Cross-cultural adaptation of Communication Function Classification System for individuals with Cerebral Palsy

Adaptação transcultural do Communication Function Classification System para indivíduos com paralisia cerebral

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RESUMO

Objetivo: realizar a adaptação transcultural do Communication Function Classification System para a população brasileira e verificar a aplicabilidade da versão traduzida.

Métodos: o estudo foi constituído de duas etapas, a primeira relacionada com o processo de tradução e adaptação transcultural por meio da tradução, análise semântica dos itens, e retrotradução do instrumento. A segunda, à testagem do instrumento, foi realizada em 40 pacientes com diagnóstico de paralisia cerebral.

Resultados: a versão final recebeu a chancela da autora do instrumento original e foi publicada pela mesma, juntamente com a versão original e todas as demais traduções, no site <http://cfcs.us>. 60% (24) dos pacientes eram do sexo masculino e 40% (16) do feminino, as idades variaram entre dois anos e quatro meses à 28 anos e dois meses, e a idade média de 7,7 (±4,6). O instrumento foi de fácil e rápida aplicação, e todos os níveis de comunicação foram observados. Sendo que oito pacientes estavam no Nível I, nove no Nível II, dois no Nível III, treze no Nível IV e oito no Nível V.

Conclusões: a versão traduzida e adaptada para o Português Brasileiro do CFCS possibilitou a classificação do desempenho da comunicação diária de indivíduos com Paralisia Cerebral em um dos cinco Níveis de Comunicação. Entretanto, para que seja amplamente utilizado em ambientes clínicos e de pesquisa, ainda há necessidade de trabalhos futuros que verifiquem a sensibilidade e a especificidade do mesmo, além da validação das propriedades psicométricas da versão brasileira do instrumento.

Descritores: Tradução; Paralisia Cerebral; Comunicação; Testes de Linguagem; Fonoaudiologia

ABSTRACT

Purpose: to the cross-cultural adaptation of Communication Function Classification System for the Brazilian population and verify the applicability of the translated version.

Methods: the study consisted of two phases, the first of which relates to the process of cultural adaptation, and the second on the instrument testing. The first was made through translation, semantic analysis of the items, back translation and approval of the final version of the instrument’s authors. The testing instrument was administered to 40 patients diagnosed with cerebral palsy.

Results: the final version received the seal of the author of the original instrument and was published by the same, along with the original version and all other translations, at <http://cfcs.us>. Of 40 patients 60% (24) were male and 40% (16) were female, ages ranged from 2 years and 4 months to 28 years and two months, with an average age of 7.7 (± 4.6). The instrument was fast and easy application as all communication levels were observed. And eight patients were at Level I, Level II in nine, two at Level III, Level IV in thirteen and eight in Level V.

Conclusions: the translated and adapted version for Brazilian Portuguese of CFCs allowed the classification of the performance of daily communication of individuals with cerebral palsy in one of five levels of communication. However, to be widely used in clinical and research environments, there is still need for further work (research) to verify the sensitivity and specificity, in addition to the validation of the psychometric properties of the Brazilian version of the instrument.

Keywords: Translation; Cerebral Palsy; Communication; Language Test; Speech, Language and Hearing Sciences
INTRODUCTION

Cerebral palsy (CP) is described as a group of permanent changes in the development of movement and posture that limit daily life activities as a consequence of a nonprogressive injury to the central nervous system that may occur during the pre-, peri- or postnatal period. The motor disorders are frequently accompanied by disorders of sensation, perception, cognition, communication and behavior and by epilepsy, as well as secondary musculoskeletal problems.

There is a current preference in the literature to classify children with CP according to their functional independence regarding gross and fine motor functions. Patient assessment and documentation for the treatment of CP should use methods validated according to the International Classification of Functioning Disability and Health (ICF) in CP of the World Health Organization, using a uniform language for the description of health problems or interventions all over the world. Thus, the Gross Motor Function Classification System (GMFCS) and the Manual Abilities Classification System (MACS) have been developed in order to categorize the mobility and manual function of children with CP, respectively, and have already been translated into Brazilian Portuguese.

However, there used to be no similar instrument for the classification of the functional communication of patients with CP to be used both in clinical practice and for research. The lack of a reliable validated and easy to use instrument limits the comparison of the communication of patients with CP to descriptive epidemiological studies and the interpretation and generalization of the treatments. In order to fill this gap, Canadian researchers have elaborated the Communication Function Classification System (CFCS) in order to classify the performance of daily communication of individuals with CP into five levels using a language shared by professionals and lay persons.

Particularly in Brazil, there is a scarcity of commercially available formal and objective instruments, especially in the language area. Thus, the translation and adaptation of instruments to other languages has been seen as a possibility of minimizing this difficulty in clinical practice and of permitting the standardization and execution of transcultural studies that might provide better clarification and understanding of disorders of communication and their specificities in different languages.

The process of translation and adaptation of international instruments is a relatively recent practice in Speech Therapy although it is already a diffuse practice among Brazilian psychologists and neuropsychologists, thus representing a path to be still followed that has currently engaged several groups of speech therapists.

The objective of the present study was to translate and to perform the transcultural adaptation of the CFCS to the Brazilian population, and then to determine the applicability of the translated version.

METHODS

The study was approved by the Research Ethics Committee of the University of Sergipe (nº 002500/2013) and the parents or persons responsible for all subjects gave written informed consent for their participation in the study. The study consisted of two stages, the first involving the process of translation and transcultural adaptation and the second consisting of the testing of the instrument. The translation into Brazilian Portuguese and the use of the instrument were solicited from the senior author (Mary Jo Cooley Hidecker) and authorized by her.

The translation of the instrument and its transcultural adaptation to the Brazilian population consisted of the following stages: translation, semantic analysis of the items and back translation of the instrument based on the studies by Beaton et al., Herdman, Fox-Rushby and Badia and Behling and Law. Three professionals participated in the translation of the instrument: a clinical speech therapist with command of English and experience in neuropsychiatrics (P1), a university professor and speech therapist with experience in neuropsychiatrics (P2), and an official public translator (P3). The back translation of version 1 of the instrument was performed by a linguist with a degree in letters, with command of English and experience in translations in the field of neuropsychiatrics (P4), who, however, did not know the original English version of the CFCS. Two professionals, a linguist (P4) and a speech therapist (P1), participated in the back translation stage of the final version of the instrument.

The initial translation of the original English version into Portuguese was performed by P1, checked by and discussed with P2, and revised by P3, producing version 1 of the instrument in Brazilian Portuguese.

Next, P4 performed the back translation of version 1 into the original language of the instrument (English). The back translation of version 1 was compared to the
original version of the instrument by P1 and P4 and version 2 was produced after discussions, content analysis and terminologic adjustments performed by P1 and P2.

A new version of the translation, denoted final version, was then elaborated and again translated into English by P1 and P4 and sent to the authors of the instrument for verification and approval. With approval of the final version by the authors, the instrument was applied to a random sample of 40 individuals with a diagnosis of CP regardless of motor involvement or classification of functionality. The subjects were males and females ranging in age from 2 years and 4 months to 28 years and 2 months, seen at a Medical Specialty Center.

All the forms of communication used by the individuals were first determined: speech, gesturing, behaviors, fixed eye gaze, facial expressions and augmentative and alternative communication (AAC). AAC systems include manual signs, pictures, boards, communication books and vocal systems – at times called voice output devices or speech-generating devices.

It was then explained to the persons responsible that the differences in the levels of communication are based on the performance of functions as a sender and receiver, on the rhythm of communication and on the type of conversational partner, i.e.: Level I – Effective sender and receiver with unifamiliar and familiar partners; Level II - Effective sender and receiver with a slower conversational rhythm, i.e., with more interruptions and a longer waiting time between these exchanges of communicative turns with familiar and unfamiliar partners; Level III – Effective sender and receiver with familiar partners; Level IV– Inconsistent sender and receiver with familiar partners; Level V– Seldom effective sender and receiver even with familiar partners.

Each one of the above concepts was defined and the Diagram of the Classification Levels of the CFCS was presented to the caregiver, who, with the help of the speech therapist, determined in what level the patient was currently functioning.

RESULTS

Comparison of the original protocol, the translated version and the back translated version did not reveal discordance of semantic equivalence. The final version of the transcultural adaptation (Enclosure 1) maintained the five questions of the Diagram of the Levels of Classification of the CFCS in which positive (yes) or negative (no) responses determine the outcome of the five possible communication levels. The final version received the seal of the author of the original instrument and was published by her on the free access <http://cfcs.us> site together with the original version and all the other translations.

Thus, as shown in the original protocol, the differences in levels are based on the performance of the individual in sender and receiver functions, on the rhythm of communication and on the type of conversational partner, with Level I indicating the most effective communication and Level V the least effective one. Some definitions should be considered when using this classification system:

1. Senders and receivers are considered to be effective when they alternate the transmission and understanding of the messages in a rapid and easy manner. To clarify or resolve misunderstandings, effective receivers and senders can use or solicit strategies such as repetition, reformulation, simplification or complementation of the message. To accelerate exchange during communication, especially when the AAC is used, an effective sender can use messages that are not so grammatically correct, leaving out or shortening words with familiar communication partners.

2. A comfortable communication rhythm is characterized when a person understands and transmits messages in an easy and rapid manner. A comfortable rhythm occurs when there are few interruptions and a short waiting time between communicative exchanges.

3. Unfamiliar conversation partners are strangers or persons that only occasionally communicate with the individual. Familiar conversation partners are relatives, caregivers and friends who can communicate more effectively with the individual due to previous knowledge and personal experiences.

The final version was applied to 40 patients with a diagnosis of CP, 60% of them (24) males and 40% (16) females ranging in age from two years and four months to 28 years and two months (mean age: 7.7 ± 4.6 years).

Regardless of the various forms of communication that may be used by a person, only one CFCS level is attributed to him, thus characterizing his overall communication performance. The only form of communication not detected in the present subjects was the use of voice output devices (Table 1).
Table 1. Characterization of the patients studied

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Despite the small sample size, all levels of communication were detected among the individuals studied: 20% (8) were level I, 22.5% were level II (9), 5% level III (2), 32.5% level IV (13), and 20% level V (8). In addition, the instrument was easy to apply and was properly understood by all participants, permitting the classification of communication level by all patients and the persons responsible for them.

The difference between levels I and II concerns the pace of conversation. In level I, the person communicates at a comfortable pace with little or no delay in understanding, in composing a message or in repairing a misunderstanding. In level II, the person needs extra time, at least occasionally. The differences between levels II and III concern pace and type of conversational partners. In level II, the person is an effective sender and...
receiver with all conversational partners, but pace is an issue. In level III, the person is consistently effective with all familiar conversational partners but not with most unfamiliar partners.

The difference between levels III and IV is how consistently the person alternates between sender and receiver roles with familiar partners. In level III, the person is usually able to communicate with familiar partners as a sender and a receiver. In level IV, the person does not consistently communicate with familiar partners. This difficulty may occur in sending and/or receiving a message. The difference between levels IV and V is the degree of difficulty the person has in communicating with familiar partners. In level IV, the person has some success as an effective sender and/or receiver with familiar partners. In level V, the person is seldom able to communicate in an effective manner, even with familiar partners.

DISCUSSION
The use of formal and objective instruments directly affects the definition of the diagnosis and consequently the definition of therapeutic conducts and the elaboration of intervention plans, possibly compromising the efficacy and efficiency of treatment. Constant questionings are essential in clinical practice regarding the progress of a person submitted to speech therapy in terms of effectiveness, efficiency and effect.

Specifically regarding persons with CP, several studies have emphasized the need to monitor the development of communication in order to perform an early intervention in all children, but mainly in those with severe motor deficiency and in those born preterm. The American Academy of Neurology actually recommends the screening of speech and language in all children and the form of communication most often used by persons with CP. The system deals with the levels of activity and participation according to the International Classification of Functioning Disability and Health of the World Health Organization, considering that communication occurs whenever a sender transmits a message and the receiver understands it. An efficient communicator alternates independently between sender and receiver roles regardless of the demands of a conversation, the communication partners or the topics. All forms of communication are considered when the CFCS level is determined, including the use of speech, gesturing, behaviors, fixed gaze, facial expressions and augmentative and alternative communication (AAC).

The process of translation and transcultural adaptation of the CFCS to Brazilian Portuguese permitted the final version of the instrument to have an appropriate language pertinent to the area of knowledge of speech therapy and neuropediatrics. The process also sought to make the instrument easy to understand for the different individuals that would use it. To determine the CFCS level it is not necessary to apply tests, with the parents or persons responsible or a professional familiar with the communication of the individual selecting the level of communication performance. Also, depending on the age and cognitive capacity of the patient, these persons can also classify his performance.

The CFCS, however, cannot explain any reasons that might justify the degree of effective or ineffective communication and cannot provide a prognosis regarding patient improvement. On this basis, it is important to underscore that the CFCS does not replace the standardized language assessment by a speech therapist, since it is not its objective to evaluate the dimensions, the components or the units of language and it does not take into consideration the countless variables that interact for its development.

In the present study, the CFCS classification was performed only by the caregivers, while in another study in which the investigators performed it, the inter-examiner reliability was considered to be excellent and the investigators were able to easily classify the children using the CFCS. The easy application of the instrument was also observed in the present study.

In another study carried out to determine the intra- and inter-observer reliability of the Dutch version of the CFCS and to investigate the association between CFCS level, the comprehension of spoken language and the form of communication most often used by CP children, in which both the parents and the speech
therapist applied the CFCS, the authors considered the CFCS to be a valid and reliable clinical tool for the classification of daily communication of CP children. The authors concluded that the professionals should preferentially classify the CFCS level of the child in collaboration with the parents in order to obtain more extensive information about the daily communication of the child in various situations involving both familiar and unfamiliar partners.40

It is important to conclude this report by emphasizing that the Brazilian Portuguese version of the CFCS, in addition to providing a standardized terminology for the characterization of the communication of patients with CP at the various health care facilities and contributing to comparative studies with other countries since the instrument is currently available in 14 languages, can be used as an instrument in programs of evidence-based health practice. Such programs intend to promote the integration of clinical experience with the best available evidence obtained with standardized instruments and protocols used worldwide.

CONCLUSION

The translated version of the CFCS adapted to Brazilian Portuguese permitted the classification of daily communication performance of individuals with cerebral palsy into one of the five communication levels. However, further research is needed to determine the sensitivity and specificity of the Brazilian version of the instrument, in addition to the validation of its psychometric properties before it can be extensively used in clinical and research settings.

REFERENCES


ERRATUM

In this article, “Cross-cultural adaptation of Communication Function Classification System for individuals with Cerebral Palsy”, with DOI number: 10.1590/1982-021620161840716, published in the journal Revista Cefac, 18(4):1020-1028, on page 1020:

Where it was:
Isabela Carolina Santos Bicalho

Read:
Isabella Carolina Santos Bicalho
Enclosure 1. Brazilian version of the Communication Function Classification System

Sistema de Classificação da Função de Comunicação (CFCS) para Indivíduos com Paralisia Cerebral

Objetivo
O objetivo do CFCS é classificar o desempenho da comunicação diária dos indivíduos com paralisia cerebral em cinco níveis. Este sistema aborda os níveis de atividade e participação de acordo com a Classificação Internacional de Funcionalidade, Capacidade e Saúde (CIF) da Organização Mundial de Saúde (OMS).

Instruções de uso
Os pais, os responsáveis ou um profissional familiarizado com a comunicação do indivíduo irá selecionar o nível de desempenho da comunicação; sendo que os adolescentes e adultos com PC também podem classificar o seu desempenho. A total eficácia do desempenho da comunicação deve ser baseada no modo pelo qual os indivíduos geralmente participam das situações cotidianas que requerem o uso de comunicação, e não na sua melhor performance. Estas situações podem acontecer em casa, na escola ou na comunidade.

Algumas situações de comunicação podem ser difíceis de serem classificadas se o desempenho for incluído em mais de um nível. Nestes casos, escolha o nível que mais se assemelhe ao desempenho rotineiro do indivíduo, na maioria dos lugares. Ao selecionar um nível, não considere a capacidade de percepção, de conhecimento ou de motivação.

Definições
A comunicação ocorre quando um emissor transmite uma mensagem e o receptor entende a mensagem. O comunicador eficiente alterna, de modo independente, seu papel de emissor e receptor, não importando as demandas de uma conversação, incluindo os lugares (e.g. comunidade, escola, trabalho e casa), os parceiros da comunicação e os assuntos.

As diferenças entre os níveis baseiam-se no desempenho de funções como emissor e receptor, no ritmo da comunicação e no tipo de parceiro na conversação. As seguintes definições devem ser consideradas quando este sistema de classificação for usado.

Formas de Comunicação
Independente das diversas formas de comunicação utilizadas pelo indivíduo, apenas um nível do CFCS lhe é atribuído, caracterizando o desempenho global da comunicação.

Referências para o aprimoramento do CFCS:

Traduzido por: Raphaella Barroso Guedes Granzotti, raphaelbg@ufsc.br, Universidade Federal de Sergipe - Brasil

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I. Emissor e receptor eficaz com parceiros desconhecidos e conhecidos. O indivíduo alterna independentemente seus papéis de emissor e receptor com a maioria das pessoas, em vários lugares. A comunicação ocorre facilmente e em um ritmo confortável com parceiros desconhecidos e conhecidos. Equívocos de comunicação são resolvidos rapidamente e não interferem na eficácia geral da comunicação.

II. Emissor ou receptor eficaz, mas mais lentos com parceiros desconhecidos ou conhecidos. O indivíduo alterna independentemente seus papéis de emissor e receptor com a maioria das pessoas, na maioria dos ambientes, mas o ritmo de conversação é lento e pode dificultar a interação na comunicação. O indivíduo pode precisar de mais tempo para entender as mensagens, compor mensagens ou resolver mal-entendidos. Os equívocos de comunicação muitas vezes são resolvidos e não interferem com a eventual eficácia da comunicação do indivíduo com parceiros desconhecidos e conhecidos.

III. Emissor e receptor eficaz com parceiros conhecidos. O indivíduo alterna consistente e eficaz com a maioria dos parceiros desconhecidos, mas é geralmente eficaz com os parceiros conhecidos.

IV. Emissor e/ou receptor inconsistente com parceiros conhecidos. O indivíduo não alterna consistentemente seu papel de emissor e receptor. Este tipo de inconsistência pode ser visto em diferentes tipos de comunicadores, incluindo: a) um emissor e receptor ocasionalmente eficaz; b) um emissor eficaz, mas receptor limitado; c) um emissor limitado, mas receptor eficaz. As vezes, a comunicação é eficaz com parceiros conhecidos.


Diagrama dos Níveis de Classificação do CFCS

O indivíduo alterna de modo consistente e eficaz seu papel de emissor e receptor com parceiros conhecidos?

A pessoa é um emissor ou um receptor eficaz pelo menos uma vez?

O indivíduo mantém um ritmo confortável de comunicação com os parceiros de comunicação?

O indivíduo geralmente comunica consistentemente e efetivamente com os parceiros desconhecidos?

O indivíduo se comunica consistentemente e efetivamente com os parceiros desconhecidos?