Hércules Ribeiro Leite & Ricardo Rodrigues de Sousa Júnior

English Version

CanChild
f-words for Child Development

Manual
The F-words Lens Tool

Introducing a new tool to identify treatment components

UFMG

UFJF
UNIVERSIDADE FEDERAL DE JUIZ DE FORA

UFPB

Development Team

Hércules Leite

Ricardo Júnior

Carolyne Miranda

Jayza Silva

Eliane Policiano

Ariane Marques

Arthur Lima

Paula Chagas

Deisiane Souto

Egmar Longo

Information about the authors of the manual

- **Hércules Ribeiro Leite** – Physical Therapist, MSc and PhD (UFMG), Professor in the Department of Physical Therapy at UFMG. Associate Member, CanChild.
- **Ricardo Rodrigues de Sousa Junior** - Physical Therapist, MSc and PhD (UFMG)

Information about contributors to this manual*

- **Deisiane Oliveira Souto** - Physical Therapist, MSc and PhD (UFMG)
- **Jaíza Marques Medeiros e Silva** – Physical Therapist, MSc and PhD student (UFPB)
- **Arthur Felipe Barroso de Lima** – Undergraduate student in Physical Therapy (UFMG)
- **Carolyne de Miranda Drumond** - Physical Therapist, MSc student (UFJF)
- **Eliane Beatriz Cunha Policiano** – Lawyer, MSc student in Law (UFJF), mother of a very smart boy with cerebral palsy, GMFCS level III
- **Ariane Cristina Marques** - Physical Therapist, Specialist in Neurofunctional Physical Therapy for Children and Adolescents (UFMG)
- **Paula Silva de Carvalho Chagas** – Physical Therapist, MSc and PhD (UFMG), Professor at the Faculty of Physical Therapy at UFJF. Associate Member, CanChild.
- **Egmar Longo** - Physical Therapist, PhD in Disabilities (Universities of Salamanca/Utrecht), Professor in the Department of Physical Therapy at UFPB

*All participants contributed to the development of the tool and reviewed the final version of this manual.

Summary

What is the "F-words lens tool" clinical reasoning framework?

This tool was developed when members of our team were conducting a scoping review on intervention ingredients for ambulatory children with cerebral palsy (CP) [1], which used the **"F-Words for Child Development"** [2] as the conceptual background and the *Rehabilitation Treatment Specification System* (RTSS) [3] as the model for identifying components of the intervention.

The development of the tool was carried out through the Patient and Public Involvement (PPI) approach, with the participation of seven researchers in the field of rehabilitation in partnership with two clinical Physical Therapists and a mother of a child with CP (Level III on the Gross Motor Function Classification System (GMFCS)).[4]

The F-words are a set of six words **(functioning, fitness, family, friends, fun,** and **future)** developed in 2012 by Rosenbaum and Gorter with the aim of translating the World Health Organization's biopsychosocial model of health – the International Classification of Functioning, Disability and Health (ICF) [5] – in the context of child development. These F-words aim to give a voice to children and their families and remind them that they should be part of their therapies and/or family routine [2,6]. The RTSS, on the other hand, was developed based on the need for rehabilitation professionals to identify, precisely, the different "labels" (i.e., different intervention names) available in interventions and their respective components: **ingredients** (what does the therapist manipulate and/offer), **mechanism of action** (how does the ingredient work?), **targets** (which result is directly expected?), and **aims** (which result is indirectly expected?)[3,7,8]. It is from the combination of these two theoretical models that the clinical reasoning tool **The F-words Lens Tool** was developed. This strategy aims to combine the two models, providing a tool in a language that is accessible to professionals and friendly to children with disabilities and their families.

The clinical reasoning of **The F-words Lens Tool** might also be used in research as a "conceptual framework" to guide qualitative, experimental studies, systematic reviews, etc.

Understanding intervention components (ingredients, mechanisms of action, targets and aims)

To facilitate filling out the **The F-words Lens Tool**, it is important that the professional has knowledge of the RTSS language and its intervention components. It is therefore recommended to read the RTSS Manual, available online (https://acrm.org/acrm-communities/rehabilitation-treatment-specification/manual-for-rehabilitation-treatment-specification/), and the published articles that provide the theoretical framework for this taxonomy system [3,7,8]. According to Van Stan et al., (2019), the RTSS presents three large groups of intervention components: Organ Functions (interventions that aim to change the functioning of organs or systems), Skills and Habits (interventions that aim to change or modify skills) and Representations (interventions that aim to change mental representations related to motivation and cognition)[3]. The **The F-words Lens Tool** presents these groups of intervention components categorized within the F-Words for Child Development: **'Fitness'** focuses on *mental and physical well-being* by engaging in physical activities or other recreational opportunities; **'Functioning'** refers to the *activities* a child carries out, as well as *participating* in play or completing a task; **'Fun'** involves *activities that a child wants to do and enjoys doing*, including ways to connect and have fun; **'Friendship'** emphasizes the quality of *social interactions, interest in friendships and the availability of friends*; **'Family'** is the *primary environment for a child* and a crucial focus for family-centred services; **'Future'** highlights the importance of positively considering this concept of 'F-Words', related to *expectations and dreams for the future* (tomorrow, next week, next year or adult life). It is therefore expected that the ingredients of interventions aimed at children and young people with disabilities will target one or more of these six words.

The table below presents the F-Words related to respective examples of interventions used in the practice of child rehabilitation, to facilitate understanding of its components and assist in filling out the tool. This table was based on the results of our scoping review, which evaluated intervention ingredients for young children with CP [1].

F-word	Example of Interventions	Ingredient examples (what the therapist manipulates or offers) *	Mechanism of Action (how the ingredient is supposed to work)	Targets (which changes directly with the ingredient)	Aims (which changes indirectly with the ingredient)
Fitness	Ankle-foot orthosis	External alignment corrections	Changes in lower extremity biomechanical alignment	Lower limb alignment	Performance on a motor task
	Functional electrostimulation Resistance training	Induced muscle activation	Changes in the musculoskeletal system	Muscle activation	Gross motor function
Functioning	Task-specific training Constraint-Induced Movement Therapy Bimanual training Conductive education	Repetitive and structured practice of a task	Learning by action	Performance in a motor task	Management of body structures and functions Participation in different contexts
	Goal-directed training	Modification or adaptation of part of a task to ensure its execution	Learning by action	Performance of a task	Management of body structures and functions Participation in different contexts
Family	Conductive education	Parental training Adaptations of contextual factors	Cognitive information processing	Parenting Skills**	Performance in a motor task
	Context-focused therapy	Adaptations of contextual factors/enviromental	Reduction of contextual barriers	Contextual enablers	Performance on a motor task Participation in different contexts
Fun	Constraint-Induced Movement Therapy Context-focused therapy	Inclusion of meaningful activities for the child	Affective information processing and engagement	Child engagement in the therapeutic process	Performance in a motor task Participation in different contexts
Friends	Modified Sports	Group activities	Affective information processing and engagement	Child engagement in the therapeutic process	Performance in a motor task Participation in different contexts
Future	Conductive education	Sharing educational information about expectations and prognosis	Cognitive information processing	Knowledge about the child's health condition	Management of body structures and functions Participation in different contexts

*Other ingredients may be present in the example interventions
**Skills the parent learns to support their child doing the task

Table 1. Menu of intervention components according to each favorite word

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What are the objectives of the The F-words Lens Tool?

- To offer the professional a tool that allows them to organize and communicate their clinical reasoning with an internationally-recognized framework
- To provide the professional with a tool that can be shared with the family in order to present the potential components of the intervention and the rationale behind them.
- To foster a collaborative family-professional model, helping to identify the components of interventions that are relevant to children and their families
- To promote a change in attitude and enable clinicians, children and their families to see the available interventions beyond "labels and brands" and look toward a focus on participation in everyday activities
- To help professionals, children and family members to identify ingredients of interventions that can be applied within the routine and context of the family based on their existing strengths and potential.

IMPORTANT: The **The F-words Lens Tool** is not a tool that aims to evaluate the effectiveness of a intervention. Rather, it provides a friendly structure for professionals, children and their families, in simple language, which facilitates clinical reasoning through a magnifying glass of the intervention components.

What is the structure of the tool and how to complete it?

Before starting to fill out the F-words Lens Tool, the professional must:
- Identify, <u>together with children and their families</u>, what their goals and their respective favorite words are. One strategy would be, for example, to use other F-words tools (Life Wheel or Goal Sheet, available on the F-words Knowledge Hub) (https://www.canchild.ca/en/resources/347-f-words-knowledge-hub)
- Identify, during the assessment and interview, the strengths/potential of the family and child, as well as the main barriers and challenges that could interfere with achieving goals (biopsychosocial model)

- **It is expected that** the tool will be completed together by the professionals and families;
- **Role of the professional:** To guide the family in identifying goals, carefully evaluate the patient's functional aspects and identify intervention components in accordance with the goals set by the family, advise on interventions that can be directed towards goals, inform possible intervention components based on the best scientific evidence available and share the completed tool with the family (pdf or printed);
- **Role of the child/family**: To reflect, collaboratively, and evaluate with the professional whether the components listed are in line with the goal established by the families and to decide on which therapeutic approaches they would like to explore to reach the goals.

To better understand how to fill out the tool, the team that developed it suggests uploading the tool template and reading the complementary clinical cases published in the article by Leite et al. (2024)[1]. **We suggest** the use of this tool **broadly** in different rehabilitation scenarios, health conditions, with children without a defined diagnosis, and across age groups.

The first column on the left side of the tool contains guiding questions that help you complete the process. **The first question concerns the goals of the child and their family** , related to the "F-Words". **The top part of the tool** presents a column for each of the "F-Words", where the professional must initially place the goals listed together with the child and their family (first line). **This is the starting point for filling it out.**
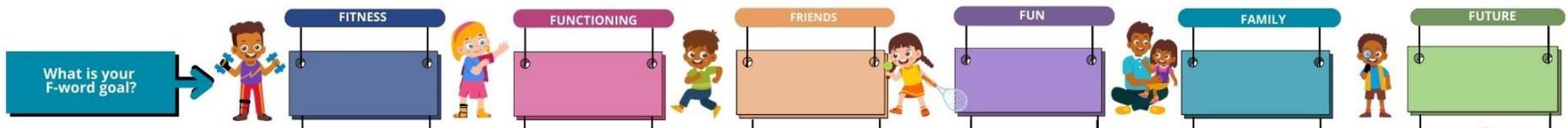
IMPORTANT: The tool should not be used in a rigid manner. Rather it supports and encourages the process of clinical reasoning of the professional and provides a way for the professional to share this knowledge with families. For example: although the picture shows the six f-words, it is common for families to have goals for only a few of the words. The professional should then target only the favourite words the family perceives as important to improve and set goals for these.

After filling in the goals, the remaining guiding questions numbered from 1 to 6 must be followed. These questions follow a line of clinical reasoning so that interested parties can broaden their view of the components of an intervention, initially starting from its ingredients.

IMPORTANT: Remember that, for any particularly goal, it may be necessary to use more than one ingredient within a favorite F-word. Different ingredients will work through different mechanisms of action. For example, for a child who wishes to drink from a cup without spilling the juice, interventions may need to include elements such as **repetitive and structured practice of a task**, but also **adaptations of contextual factors/environmental modifications**.

IMPORTANT: The tool should be used collaboratively after the entire evaluation and interview process with the families based on the biopsychosocial model. The magnifying glass tool aims to help the professional organize their reasoning after this process.

It will not always be necessary to choose a classic intervention that will take place in a therapeutic environment. Give caregivers the opportunity to see ingredients of intervention in their usual child and family routines and the power of changing the activity or the environment to support the child's participation.

IMPORTANT: The **The F-words Lens Tool** will not replace the importance of later defining SMART (*Specific, Measurable, Achievable, Relevant, Timeable*) and Goal Attainment Scaling (GAS) goals. Although these tools and strategies are widely used, it is crucial to keep in mind that they should not **take us away from the intention of the parent/child-identified goal**,

unless the child and family are actively involved in determining the markers of success. These strategies are often not implemented collaboratively, and special attention should be given to addressing this issue.

The F-words lens tool: Identifying intervention components
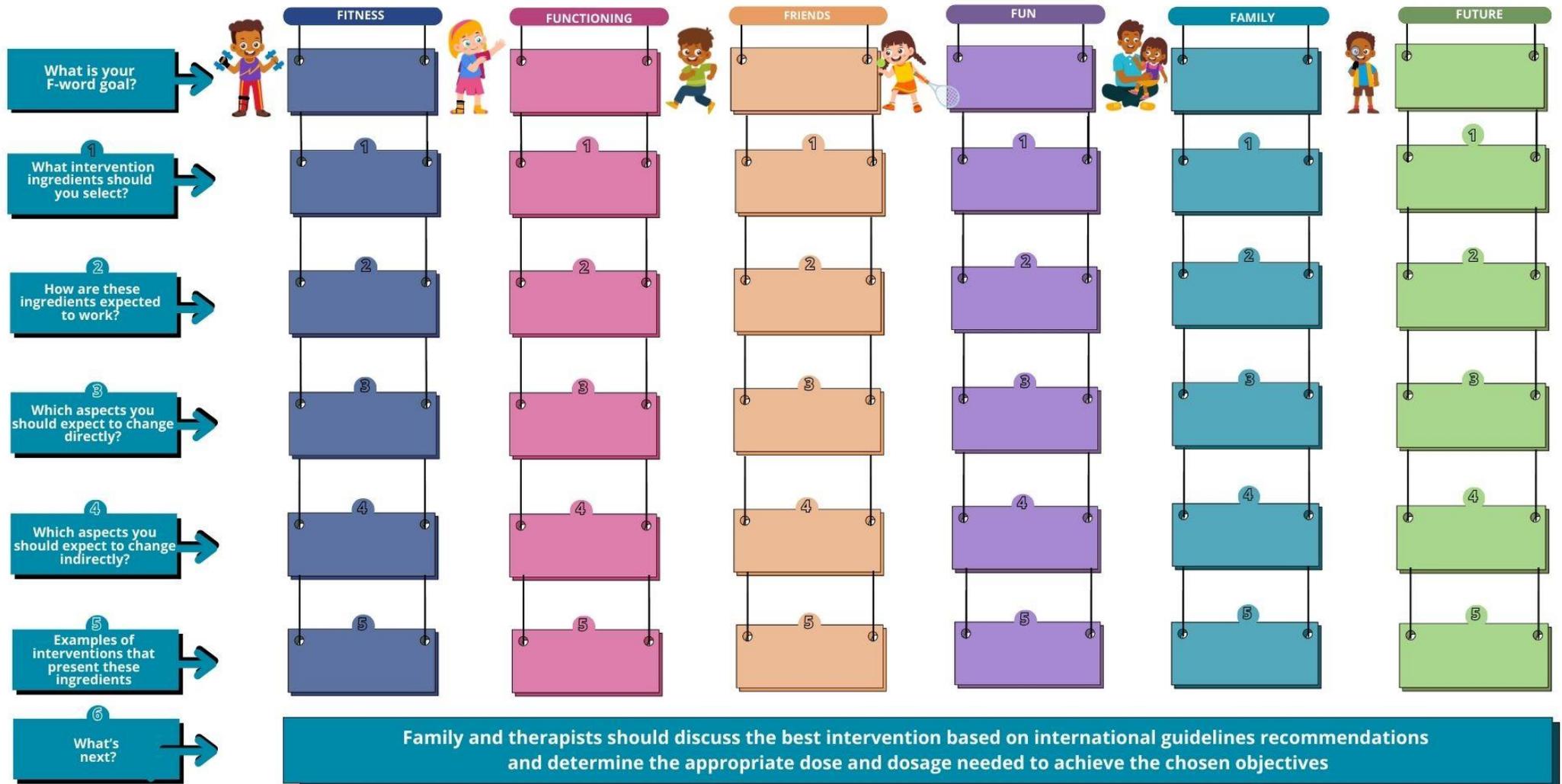
	FITNESS	FUNCTIONING	FRIENDS	FUN	FAMILY	FUTURE
What is your F-word goal?						
1 — What intervention ingredients should you select?	1	1	1	1	1	1
2 — How are these ingredients expected to work?	2	2	2	2	2	2
3 — Which aspects you should expect to change directly?	3	3	3	3	3	3
4 — Which aspects you should expect to change indirectly?	4	4	4	4	4	4
5 — Examples of interventions that present these ingredients	5	5	5	5	5	5

6 — What's next? Family and therapists should discuss the best intervention based on international guidelines recommendations and determine the appropriate dose and dosage needed to achieve the chosen objectives

How to interpret and share the tool's information?

The professional explains to families, in accessible language, how the process of filling out the tool will take place. The following analogies may be very useful to understand the intervention components:

"To understand whether an intervention is effective for your child, it is important to understand its components, such as its ingredients and mechanisms of action... Let's think of interventions as if they were a cake, and we need to discuss the recipe... The ingredients of the intervention are like the ingredients of the cake (flour, milk, eggs); and its mechanisms of action would be how each ingredient in the cake works to bake it, such as baking soda, which makes the cake rise... Therefore, to know if an intervention works to achieve our goals, we must understand its components first and see if they are necessary for our 'cake'..." [Leite et al., 2024]

"Furthermore, it is also important to understand that each cake will be unique, considering that each house has a different oven, or may even use different ingredients (lactose-free milk, almond flour, gluten-free, etc)..." [Peter Rosenbaum, 2024]

Discuss and explain to families how each ingredient can work and what changes children and families should expect both directly and indirectly:

"For your child to reach the _____ goal, it would be important to choose an intervention that includes the ingredient _____, it works through the _____ mechanism, which can make your child directly improve aspects of _____ and indirectly also improve the aspects of _____..."

At the end of filling out the F-words lens tool, there is a question about: What is the next step? From this process, clinicians should talk to their families about the best therapies, dose (total duration) and dosage (frequency and intensity of the session), always in accordance with available resources, guidelines and good practices:

"... thinking about these components, _____ interventions can be useful, they work when offered at a certain frequency _____and length of appointment times_____ in each service, bringing results at an expected length of time_____."

Contacts

If you have any questions, or requests for training or lectures, please contact the main researcher:

Hércules Ribeiro Leite, PhD
Postgraduate Program in Rehabilitation Sciences
School of Physical Education, Physiotherapy and Occupational Therapy, Federal University of Minas Gerais
Avenida Presidente Antônio Carlos 6627, Pampulha, Belo Horizonte, MG, Brazil
zipcode: 31270-901; e-mail: hercules@ufmg.br/herculesdtnaa@gmail.com

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Supplemental materials

The template for filling out the tool, as well as clinical cases for a better understanding of the clinical reasoning instrument, are available as supplementary material1 at the link below:
- To upload the "**The F-words Lens Tool**" template, click here.
- To upload the case studies, click here.

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