



## Use of *F-Words* in pediatric physical therapy rehabilitation services: an observational study

*Utilização das F-Words em serviços de reabilitação fisioterapêutica pediátrica: um estudo observacional*

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Received in december 28, 2022

Accepted on may 22, 2023

### ABSTRACT

The aim of this study was to assess the level of knowledge of physiotherapists who work in public and private pediatric rehabilitation services about knowledge of *F-Words*, as well as to identify the main barriers to applying these tools in care. This is a cross-sectional study, conducted in accordance with the STROBE recommendations. The sample had a mean age of  $28.1 \pm 5.8$  years, consisting of 54 physiotherapists who work in public and private pediatric rehabilitation services. It was observed that 55.6% of the sample had already heard about *F-Words*; 44.4% did not know about the importance; 94.4% establish therapeutic goals in partnership with the family; 57.4% had never heard of *F-Words* Tools; 77.8% never applied these tools in care. It is concluded that the *F-Words* are important, but are little used in assistance due to the lack of knowledge of physiotherapists in relation to the tool and instruments.

**Keywords:** Child. Physiotherapy. Pediatrics. Disabled people. CIF.

### RESUMO

O objetivo deste trabalho foi avaliar o nível de conhecimento de fisioterapeutas que atuam nos serviços públicos e privados de reabilitação pediátrica sobre o conhecimento das *F-Words*, assim como identificar as principais barreiras de aplicação destas ferramentas na assistência. Trata-se de um estudo transversal, conduzido de acordo com as recomendações do STROBE. A amostra apresentou uma média etária de  $28,1 \pm 5,8$  anos, constituída por 54 fisioterapeutas que atuam nos serviços públicos e privados de reabilitação pediátrica. Foi observado que 55,6% da amostra já ouviram falar nas *F-Words*; 44,4% não sabiam sobre a importância; 94,4% estabelecem metas terapêuticas em parceria com a família; 57,4% nunca ouviram falar nas *F-Words* Tools; 77,8% nunca aplicaram essas ferramentas na assistência. Conclui-se que, as *F-Words* são importantes, mas são pouco utilizadas na assistência em decorrência da falta de conhecimento dos fisioterapeutas em relação à ferramenta e aos instrumentos.

**Palavras-chave:** Criança. Fisioterapia. Pediatria. Pessoas com Deficiência. CIF.

## INTRODUCTION

According to the International Classification of Disabilities, Activities and Participation (ICDDM-2), disability is a loss or abnormality of a body part (structure), or bodily function, including mental functions. In recent decades it has been identified that it is also the result of social, behavioral and architectural barriers, changing from a medical and individualistic view to a social and contextual view.<sup>1</sup>

The inclusion of children with disabilities is a process that begins in the family nucleus. This nucleus can be defined as a significant social unit inserted in society, having an influence on the determination of human behavior and the formation of the personality of its members.<sup>2</sup>

The model of the International Classification of Functioning, Disability and Health (ICF) was published by the World Health Organization in 2001, having structure represented by five domains, namely: structure and function of the body, activity, participation, environmental factors and personal factors.<sup>3</sup> These domains are interrelated and influence health and functionality in an equal way. Thus, the ICF provides a detailed description of the aspects of people's function and health, being based on the biopsychosocial model.<sup>4</sup>

The ICF has become an important tool for the classification of living conditions, as well as for the promotion of social inclusion policies.<sup>5-6</sup> It has also been used as a conceptual model by the World Disability Report, published in 2011. Its use was recommended because it is a structural framework that better reflects the principles and values of the biopsychosocial and spiritual model, understanding functionality and disability as a dynamic interaction between health problems and contextual factors, both personal and environmental.<sup>6</sup>

In 2012, two researchers from the Centre for Childhood Disabilities Research - CanChild, the Canadian institution responsible for the development of most of the assessment tools considered the gold standard in child rehabilitation published a paper entitled "The '*F-Words*' in childhood disability: I swear this is how we should think!". In order to propose the diffusion of words starting with the letter F in English (that is why they are called "*F-Words*"), which would correspond to the domains of the ICF and that are related to the child's playful universe. *The F-Words*, translated into Portuguese as My Favorite Words, focus on six key areas of child development, recognizing that no one factor is more important than another, encouraging professionals working in the field of childhood disability to adopt this way of thinking and apply these concepts in their work with children with disabilities and their families.<sup>7</sup>

The *F-Words* in childhood disability include - functionality, family, health, fun, friends and future.<sup>8</sup> Interventions based on this tool enable a new look at child rehabilitation, considering the ICF in a playful and participatory way. It is a contemporary approach that incorporates the family in the process of setting goals, one for each domain of the ICF or *F-Words*, making the intervention process dynamic and family-centered. This is important because one of the main goals of the *F-Words paper* is to operationalize the ICF.<sup>7</sup>

The *F-Words Tools* are four instruments that were developed by the author Rosenbaum, in partnership with parents of disabled children in order to facilitate the practical application of *Words with F*: *F-Words Agreement*, *F-Words Collage*, *F-Words Profile*, *F-Words Goal Sheet*. In addition to these instruments, the characteristic structure of the ICF was elaborated in association with *My Favorite Words (F-Words Framework)*, in order to correlate the concepts and explain their relationships.

*F-Words* are embedded within the CIF framework to illustrate the interconnectedness between the two concepts. In this way, the six aspects of F-words are fundamental to the life of each child, hoping to promote modern ways of thinking about disability in childhood and to go beyond traditional approaches to "normality". It is proposed, then, that instead of placing limits on children with disabilities, the focus should be on individuals' strengths and what they can do, no matter the way it is done.<sup>10th</sup>

Previous studies affirm that the application of *F-Words* in children with disabilities provides a social vision instead of the biomedical model, recognizing participation as the main form of quality of life and health. However, there is still a limited number of professionals who use *F-Words* to direct their conduct in care practice. Therefore, this study is justified, which aims to evaluate the level of knowledge of physical therapists working in public and private pediatric rehabilitation services about the knowledge of *F-Words*, as well as to identify the main barriers to the application of these tools in care.

## **METHODS**

This is a cross-sectional, quantitative and analytical study conducted using the recommendations of STROBE.<sup>10</sup> The sample consisted of 54 physical therapists working in public and private pediatric rehabilitation services.

The collection of this study was carried out through a standardized questionnaire shared through an electronic application Google Forms®, in social media groups. The questionnaire

was prepared by the author of the study, containing two parts: I- Identification regarding sociodemographic data (age, gender, marital status, education, service and time of work) and II- Knowledge in relation to *F-Words* (questions related to the knowledge of participants about F-Words, and the last question was made available in the free space so that the participant could describe their experiences in the use of this tool, highlighting its main barriers and facilitators.

This study was approved by the Research Ethics Committee of Faculdades Nova Esperança (Facene) and followed the norms of Resolution No. 466/2012, and the Informed Consent Form (ICF) of each participant was signed, as well as Resolution No. 424/2013 of the Federal Council of Physical Therapy and Occupational Therapy, which deals with the code of ethics of Physical Therapy professionals, of which it was maintained throughout the process, as well as secrecy and confidentiality of the data collected.

All statistical procedures were performed using the SPSS® software. Qualitative variables were described in absolute and relative frequencies. For the descriptive analysis of quantitative variables, the Kolmogorov-Smirnov normality test was performed. The variables that presented parametric distribution were described as means and standard deviation. The variables that presented nonparametric distribution were described in median and interquartile range.

## FINDINGS

The study included 54 physical therapists who answered the proposed questionnaire. These professionals had a mean age of  $28.1 \pm 5.8$  years. Table 1 presents the descriptive characteristics of the sample.

**Table 1.** Sample characterization

Variable (N=54)	n (%)
<b>Gender</b>	
Male	5 (9,3)
Female	49 (90,7)
<b>Marital status</b>	
Single	32 (59,3)
Married	17 (31,5)
Stable Union	4 (7,4)
Divorced/Separated	1 (1,9)
<b>Schooling</b>	
Graduation	22 (40,7)
Specialization	24 (44,4)
Masters	5 (9,3)
Doctorate	2 (3,7)
Post-Doctorate	1 (1,9)

<b>Type of Service</b>	
Public	11 (20,4)
Private	43 (79,6)
<b>Acting Time</b>	
Less than 1 year	21 (38,9)
1 to 5 years	19 (35,2)
5 to 10 years	5 (9,3)
More than 10 years	9 (16,7)

Source: Survey data, 2022

Table 2 presents the main characteristics related to the level of knowledge of F-Words of the professionals participating in the research.

**Table 2.** Level of knowledge about *F-Words*

Level of knowledge of <i>F-Words</i>	n(%)
<b>Ever heard of <i>F-Words</i></b>	
Yes	30 (55,6)
No	24 (44,4)
<b>Know the importance of <i>F-Words</i> in assistance</b>	
Yes	17 (31,5)
No	23 (42,6)
Yes, but I need to learn a little more about it	14 (25,9)
<b>Main environment in which interventions are performed</b>	
Clinic	28 (51,9)
Patient's Home	16 (29,6)
School	2 (3,7)
Community Environment	3 (5,6)
<b>Makes interventions aimed at the home, school and/or community environment</b>	
Yes	43 (79,6)
No	11 (20,4)
<b>Establishes therapeutic goals in partnership with the family</b>	
Yes	51 (94,4)
No	3 (5,6)
<b>Encounters resistance from family members or the child in the execution of the proposed activities</b>	
Yes	31 (57,4)
No	23 (42,6)
<b>Ever heard of <i>F-Words Tools</i></b>	
Yes	22 (40,7)
No	31 (57,4)
<b>Have you applied any of the <i>F-Words Tools</i> in the assistance</b>	
Yes	12 (22)
No	42 (77,8)
<b>Difficulty in starting to implement <i>F-Words</i> within the pediatric rehabilitation service</b>	
Lack of adequate remuneration	3 (5,6)
Little time available for the patient	12 (22,2)
Little knowledge about the instruments	25 (46,3)
Lack of skill/experience of the professional in relation to the use of the tools	14 (25,9)

Source: Survey data, 2022

Among the main limitations highlighted by the study participants, they can be seen in Chart 1.

**Chart 1.** Main limitations highlighted by the study participants

<p><b>Professional 1</b> – "Make the family and people in the social circle of patients understand that their difficulties and differences are not limiting factors and that they should encourage their functionalities."</p> <p><b>Professional 2</b> – "Lack of knowledge and experience on the subject, and lack of time available to the patient."</p> <p><b>Professional 3</b> – "Lack of articles and studies that address this topic."</p> <p><b>Professional 4</b> – "It is still little widespread, perhaps the training of more professionals in the area is crucial."</p>
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Source: Survey data, 2022

This study aims to evaluate the level of knowledge of physical therapists working in public and private pediatric rehabilitation services about the knowledge of *F-Words*, as well as to identify the main barriers to the application of these tools in care.

The sample had a mean age of  $28.1 \pm 5.8$  years. Within the sample, a higher prevalence of single women and professionals specialized in the area of pediatric physiotherapy working in the private service was observed, with the highest incidence of work with less than one year of training.

Regarding the level of knowledge, it was observed that 55.6% of the sample had heard of *F-Words*, however, it drew attention although these professionals had already heard of it, many answers were found that were related to the lack of knowledge of professionals on the subject. It is stated that the *F-Words* are based on the structure of the ICF, aiming to associate in a simple way the domains of the ICF with the main areas of life of children and adolescents with disabilities, in order to facilitate the biopsychosocial approach in clinical practice and in the family context, encouraging to focus on the factors that are important for the development of all children - their participation, activities and environment.<sup>7</sup>

Its application is focused on what is really important and relevant to the child. However, it needs to be more widespread. Studies were conducted in order to disseminate knowledge about *F-Words* in childhood disability, establishing a partnership between family and researcher.<sup>8</sup> As such, families and researchers helped develop, disseminate, and evaluate a video about *F-Words* for online awareness. However, about 44.4% did not know about the importance of *F-Words* in care. It was evidenced the importance of *F-Words* concepts to create personal goals that aim to motivate and involve the individual, to increase the results of treatment, such as: improvement in gait functions.<sup>11th</sup>

The clinic was the main environment in which the physiotherapists perform their interventions, it is important that the performance of pediatric physiotherapy is beyond the walls of the clinic, that involves the family within the process, that the approach should not be aimed

at the child's disability, but on what the child can do with a focus on their capabilities, in activities, participation and the environment.

When asked if the professionals establish therapeutic goals in partnership with the family, it was observed that 94.4% answered yes, however, the vast majority of professionals reported that they encountered resistance. A study was conducted on the view of parents and service providers on family-centered care for children with cerebral palsy.<sup>12</sup> To better meet the needs of families and their children, rehabilitation service providers have taken a family-centered service approach. In this approach, parents are seen as experts in the needs of their children, and the family and professionals collaborate in the rehabilitation process.<sup>5</sup>

There is an ambiguity regarding these answers, are these goals really being relevant or is the conduct of the professionals instead of being a relationship of partnership with the family, is being a relationship of superiority. In 2014, an integrated research team was created, including parents and researchers, trained at CanChild to proactively disseminate and study the uptake of *F-Words*, even publishing two articles about its outreach work.<sup>13, 8</sup> Therefore, the intervention should not focus only on the child, but rather seek parental involvement throughout the treatment process. Several authors point out that early intervention is much more effective when the family is an active agent in this rehabilitation process. Thus, the focus on the parent/child dyad is fundamental in the proposal of the present study.<sup>14, 15</sup>

It was demonstrated that 57.4% of the evaluated professionals had never heard about *F-Words Tools*. In 2014, an integrated research team of parents and health service researchers was formed to systematically promote and study the dissemination and implementation of F-words in practice. Since then, the research team has worked with many stakeholders such as families, service providers and administrators.<sup>8, 13</sup> However, 77.8% never applied these tools in care.

The *F-Words Tools* are four instruments that were developed to facilitate the practical application of Words with F and the characteristic structure of the ICF was elaborated in association with My Favorite Words, in order to correlate the concepts and explain their relations. The *F-Words Tools* were translated as follows: *F-Words Agreement* (Word Agreement with F), *F-Words Collage* (*Collage of Words with F*), *F-Words Profile* (*Word Profile with F*), *F-Words Goal Sheet* (*Goals sheet of Words with F*) and *F-Words Framework* (*structure of Words with F*).

When the main barriers were asked, what stood out in the research was the lack of knowledge of the professionals in relation to the instruments, the lack of adequate remuneration, little time available to the patient and the lack of skill/experience of the professional in relation

to the use of the tools. Thus, it is important to emphasize the importance of professionals having knowledge of the function of *F-Words*, to put them into practice. The knowledge of the existence of this tool should reach the family context in which the child lives for better adherence.

The proposal is to involve parents in the educational process of their child, in a collaborative work between professionals, thus aiming at the family members to have a global understanding of the child and its context. Given this, it is questioned whether the *F-Words* can contribute to a better understanding of family members regarding the rehabilitation of children with physical disabilities.

Due to the changes in thinking about "disability" and thinking about the concept of biopsychosocial health, we see the need to insert the ICF in the rehabilitation process of children, with *F-Words* being a strategy for insertion, dissemination and implementation. Although there are few studies on the subject, there is a need to disseminate these tools. Thus, the CanChild article in 2012 presented the *F-Words with the objective of mobilizing knowledge aimed at spreading awareness about the ideas of F-words, which are used to operationalize the ICF, namely: Function, Family, Health, Fun, Friends and Future.*

This study is one of the first Brazilian studies that highlighted the barriers of physical therapists in relation to the application of this resource, but had a limitation of the scarcity of other studies to assess the level of knowledge of physiotherapists working in public and private pediatric rehabilitation services about the knowledge of *F-Words*.

Finally, the importance of this study is highlighted, in the sense of being able to contribute to science, presenting to professionals the concepts of *F-Words* based on the ICF, encouraging them to adopt the way of thinking and applying such concepts in the physiotherapeutic treatment for rehabilitation of children with physical disabilities. As well as, to offer tools that assist in the treatment of children with physical disabilities in a biopsychosocial and accessible way; to evaluate how *F-Words* can contribute to a better understanding of the family about the rehabilitation process, in addition to encouraging and encouraging other health professionals to produce new studies to obtain better results, also improving future evaluations.

## **CONCLUSION**

This study concludes that *F-Words* are important, but are little used in care due to the lack of knowledge of physical therapists regarding the tool and instruments. The study in



question serves to encourage professionals working in the field of disability in childhood to adopt this way of thinking and apply these concepts in their work with children with disabilities and their families.

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