop sign if the child interrupts. The parent refrains from making eye contact with the child at that specific moment but maintains eye contact with the speaker whose turn it is.
- Maintaining normal eye contact, appropriate to the customs of the culture and the family. Making eye contact facilitates calm interaction times and helps to avoid overlapping speech turns: you see when the other person has finished talking, is still talking or has something else to say.
- Monitoring the general pace of life within the family (calm transitions from one to the next activity, sufficient 'empty' time). In the event of time pressure or a fast pace of life, the parent learns to speak in short, calm statements and to postpone conversations/discussions to a more suitable moment.

5.2 Reducing Linguistic Demands

COMMON INDICATIONS:

- The child has advanced language development.
- The child uses hardly any or no (natural) pauses at all when telling a story.
- The number of questions asked by the parent is relatively high.
- The number of statements by the parent is rather low.
- The number of utterances by the parent per turn is much higher than the number of utterances by the child per turn.
- The parent's language use is considerably more complex (compound sentences, relatively difficult words, lengthy sentences, inverted or passive sentences) than is appropriate for the developmental age of the child.
- The parent frequently introduces a new topic.

(Refer inter alia to the video interaction analysis in paragraphs 1a, b, 2a, b and 4a, d, e.)

GOAL:

A specific alignment with the language level and profile of the child, no overstimulation of the language development, no (excessively) high demands on language processing and expression.

POSSIBLE BEHAVIOURAL CHANGES ON THE PART OF THE PARENT:

- Mainly using statements (not questions) when speaking and using words which are appropriate, in terms of length and complexity, for the child's developmental age and language profile (according to the assessment).

- Ensuring a good balance between the number of spoken *utterances per turn* by the parent and by the child.
- Following the child's initiative as far as possible with attention and supportive language.
- Primarily asking forced-choice or closed questions instead of questions in an open form, if the child tends to stutter more when answering open questions.
- Frequently recasting the child's sentences in the form of a statement, with sometimes the addition of an extra, relevant remark. (Child: "I want to pat the dog." Parent: "Oh, yes, pat the dog. You like the dog.") The parent should always try to do this if the utterance is ungrammatical, calmly and in an objective tone of voice, without explicitly correcting the child ("I choosed the girl". "OK, you chose the girl.").
- Not explicitly asking the child to repeat a phrase that he is not yet able to pronounce correctly.
- Modelling not always being able to think of the right name for something, and then describing it ("A kind of horse with stripes"), so that the child feels less pressured in finding the right word for something correctly and fast.
- Spending several sentences on a piece of information in the conversation ('lexical redundancy'). The child is exposed to the same word in different contexts, which will promote storage of both its form and content. This will also reduce the information density of the conversation, which in turn means that the demands on the child's processing capacity are reduced. Something similar also applies in respect of sentence structure ('grammatical redundancy). Consciously making minimal changes to the sentences, demands less processing on the part of the child. Moreover, it is easier for the child to imitate a recurrent structure. Note: The child is exposed to the verbal information repeatedly and in a slightly varied form, **without** asking the child to do the same.
- Recognising the need for "less talking" in certain situations. On days when the stutter is severe, activities may be sought that require little to no talking, such as activity games, puzzles, colouring, playing with clay, bicycling, cutting with scissors, listening to music. The parent learns that giving attention and language (talking) are not necessarily inextricably linked.
- If the child makes no natural pauses, the parent can offer a stop sign and summarise in 2–3 words what he or she heard, before given the child the opportunity to continue.

5.3 Reducing Emotional Demands

COMMON INDICATIONS:

- Relationship between severity of the child's stutter and strong emotions.
- The child is in general afraid to make mistakes, or reacts sensitively to his stuttering.
- The parent-child interaction is characterised generally by a high degree of emotionality. This produces arousal/pressure in the child.
- The parent's reactions specifically to the child's communication seem agitated, stressed, anxious, worried, etc.; this is reflected by the child.
- The reaction of the parent (environment) to the behaviour of the child is poorly aligned with the child's temperament (*Poor Fit*).

- Parents shrink from talking about the stuttering with their child, even though everyone knows about it and knows that it is causing problems for the child. (*Conspiracy of silence*).

(Refer inter alia to the video interaction analysis in paragraphs 1c, 3, 4b, f, 6a, b, c, d.)

GOAL:

The parent demonstrates that she or he hears and sees the child. The parent shows in word and deed that he or she accepts the child and the child's speech. The parent creates a calm emotional basis, reducing the communication pressure points for the child. Not all aspects can be translated into exercises; some will be mainly addressed during the parent sessions. However, here again, the speech therapist will strive for modelling, practice and skills training during the sessions.

POSSIBLE BEHAVIOURAL CHANGES ON THE PART OF THE PARENT:

- Learning to, in general, remain calm (preventively) and to curb his or her own intense emotions around the child.
- Providing structure and therefore safety and predictability. Many pre-schoolers are soothed by routine and predictability (for example, regularity in meals). The weekly routine may be visualised by the parents in charts with pictograms. Special events, such as putting out a shoe for St. Nicholas, can be marked on the chart. In this way, the frequency and when this is allowed is clearly established and visible, providing a more calming environment.
- Understanding and acknowledging the child's temperament and adjusting his/her reaction to the child accordingly. The parent strives for a 'Goodness of Fit', (learning) to value the child for who he is instead of reacting to what he does.
- Curbing the child's strong emotions by learning to react in two steps (see Appendix 5 Communicating with lowered Emotional Demands: two steps). A strong emotion in the child will often be regulated sooner if the emotion is verbalised in a responsive, calm tone of voice, to give it a little space (first step). Verbalising this emotion in the form of a statement then validates the child's strong (negative) emotions. Next, the normal routine is restored with calm behaviour (second step).
- If the child remains stuck in his emotional state, e.g. anger, the parent might say in a calm, neutral voice that "he needs to go to his room, where he can be angry all he likes." Importantly, the child should not feel that he is being sent to his room as a punishment for expressing his anger. However, sending him to his room prevents his anger from being reinforced by the attention it might receive in the social situation.
- Refraining from offering advice about the way the child speaks. While obviously well-intentioned, this often has the result that the child reacts with more tension to his stuttering.
- If the child exhibits a negative emotional reaction in relation to his stuttering (for example, fear, frustration, anger or helplessness), or is clearly wrestling with his speech, the parent reacts responsively and calmly, in a non-judgmental way ("Talking can be really hard sometimes; it happens to everyone now and again.") The parent models that stuttering is allowed.
- Modelling how to handle making a mistake in a relaxed way ("It happens"), so that the child puts less pressure on himself when he makes a mistake.

- Now and again, the parent will casually speak using the disfluencies/stutterings the child makes, with the aim of lessening the child's sensitivity to this. This exercise is often not immediately clear to the parents and sometimes the parents themselves are very sensitive about stuttering. It is therefore recommended first to discuss the motivation for this behaviour change with the parents and to practice it during a session without the child being present.

5.4 Reducing Cognitive Demands

COMMON INDICATIONS:

- The child wants to "know everything" and keeps asking more and more.
- The parent asks questions that are relatively highly cognitively complex.
- Observing 'demand speech': "Tell so-and-so what…
- The parent applies a more complex level of language/cognition relationships when conversing with the child than would seem appropriate to the developmental stage of the child.
- The parent regularly introduces new topics and/or topics outside the "here and now" context.

(Refer inter alia to the video interaction analysis paragraphs 1d, 2a, b, 3, 4a, d, e, and 6c.)

GOAL:

The parent is alerted to excessive cognitive demands placed on the child, and modifies this behaviour where necessary. Clinical practice has taught that excessive cognitive demands exacerbate stuttering.

POSSIBLE BEHAVIOURAL CHANGES ON THE PART OF THE PARENT:

- Asking one question at a time, the complexity of which is tailored to the child's (developmental) age and allows the child sufficient opportunity to respond.
- Posing a question in such a way that the child is free to comment or not: "Hmm, let me think, I wonder what the kids could have done at school today… I think they did painting." The child is free to decide whether to pick up on this 'communication thread' or to let it go.
- Trying to avoid 'Demand speech' as much as possible and to replace by a statement. 'Demand speech' is a type of relatively complex question, but tends not to be recognised as such by parents: "Tell mummy what you did at school today"; "Tell daddy what you told me about the little girl in your class." There is far less communication pressure when the parent instead speaks in statements and makes longer pauses. The mother could start, for example, by saying: "Josie told me about something fun she did at school today, daddy…". If this is followed by a longer pause, the child may or may not jump in. The parent might also follow up by adding something like "It was something to do with paint bottles…", once again giving the child the opportunity to take up the story or not.
- Following the child's initiative with his or her full attention instead of suggesting new subjects and asking the child to pay attention to these. In this way, the parent is in tune with the child and engaging with him on his level.
- Conversing with the child during play and reading books with the child that are appropriate to his language/cognition relationship level. This also applies to answering the child's questions. A pre-schooler generally only needs to know the main outlines, not all the details.

6 Phase II: Increasing the child's Capacities

Once a stepwise reduction of all the relevant Demands has been achieved and the fluency enhancing environment has consequently gained a more definite shape, attention can be turned to reinforcing the child's Capacities for fluent speech. Phase II is initiated if an insufficient level of fluency has been attained after completion of Phase I.

Note: The fluency enhancing speech behaviour that is the end product of Phase I remains the basis for treatment during Phase II: all exercises directed at increasing the child's Capacities are performed using this speech behaviour. The speech therapist continues to be a model for the parents. This aspect, therefore, remains a *recurrent component* of each treatment session in Phase II as well.

Also, the fixed order in which the four domains are addressed remains unchanged in Phase II: Motoric, Linguistic, Emotional and Cognitive. However, in Phase II, a domain does not need to be completed before moving on to the next. For example, it may well be necessary to train the speech motor skills for a prolonged period. In that case, these might simply be more briefly addressed during the actual treatment session. At the same time, next to these exercises in the Motoric domain, work can be started on the reinforcement of the child's Linguistic skills where necessary. Or a start can be made with tackling the Emotional Capacities, while also spending part of the session on training new levels of SMT and, if necessary, on language skills training. In Phase II, again, only those indications specific to the child are addressed, as long as his fluency is not yet sufficiently established.

Finally, the structure of the treatment sessions during Phase II is as a rule similar to that of the sessions in Phase I: the speech therapist models an exercise while the parent observes and takes notes in the logbook; the parent is given the opportunity to practice the exercise while the speech therapist observes and provides constructive feedback (if necessary). When the parent has mastered the exercise, it is repeated at home.

6.1 Increasing the child's Motoric Capacities

POSSIBLE INDICATION:

- The OMAS test (Riley & Riley, 1985) has revealed inadequate speech motor skills. Results from the Computer Articulation Instrument (CAI, Maassen et al., 2019) support this.

GOAL:

Improvement of the motor planning and execution of speech, as evidenced by an improved accuracy, fluency and speed of the speech movements.

METHOD:

The speech motor skills are trained using Speech Motor Training (SMT; Riley & Riley, 1985; 1999). The OMAS and SMT are available on the RESTART-DCM website for speech therapists who have attended the workshop.

As soon as both parent and child are able to perform the exercise correctly during the treatment session, they then practise this twice a day, at home and every day, for 2×5 minutes. During this phase, the Special Times are optional.

6.2 Increasing the child's Linguistic Capacities

POSSIBLE INDICATIONS BASED ON THE ASSESSMENT AND OBSERVATIONS IN PHASE I:

- There is a developmental language delay or disorder.
- There is an imbalance in the language profile: a significant difference in one or two language components (sentence comprehension, word comprehension, sentence production, word production, sound production) compared to the other components. The test manual will sometimes indicate at what point a difference is statistically significant. If it does not, we maintain a difference of one standard deviation.
- There is a delayed availability of words or sentence structures during spontaneous speech. A delayed availability of the word form can appear in normal linguistic nonfluencies such as: /umba, umba, umbrella/. A delayed availability of the word as a whole (lexical-semantic) can emerge from a test (Renfrew, 1997) or observations of spontaneous speech – long (filled) pauses prior to a content word – or from descriptions or comments made by the child himself, e.g.: "My head knows it but my mouth doesn't." Delayed availability or problems with planning the grammatical structure may be indicated in the case of long (filled) pauses, word or sentence part repetitions, revisions or false starts.
- Phonological problems are seen.
- The child barely makes use of natural pauses (imaginary full stops or commas).

GOAL:

The improvement of the language skills, insofar as these (appear to) affect fluency; teaching the child coping strategies that he can use as long as his insufficient language skills impact negatively on his fluency.

METHOD:

These language skills will be practised at home during the Special Times – minimally 5 days per week. Care is taken to ensure that training the Linguistic Capacities does not result in an increase of the Demands. Overtraining a skill is recommended before a new aspect is addressed.

Note: Part of the Special Times (a brief 5-minute bout) can be used to work on progressing the SMT.

- Eliminating an eventual imbalance in the child's language profile (for example, relatively weak word comprehension) through appropriate language stimulation.
- Improving or automating sentence production through the automation of relevant sentence structures through play (TenT, Schlichting & De Koning, 1998; in English: BEST, McKean, Pert & Stow, 2012).
- Improving word retrieval by means of training word retrieval skills (including practicing semantic categories and/or learning to use same sound cues) and by learning coping strategies, such as description: ('the thingy to…').
- Using play (stoplight talk or bus stop talk) to teach the child to make pauses in longer sentences and when telling a story. In Phase I, this was facilitated by the parent (reduced Demands – Linguistic Domain). If the child still fails to insert the pauses without intervention from the parent, he will be directly taught this skill.
- Improving the phonological skills is done with caution as a rapid growth in these skills is associated with persistent stuttering (Paden et al., 2002). This treatment goal is therefore postponed until the child has achieved a substantial degree of fluency, unless the child is experiencing an impediment (frustration, comprehensibility, beginning to read). Suitable methods are, for example, Hodson & Paden (Hodson & Paden, 1991) and Metaphon (Dean, Howell, Waters & Reid, 1995) which strongly emphasise visual and audio training and provocation within facilitating contexts. Directly stimulating the sound production, for example, by 'expressing the sound' with intensified articulation pressure is never done.

6.3 Increasing the child's Emotional Capacities

POSSIBLE INDICATIONS BASED ON THE ASSESSMENT AND PHASE I:

- The child is extremely sensitive about his speech and/or stuttering.
- The child has a reactive temperament and low emotional self-regulation abilities, and this is associated with more frequent or more severe stuttering.

GOAL:

The child will develop a calm and relaxed attitude towards speaking/stuttering; the child will learn to recognise and regulate strong emotions or sensations that maintain the stutter (through provocation or reinforcement).

METHOD:

The speech therapist 'translates' the goals as far as possible into concrete exercises. After the speech therapist has practised the exercises with the child, she creates times during the sessions in which these are practiced with the parent. Some exercises are repeated during the Special Times – minimally 5 times a week; other exercises are intended as tools for the everyday situation at home.

Note: Changes in the Emotional domain will often be supported by modelling *thoughts* that are spoken aloud. This can blur the line between the Emotional and the Cognitive domains. The *focus* of the exercise (whether it is aimed at modifying an emotion or a cognition) determines in this case the domain to which the aspect to be modified is assigned.

- Desensitisation to the experience of stuttering. Despite modelling by the parent of relaxed disfluencies/stutters (reducing Demands, emotional domain) the child continues to exhibit anxiety or frustration about speaking/stuttering. We can distinguish three steps.
    1. The speech therapist produces disfluencies that resemble those of the child. Initially, the speech therapist will use the same intonation and facial expression to show an emotional reaction similar to that of the child, except the focus is on her words. For example "Oh, boy, that was big block; my mouth got completely stuck". After a brief pause but in the same turn, the speech therapist continues to talk to herself out loud – known as self-talk – offering a shift in focus that neutralises the underlying negative emotion. The speech therapist might say: "But awesome that I kept on going, because now everyone knows what I wanted to say." All throughout, the child can quietly observe the speech therapist, without being burdened by his own emotion.
    2. At a later moment during the session a comment can be made in a calm voice about a stutter produced by the child ("Gosh, now your mouth got a bit stuck, same as me just now. Oh well, talking can be hard sometimes"). Gradually, if necessary, the therapy can work towards:
    3. A game in which the speech therapist (and/or parent) and the child intentionally insert stutters when speaking, reinforcing a neutral and tolerant attitude toward the stuttering. This introduces the Cognitive concept that "it's OK to stutter" at domain level.
- During Phase I, the parents learned how to curb and avert strong emotions in the child (see inter alia Appendix 5). In Phase II, the focus shifts to teaching the child skills to regulate his emotions himself. We use the following stepwise procedure:
    1. The child learns what emotions are and to talk about them. There are therapy materials in abundance, as well as numerous picture books that can serve as a lead-in.
    2. The child learns to recognise and verbalise emotions – first, those of others (speech therapist, parents, brother, sister…) and then his own. Only after the child has mastered this step is he ready to proceed with step 3.
    3. The child learns how to curb an emotion that is too intense. In practice, this generally concerns learning to curb frustration and anger. Options:
        a. Point out a skill to the child that he may have already mastered. For example, speech therapist: "Hey mummy, did you see that? Marc couldn't manage to tie his shoelace and he got a little mad. He went over to daddy and asked for help. That was so smart of him, to think of a new plan when something doesn't work. That way, you don't have to stay angry." But not addressing this to the child directly, the child is free to process this verbalization of how to self-regulate without interference.
        b. The speech therapist may also, just as described in the above in relation to the feelings when stuttering occurs, exhibit the negative emotion in the same way as the child does, and then use self-talk to model how to let go of the emotion.
    3. During the final step, the speech therapist creates moments during a treatment session in which a specific emotion is evoked in the child. The speech therapist then goes through the steps together with the child to regulate this emotion.

6.4 Increasing the child's Cognitive Capacities

INDICATIONS:

- The child demonstrates inadequate turn-taking behaviour, despite guidance from the parent (Phase I).
- The child has a low metaLinguistic awareness.
- The child makes the impression he is a perfectionist in general, or with regard to his speech/fluency.

GOAL:

To learn age-appropriate concepts that can promote easy and carefree – and consequently more fluent – communication.

METHOD:

As soon as the parent has gained sufficient mastery of an exercise, this must be practised one-on-one during the Special Times at home, minimally 5 days a week. Possibly in combination with exercises for other domains.

- The concept of turn-taking/speech rules is taught (Conture, 2001):
  - Listen when other people are talking (ears open)
  - Don't talk out of turn (wait for your turn)
  - Don't interrupt other people (mouth shut)

  The first step may be games in which turn-taking in the game is linked to turn-taking in speech. Here again, the speech therapist models how to learn the rules: she starts by talking out of turn, stops herself, then uses audible self-talk to remind herself of the speech rule and gives herself a pat on the back for being smart enough to wait for her turn. The parent first observes but starts to take part as soon as possible and to take over the role of the speech therapist. The times the child waits, even if it is only for a few seconds, are immediately pointed out by the speech therapist and verbalized in a positive way.
  The opposite may also occur: the child keeps getting cut off when it is his turn to speak. The speech therapist models, verbalises and invites the child, first together and later alone, to ask for his turn back.
- The child is taught concepts to enable him to 'talk about talking'. For example: the concepts of slow↔fast, easy↔hard, etc.: by performing activities in a fast/slow, tense or relaxed way, the child can learn to carry over the physical and mental experience of the concept into the act of speaking words.
- the child learns that 'mistakes are allowed', that no one excels in everything and speech does not necessarily have to be fluent to be 'good'. This aspect was addressed in the emotional domain with the intention of 'relieving' the negative emotion. Here, the focus is on the (cognitive) *concept*. Once again, the speech therapist creates an opportunity for practice based on a step-by-step procedure.
  1. Using self-talk that is audible to the child, the speech therapist begins, with a departure point the child's negative cognition.
  2. The speech therapist models how to shift the focus towards a new concept – once again, audibly, using self-talk.
  3. The speech therapist provides other (created) settings in which *together with the child*, the same reasoning technique is practised.

7

Phase III: Working more directly on fluency

Phase III is initiated if Phase I and Phase II have failed to yield an acceptable level of fluency. Treatment in this phase is targeted more directly at the child's speech behavior. The intention is emphatically not for the child's environment to *expect* him to apply this speech behavior in daily life. The idea is to wait and see if the child spontaneously starts to employ other, easier speech behaviors as a result of having experienced these in the exercises.

In Phase III, again, maintaining at all times a tolerant attitude towards stuttering continues to be of paramount importance: *stuttering is allowed!* Ensuring the child has a positive attitude towards communication remains key.

INDICATION:
Phase I and II have been completed but both the speech therapist and the parents feel that a further reduction in stuttering severity is possible.

GOAL:
For the child to experience that speaking and stuttering do not always have to follow fixed patterns. The child learns that he can exert control over this, enabling him to move into a more fluent speech pattern. If a child is able to regularly experience this – by getting enough practice in a playful manner – he will be more likely to employ this effect of a slightly different approach to control, of his own accord.

METHOD:
Different speech patterns are practised in play – for example, a little bit slower, slightly less tense, with slightly more pronounced articulatory movement. These different speech behaviours are solely practised in the form of a game – even at home, during the one-on-one 15-minute PC periods or with the whole family. In daily life, therefore, a child is never asked to use one of these behaviors to stutter less or to "hide" the stuttering. The parent can join in at various moments: the parent can practice along with the child from the very beginning, or the child is first taught the modifications by the speech therapist while the parent observes, in which case the child, as it were, 'teaches' the modifications to the parent. At home, this could even be practiced in the form of a family game.

- Practising the *stuttering* modifications as a game and using the model of the speech therapist: relaxed versus tense stuttering, repetitions versus prolongations/blocks, single repetitions versus multiple, glide sounds versus multiple repetitions, etc.
- Practising the *speech* modifications as a game and using the model of the speech therapist: practising variations in rate, in volume, in pitch, in melody.
- The variations are chosen dependent both on the type of stutters produced by the child and their fluency enhancing effect. The kind of game and type/degree of change are tailored to the developmental level of the child.

8 Tapering off the therapy

INDICATION:

Whenever sufficient fluency has been attained. This is a point that is discussed by the parents with the speech therapist. Sufficient fluency may be attained:

- During or after Phase I, once the parents have created a sufficiently fluency enhancing environment for their child.
- During or after Phase II, once the child has sufficiently trained one or more Capacities.
- During or after Phase III, once the child has learned to play with the stuttering and speaking modifications.

GOAL:

The parents are able (for the time being) to continue with the changes in speech behavior without help, they know what to do in the case of a relapse and are aware of the criteria for seeking contact with the speech therapist.

METHOD:

- Parents are taught to gradually fade out the fluency enhancing environment (behaviour changes) introduced during the therapy if the stability of the child's fluency should allow. The parents are also taught to (rigorously) re-implement these behavior changes if a relapse into stuttering occurs, or preventively, if the parents expect this to happen (for example, if a big change, like starting school, is imminent). During the treatment session, a pressure-inducing element, such as reducing the response latency times is briefly, perhaps for 2 minutes, added in order to desensitise the child, as it were, to the normal level of pressure in communication. Gradually, the communication will thus become more normalized.
- Parents increasingly make their own choices for specific interventions (behavior changes) and are able to act accordingly. Parents learn to be flexible in reducing and (consciously) normalizing Demands.
- The speech therapist and the parents together draw up a relapse prevention plan specifically for the child. This also contains the criteria for contacting the speech therapist anew. In general, these include when parents are unsure (something is not going right), if there have been 2 dips in fluency, and if no upward trend is seen in fluency despite the interventions initiated by the parents.
- The frequency of the therapy appointments is tapered off in consultation with the parents. Some parents have a greater and longer need for feedback than others. All the procedures on how to act in the case of relapse are entered in the logbook.

In some cases, the therapy may be terminated prematurely. This may occur at the parent's initiative:

- Due to circumstances it is not the right time for therapy
- The parent has a preference for a different method
- The parents no longer require help, etc.

The speech therapist may also initiate the premature termination of the therapy:

- Despite the support provided through the therapy, the parents cannot or are unwilling to implement the required treatment at home or to perform this correctly.
- The speech therapist and the parents agree to switch to a different method because, despite all the hard work by both parties, the child's fluency fails to progress satisfactorily.

If at all possible, the therapy should be ended in a neutral manner, to allow for the possibility of continuing this at a different time and/or using a different method.

IN CONCLUSION

The RESTART-DCM Methodology is a treatment approach designed for pre-school children who stutter. Not every therapy is equally suitable for everyone. The selected treatment should never become an end in itself. *Customization* remains the most important element to give the child the best that therapists have to offer.

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Appendices

RESTART-DCM Method 2021

APPENDIX 1 Parent-child interaction form

Behaviour likely to be addressed in therapy in italics.

	Communicative behaviours observed	Free play	Making puzzle
L L E C	**1. Questions parent to child** a. few / *many* *b. open* / closed *c. in a commanding tone, or with little time for the child to answer* d. adequately attuned/ within the present context		
L/C L/C M M	**2. Turn-taking behaviour** a. balanced number of turns — proportion number of turns parent-child b. even length of turns parent-child — proportion number of utterances per turn parent-child *c. talking simultaneously / interrupting* *— parent interrupts – child interrupts* *d. interaction times are too short* *— parent starts too fast – child starts too fast*		
E	**3. Parent response to stuttering** *a. negative verbal reaction to the stuttering* of the child *b. negative non-verbal reaction to the stuttering* of the child (parents look away, hold their breath, go rigid, etc.) c. react in a neutral and empathetic way		
L/C E M C/L C/L E	**4. Parent(s) linguistic behaviour** *a. introduce a new topic* *b. correct child's verbal behaviour* *c. make utterances that increase time pressure* d. content is attuned to earlier utterance of the child (lexically redundant) e. form is attuned to earlier utterance of the child (grammatically redundant) f. engage in parallel talk		
M	**5. Articulation rate** Average calculated across at least five utterances: Write out in full and measure with a stopwatch Father _____ syl/sec Mother _____ syl/sec Child _____ syl/sec Sibling _____ syl/sec		
E E E E C	**6. Other parental behaviour** a. ignore undesirable behaviour child or *give negative attention* b. show *directive*/non-directive action ('tone') c. encourage the child d. stimulate the child's self-esteem e. maintain adequate level of play/cooperative play		

M = Motoric, **L** = Linguistic, **E** = Emotional, **C** = Cognitive

APPENDIX 2 Assessment overview form

CASE _____ **DATE** _____ **THERAPIST** _____

CASE DESCRIPTION BASED ON ANAMNESTIC INTERVIEW		
Personal information	Name:	
	Age:	
	Gender:	
	Family:	
	Parental occupation:	
	School/level:	
Child's history – in general	Motor development:	
	Illnesses:	
	Hearing:	
	Treatment in general:	
	Physical complaints:	
Child's history – specific	Onset speech-language development:	
	Course:	
	Onset stuttering (age):	
	Possible Cause(s):	
	Severity shortly after onset (8-point scale):	
	Course following onset:	
	Family history: *(recovered / persistent)*	
	Current severity: *(8-point scale)*	
	Stable / variable pattern:	
	Awareness of stuttering:	
	Environmental factors:	
	Previous speech therapy (for stuttering or other speech-language problems)	
	Other significant information:	

APPENDIX 2

CASE _____ **DATE** _____ **THERAPIST** _____

ASSESSMENT FINDINGS	
Stuttering	Description of stuttering, types of dysfluencies: SSI: Score _____ = very mild / mild / moderate / severe / very severe

ASSESSMENT DATA **DEMANDS**
Parent-child interaction analysis *("behaviour likely to be addressed in therapy")*, parent interview, child interview, questionnaires, etc.

Motoric domain	**Linguistic domain**	**Emotional domain**	**Cognitive domain**

ASSESSMENT DATA **CAPACITIES**
Test results, questionnaires, standardized observations, etc.

Motoric domain	**Linguistic domain**	**Emotional domain**	**Cognitive domain**

APPENDIX 2

CASE _____ **DATE** _____ **THERAPIST** _____

TREATMENT PLAN	
Treatment Goals	Demands:
	Capacities:
Materials:	
Methods:	

APPENDIX 3 Starting RESTART-DCM THERAPY: Information for parents

RESTART-DCM therapy is a treatment approach for young children who stutter. It is based on the Demands and Capacities Model (DCM), developed in the USA. This model is explained in the below. Thanks to RESTART, the scientific study into this treatment, the therapy is supported by a clearly described protocol. This information folder offers a brief summary of three questions to which every parent wants to know the answer: why does my child stutter, what can I do, as a parent, to help my child and what can I expect from the treatment?

Why do children start stuttering?

Despite the huge volume of knowledge about stuttering available to scientists today, its precise cause remains unclear. Most scientists view stuttering as a neurodevelopmental disorder. Due to a combination of hereditary (genetic) and developmental factors, approximately 8% of all children start to stutter between the ages of 2 and 5. During this period, children are developing in many different areas: they start having ideas that they want to share with their environment, they use many new and more difficult words, they start speaking in longer sentences and their speech rate increases. They employ these newly-developed language skills in their steadily expanding 'world': with friends, in their playgroup, at school, etc.

The Demands and Capacities Model

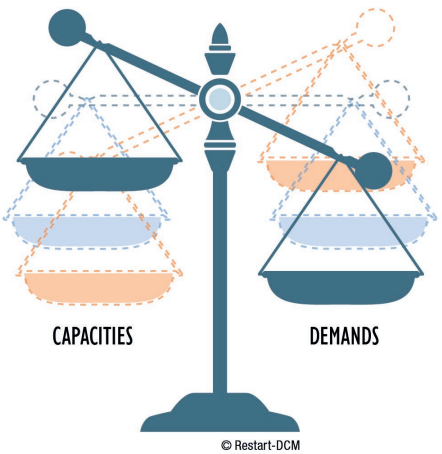
According to the RESTART-DCM approach, when a child starts to stutter, this is what happens: on the one hand are the child's *Capacities* for fluent speech. By Capacities, we mean the skills and capabilities that are required to speak fluently such as being able to choose the right words and making sentences in a way that others can understand what is being said. Part of this is also being able to verbalise strong emotions – putting these into words – which lessens the force of these feelings. It is also extremely important that the child is able to coordinate his speech muscles properly. As children grow older, the *Capacities* needed for fluent speech mature and grow stronger.

Next to *Capacities* are the *Demands* that are placed on speech. These Demands refer to: the challenges confronting a child when speaking with other people. Most of these challenges are automatic and unconscious. They are normal. For example: adults have a far higher speech rate than young children. And: when people get together in groups, everyone talks at once. Another example, relating to the child himself: children can have strong language skills, but when they use long, involved sentences, it places a high demand on their speech motor skills.

Sometimes, this can overwhelm their Capacities at that moment, at which point they can start stuttering. Other children want to say a lot very quickly. This can also demand too much of their speech motor Capacities, making it impossible for them to speak fluently. These children may also become frustrated, because they are demanding more of their power of speech than they can deliver at that moment. This feeling of frustration can make the stuttering worse.

As long as the child's Capacities for fluent speech develop rapidly enough, there is nothing particularly noticeable about his speech. The Capacities are strong enough to fulfil the increasing level of Demands. Now and again, the child will hesitate, start anew, repeat parts of words, stumble or drag out syllables. But it is when the development of the child's Capacities falls behind that the demands placed by the child on his speech production system will become greater than he is (as yet) capable of meeting.

The balance, the equilibrium between the Capacities and the Demands is then disturbed.



What can parents do?

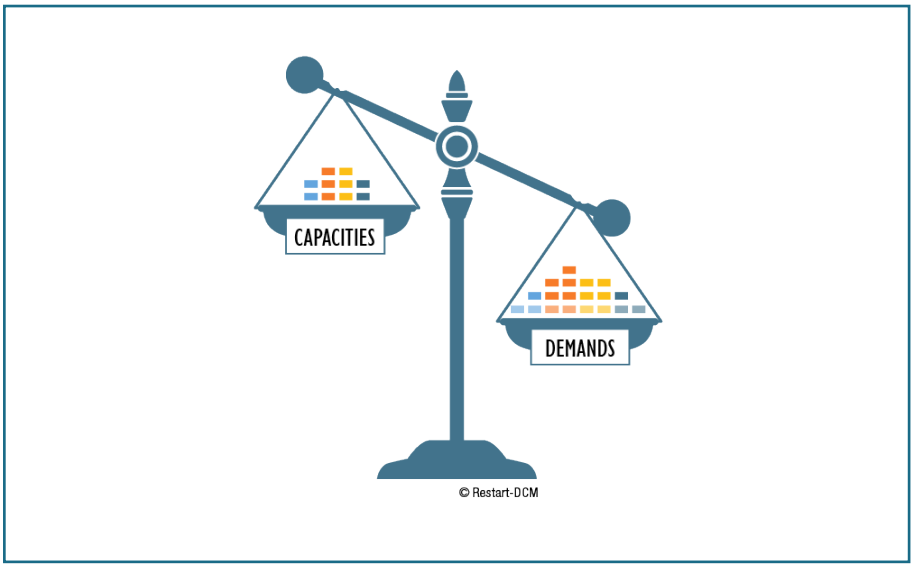
All parents who are worried about their child's stutter have one thing in common: they all want to help their child. Throughout the RESTART treatment, a speech therapist does precisely that: helping parents to create a new balance between these Capacities and the Demands. A new balance in which the Capacities match the Demands.

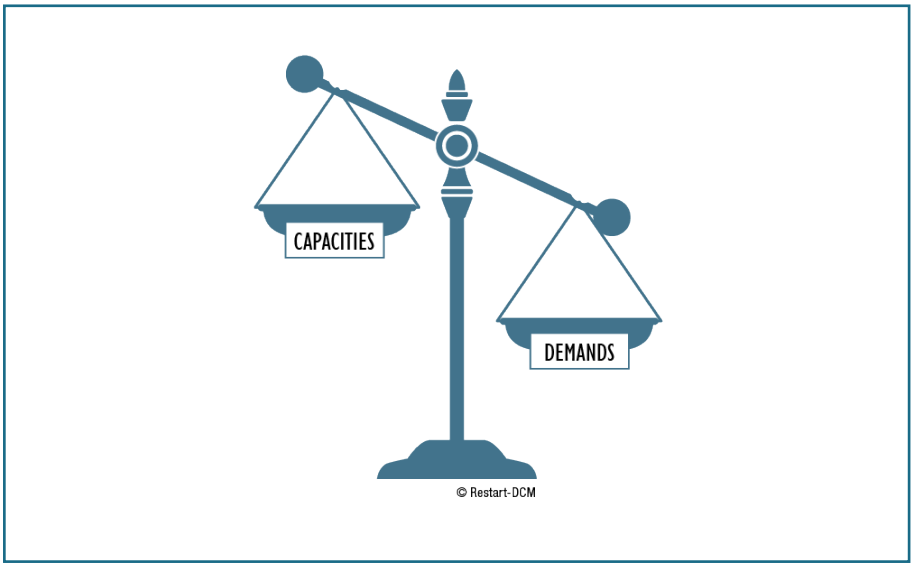
Parents do not cause stuttering, but they do play an important role in stimulating speech fluency. Throughout the treatment, the parents and speech therapist work together to achieve a better balance to enable fluent speech. The therapy starts by reducing the Demands imposed by the environment. For example, parents learn how to speak in a calmer fashion to the child. They can put the child's strong emotions into words, which will soothe the child and enable him to speak more easily. Changes of this kind improve the fluency because less is being asked of the Capacities of the child at that moment. The next step is to bolster the Capacities of the child. The speech therapist can do that, for example, with speech exercises, or exercises targeted at improving the child's vocabulary or at the ability to manage his emotions. As soon as possible, the parent practises together with the speech therapist to learn how to do these exercises at home. The speech modifications that parents learn to implement in the everyday situations at home are of paramount importance for the impact of the treatment. These enable the parents to immerse their child in a speech environment that will make fluent speech easier.

What can you expect of the treatment?

The chance that the treatment will be effective is very high. The best outcome of the therapy is when the child finds, feels and holds on to his or her "fluent speech groove". However, there will always be a small number of children, whose Capacities are not adequate for achieving complete fluency. With the parents' support, children can be prevented from developing negative feelings about their speech or about themselves, or from fighting against their stuttering. Research has shown that these parents and children, too, years after the treatment has ended, are generally very satisfied with the child's communication in everyday speaking situations. In short, these children speak perfectly well, with a bit of mild stuttering, without this being a source of concern for the child.

APPENDIX 4 Restart-DCM Balance





APPENDIX 5

Communicating with lowered Emotional Demands: two steps

Marie-Christine Franken and Caroline de Sonneville-Koedoot[1]

Step 1: Affirming the child

This document is divided into two parts. The first part (step) explains how we, as caregivers, can clearly demonstrate to a young child that (s)he is explicitly seen and heard, or, in other words: how we can *affirm* a child. The second part (step) discusses the next step that can be taken. The purpose of the second step is to advance the positive development of the child.

THE CHILD'S INITIATIVE

Anything a child says, does, feels, wants or thinks, that (s)he comes up with him- or herself is called an **initiative**. A child can take initiative in different ways: by making a sound (such as a baby, who cries because (s)he is hungry), pointing to something (e.g. a toddler, who can't yet use words to make his or her meaning clear), making a facial expression (e.g. looking surprised or startled). It is important that a caregiver show the child that (s)he sees his or her initiatives. By noticing (**="acknowledging"**) the child's initiatives, a child feels seen and heard. This is important: it gives the child a sense of belonging and sends the message that (s)he is worthwhile. A sense of belonging (also called the right to exist) constitutes a basis for the development of the child's self-concept, (self) confidence and to form a secure attachment.

THREE WAYS TO AFFIRM A CHILD

1. Affirmation without words

If a child takes initiative, the caregiver can respond in various ways: by making eye contact, a friendly facial expression, leaning towards the child, winking, saying "uhhum" (small children) saying "ahah" (slightly older children). Through all these responses, the caregiver shows the child that his/her initiative has been noticed (acknowledged).

2. Affirmation with words

Young children: repeat, as literally as possible (using a grammatical sentence), what the child has said. For example, if the child says: "Bus go grandma", the parent repeats: "We're going to grandma's on the bus."

Older children: using slightly different words, repeat or summarize what the child has said. For example: the child says, "I have to do a presentation". Parent: "It's your turn to give a presentation" (repeating). Or the child says: "First we played football then we played with Lego and we also watched TV." Parent: "You did a lot of different things" (summarizing).

[1] This document was developed as an appendix to the RESTART-DCM Method (2007) and slightly revised for the second edition (2021).

N.B. Parents often have a natural tendency to repeat things in the form of a question. An affirmation should however not be a question, but a declarative statement, i.e., concluded with a full stop, not a question mark, and said in a friendly tone of voice. Repeating or summarizing in the form of a question can give the child the idea that what he/she said is being called into question, which would create the opposite effect. Example: A child says: "I did it." Parent: "You did it, well done", instead of "You did it?"

3. Parallel talk
Parallel talk is used to verbalize, in an accepting or approving manner, what the child is doing, thinking, wants or feels at that particular moment.

Doing: "You're drawing with a green crayon."
Thinking: "You're thinking: I hope mummy thinks it's ok".
Wants: "You don't want to go to bed yet."
Feels: "You're worried that the party will be cancelled" / "You're disappointed that grandma's not coming."/ "You're upset that we're not going to the zoo after all."

Parallel talk verbalizes what is **actually** taking place at the present moment. Talking about what is going on in the moment makes the situation clear, comprehensible and predictable. The child knows what to expect, which makes him or her feel safe and secure. Example: "You picked up the blue block" (instead of "You're playing"). Or: "You were disappointed you weren't invited' (instead of: "You were really angry yesterday"). Like an affirmation, parallel talk occurs in a friendly tone of voice in the form of a statement, not a question. When describing the child's feelings or thoughts, the caregiver enters the child's world or emotions. Sometimes their interpretation of what the child is feeling or thinking is wrong. It does not matter when this happens, as the child, precisely because of the caregiver's parallel talking, will feel welcome to "correct" the caregiver's interpretation. What is important is how well the caregiver is attuned to the child. Example: if the child does not immediately start to eat, the parent may interpret this as "You're not hungry yet". Child: "I am hungry, but I don't feel like spinach."

Parallel talk should be neutral, free of any value judgements. This means that negative behaviour is named, without the use of judgemental language. Instead of "You're being annoying", describe what is actually happening: "You're kicking against my chair". Parallel talk contains no compliments or opinions, i.e., not: "That's a lovely drawing you're making", but "You're drawing". Parallel talk always starts with "you". That way, it's always about the child rather than yourself.

Parallel talk, like affirmations with words, not only reinforce the child's self-confidence; both also stimulate the child's language development.

WHY IS AFFIRMING THE CHILD SO IMPORTANT?

By affirming the child, you send the child the 'message' that you are interested in him/her. The child feels worthwhile, has a feeling of security. In addition, it also helps the child to develop (self) confidence.

By using parallel talk, a caregiver holds, as it were, a non-judgemental mirror up to the child. As a consequence, the child not only feels seen, he or she also realizes what they are doing at that particular moment. Parallel talk can suppress or prevent impulsive or excited behaviour on the part of the child. Using parallel talk increases a child's perception of him/herself, allowing him/her to develop (more) self-awareness and own identity. As a result, the child, as he matures, will find it easier to remain him/herself in a group.

CONFLICT SITUATIONS

Experience has taught that explicitly remarking on (repeating or summarizing) the child's initiative works particularly well in (imminent) conflict situations.

At times when emotions (impatience, disappointment, fatigue, irritation, anger) are involved, caregivers often forget to repeat/summarize what the child says. Understandably, the response is unthinking and often contains a correction or "rejection". The child adapts, does what is expected of him/her, or the conflict escalates.

If caregivers can succeed in repeating or summarizing, even during a difficult moment the conflict will be more subdued or perhaps even avoided altogether.

The idea behind this is that a child who is secure in the knowledge that he or she is heard and understood will in turn be more willing and better able to heed what the caregivers are asking of him or her.

GIVING AN AFFIRMATION, AND THEN WHAT?

Repeating, summarizing or describing what a child says is not the same as agreeing with what he or she says or letting him/her have his own way. After repeating or summarizing what the child said or describing what (s)he is doing, a 'second step' will often follow; something the caregiver then says or asks. This second step can serve to return calmly to the normal routine, or to promote the positive development of the child.

Example: a child does not feel like cleaning up and coming to the table to eat. A parent often responds as follows: "Put your toys away, we're about to eat". The child diddles around and says, "I'm not hungry" and does not do as he or she is asked. An approach, which fosters the child's feeling of being heard and understood, which therefore also increases the willingness to do as the parent asks, is e.g.: "You don't feel like eating yet (=repeating). You'd rather go on playing; you're having good fun, aren't you? (= using parallel talk). But it's just about time to eat (= opinion). Tell you what, I'll help you tidy up" (= proposal) Or: "Move your things over to there, then you can go on playing after we've eaten" (=positive motivation).

This second step, which follows after affirming a child, is discussed in detail in part II.

Communicating with lowered Emotional Demands: two steps

Marie-Christine Franken and Caroline de Sonneville-Koedoot

Step 2

In the first part, it was discussed how caregivers can *affirm* a child. This second part deals with the step that often follows the affirmation.

GIVING AN AFFIRMATION, AND THEN WHAT?

In all cases, first: an affirmation is always given. Then, a second step may follow. This may take two different forms, i.e., A and B.

A. Motivating the child

If a child exhibits undesirable behaviour, we use neutral parallel talk as a first step, e.g. "You took another cookie". The purpose of the second, motivational, step is to restore the normal routine with calm behaviour, in order to decrease the child's stuttering. It involves motivating the child, using positive words, to cooperate, e.g. "Put it back quickly." Positive motivation means that caregivers don't say what they *don't* want, but instead what they *do* want.

It also helps to identify the positive intentions behind a child's behaviour – if possible, give your child the benefit of the doubt, e.g. "You really felt like having another cookie. That's why you took another one."

Another example: if a child keeps tattling on his or her little brother: Parent: "You want to keep an eye on/ take good care of your brother" (describe the intention). "It's ok, I'm watching him. You go play with your puzzle/try to find all the blue pieces in the puzzle" (positive motivation). Instead of "Would you quit tattling on your little brother"?

Using positive motivation, a caregiver provides clarity, direction, structure and sets limits. This makes children feel safe and secure, as they know what they may do.

B. Deepening

By 'deepening' we mean: the caregiver offers his opinion, makes a proposal, makes an agreement or asks a question. The purpose of this second step is to advance the development of the child. Make sure that this second step does not turn into an "interrogation": the main consideration is the contact with the child. Below are examples of how parallel talk (Step 1) could be followed up in the second step:

Parent: "You want to shower first and then watch some TV." (=parallel talk). "I think that's a good idea" (=giving an opinion).
Parent: "You're hungry" (=parallel talk). "Let's have pancakes today" (=make a proposal).
Parent: "You feel like having a piece of candy" (=parallel talk). "When we have coffee, you can have a treat" (=making an agreement).
Parent: "You are angry" (=parallel talk). "Can you tell me why you're so angry?" (=asking a question).

WHY IS 'DEEPENING' AS THE SECOND STEP IMPORTANT?

As a child matures, (s)he must develop in a number of areas. A child must learn to talk. (S)he must learn to engage in age-appropriate activities. A child must learn to make and maintain contact with others. In other words: a child has several developmental tasks. A child largely performs these developmental tasks in relation to his/her caregivers. Were caregivers to affirm the child and nothing else, the child would not develop adequately. By adding an opinion, proposal, agreement or question, a child learns to become aware of others' feelings. It teaches perspective taking and can help in learning that other people also have needs.

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