ORIGINAL ARTICLE

Results of the ICF core sets for chronic widespread pain in women with fibromyalgia in Brazil

Resultados do core set da CIF de dor crônica generalizada em mulheres com fibromialgia no Brasil

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ABSTRACT

The International Classification of Functioning, Disability and Health (ICF) was developed by the World Health Organization to standardize the terminology used to describe disabling situations. The ICF core set for chronic widespread pain (CWP) is a resource derived from the ICF that systematizes and speeds up the functioning description of persons with CWP, with the objective of supplying information for public health reports and to guide rehabilitation interventions. The present study aimed at describing the results of the use of the ICF core set for CWP in a sample of 29 female patients with fibromyalgia that finished the multidisciplinary rehabilitation program. The core set categories in which 30% or more of the patients were considered without problems were classified as "non-relevant" for the description of functioning in people with this health condition. In all, 58.2% of the categories of the core set were classified as "non-relevant", corresponding to 43.5% of the body functions, 51.8% of the activities and participations and 68.8% of environmental factors. These findings might have been strongly influenced by the fact that the patients were pre-selected for participating in group activities, which presupposes better emotional and interpersonal relationship conditions. The fact that they had finished a therapeutic program with group psychotherapy and physical conditioning activities might also have favored the performance in psychological activities and functioning as well as relationship and several physical activities. Although these findings show an unfavorable result for the validation of the ICF core set for CWP, the characteristics of the studied sample do not allow its generalization.

KEYWORDS

International Classification of Functioning, Disability and Health, fibromyalgia, pain, women, Brazil

RESUMO

A Classificação Internacional de Funcionalidade, Incapacidade e Saúde (CIF) foi desenvolvida pela Organização Mundial de Saúde para uniformizar a terminologia usada para descrever as situações incapacitantes. O core set da CIF para dor crônica generalizada (DCG) é um recurso derivado da CIF que sistematiza e agiliza a descrição da funcionalidade das pessoas com DCG, com o objetivo de fornecer informações para relatórios de saúde pública e para orientação de intervenções de reabilitação. Este estudo objetivou a descrição dos resultados da aplicação do core set da CIF para DCG em uma amostra de 29 pacientes com fibromialgia que terminaram o programa de reabilitação multidisciplinar. As categorias do core set nas quais 30% ou mais dos pacientes fossem considerados sem problema foram classificadas como "não relevantes" para a descrição da funcionalidade das pessoas com essa condição de saúde. Ao todo, 58,2% das categorias do core set foram classificadas como "não relevantes", correspondendo a 43,5% das funções corpóreas, 51,8% das atividades e participações e 68,8% dos fatores ambientais. Esses achados podem ter sido fortemente influenciados pelo fato de os pacientes serem pré-selecionados para a participação em atividades em grupo, o que pressupõe melhores condições emocionais e de relacionamento interpessoal. O fato de estarem ao final de um programa terapêutico com atividades de psicoterapia em grupo e condicionamento físico também pode ter favorecido o desempenho nas funções e atividades psicológicas e de relacionamento, assim como em várias atividades físicas. Apesar desses achados apontarem desfavoravelmente para a validação do core set da CIF para DCG, as características da amostra estudada não permitem a sua generalização.

PALAVRAS-CHAVE

Classificação Internacional de Funcionalidades, Incapacidades e Saúde, fibromialgia, dor, mulheres, Brasil

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INTRODUCTION

The International Classification of Functioning, Disability and Health (ICF) was approved by the World Health Organization (WHO) in 2001. It is an information tool in public health, of which main purpose is to define a common language to classify the health components, as well as the disability aspects. The functionality model of the ICF migrates from a linear sequence of concepts based on the biomedical model of disability, i.e., deficiency, disability and disadvantage, to a multidirectional structure that comprehends the body structures (BS), body functions (BF), activities and participations (A&P) and context factors, environmental factors (EF) and personal factors (PF). These concepts have been described with details in previous publications[1] and its inter-relationships are summarized in Figure 1. Based on the ICF, countries, regions and health services can prepare reports and compare their data in health statistics.
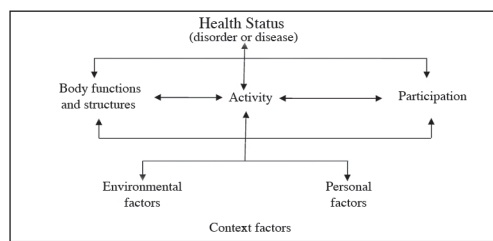

Figure 1
Representation of the model of the understanding of functionality according to ICF.

However, the use of the ICF can be quite difficult and uninteresting, given the variety of aspects that can be classified in each person's functionality. The classification of a person's functionality might have poor reproducibility, according to the observer, if there is no systematization in the observation, directing the attention of the professional in charge of the classification to the most relevant aspects of the individual's functionality and disability. Thus, it became necessary to develop tools to guide the observation, directing the examiner's attention to the most important health components in each person. The core sets of the ICF are selections of ICF categories that better describe the patients' functionality with specific health conditions and situations.[2,3] Its creation was based on an evidence process from systematic reviews[4] and questioning of professionals and patients, as well as the achievement of consensus in international panels of specialists.[5]

One of the health conditions elected for the construction of core sets was generalized chronic pain, characterized by fibromyalgia (M79.0) and by persistent somatoform pain disorder (F45.4). The comprehensive ICF core set allows the detailed functional evaluation of the individual with a certain health condition; to fill it out, the health team intervention is recommended, in which each professional of the health team contributes with his/her specialized analysis, compiling a full and detailed picture of the multiple aspects of functionality. The comprehensive ICF core set for generalized chronic pain includes 23 categories of BF, 1 category of BS, 27 of A&P and 16 EF, totaling 67 categories. The same international panel of specialists developed an even shorter version, with 24

categories that are considered more essential for the description of people with generalized chronic pain, called the summarized ICF core set; it has 9 categories of BF, none of BS, 10 of A&P and 5 of EF. This summarized version was developed to be filled out by only one person, within a reasonable time for use in research and clinical practice.[5]

OBJECTIVE

This aim of the present study was to explore the results of using the comprehensive ICF core set for generalized chronic pain in a group of women with fibromyalgia. It also aimed at verifying to what extension the categories that comprehend the summarized ICF core set for generalized chronic pain can adequately describe the patients' functionality.

METHODS

All patients with fibromyalgia that had finished the rehabilitation program at the Division of Rehabilitation Medicine (DRM) at the end of 2006 were invited to participate in the study. All the participants were informed on the study aims and agreed to participate by signing the informed consent form. The evaluations were carried out by professionals that had experience with the ICF and the core sets, based on medical files, interviews and physical examinations. To participate in the rehabilitation program, the patients had to have a confirmed fibromyalgia diagnosis[6], undergo a cardiovascular stress test to determine the aerobic training heart rate[7], participate in interviews with social workers and psychologists in order to verify their capacity to participate in group activities, as well as their availability of resources to attend the treatment program for a period of 4 months.

The rehabilitation program for fibromyalgia at the DRM consists of group interventions, with a 2-hour duration, three times a week, for 4 months.[8] The program consists of group educational and therapeutic activities, regarding aspects of pain control as well as ergonomics, self-massage, body awareness, group psychotherapy, stretching and supervised physical conditioning.

Each category of the ICF core set for generalized chronic pain received a qualifier code that reflects the impact of the health conditions on the functions, structures, activities, participations and environmental factors. The qualifiers are described in Chart 1.

Chart 1
General ICF Qualifiers.

Qualifier	Nominal	Quantitative
0	No problem (absent ...)	0 – 4%
1	Mild problem (slight, mild ...)	5 – 24%
2	Moderate problem (medium, average)	25 – 49%
3	Severe problem (intense ...)	50 – 95%
4	Complete problem (total ...)	96 – 100%
8	Non-specified	
9	Non-applicable	

For the categories of the components BF, BS and A&P, of which the total of the study participants that obtained 0 or 9 reached 30% of the sample or more, the category was considered non-relevant, as the authors understood that, if one category was classified as 9 (non-applicable), it has, effectively, the same meaning for the person as the classification 0 (no problem). For the EF categories, we chose to study the prevalence of qualifications 0 and 9, separately.

RESULTS

Twenty-nine patients participated in the study. Of all the possible responses (67 categories x 29 patients = 1,943), only 14 obtained the qualification 8 (non-specified), which indicates a good quality of the filling out of the core sets, as the latter were answered almost entirely.

The result of the use of the ICF core set for generalized chronic pain in this sample is shown in Table 1. In general, 29 categories were qualified as "no problem" in 30% or more of the patients in the components BF, BS and A&P, which indicates that they were not incapacitating at that moment of their lives. They corresponded to 43.5% of the BF and 51.8% of the A&P. the only category of this core set that referred to the body structures was considered relevant.

The categories of the BF that did not reach levels of significance were b122 (Global psychosocial functions), b147 (Psychomotor functions), b1602 (Thought content), b164 (Superior cognitive functions), b180 (Personal experience and Time functions), b260 (Proprioceptive functions), b270 (Sensory functions related to temperature and other stimuli), b430 (Hematological functions), b735 (Muscular tonus functions), b760 (Voluntary movement control functions).

Categories of A&P that did not reach a level of significance of 30% include d160 (Concentrate attention), d175 (Solve problems), d220 (Perform multiple tasks), d450 (Walk), d475 (Drive), d510 (Wash oneself), d540 (Dress oneself), d570 (Care after one's health), d620 (Acquisition of property and services), d650 (Take care of house objects), d660 (Help others), d720 (Complex interpersonal interactions), d760 (Family relations), d770 (Intimate relations), d845 (To get, maintain and leave a job), d850 (Remunerated work), d855 (Non-remunerated work), d910 (Community life), d920 (Recreation and leisure).

For the environmental factors, [11] (68.8%) categories were considered as "non-relevant" as they totaled 30% of the scores 0 or 9. For 7 of these "non-relevant" categories, the determinant aspect was the qualification as 0 "neither facilitator, nor barrier", they were: e310 (Nuclear family), e325 (Friends), e420 (Individual attitudes of the nuclear family), e425 (Individual attitudes of friends), e455 (Individual attitudes of health professionals), e460 (Social attitudes), e465 (Norms, practices and ideologies). However, in 4 of them, e430 (Individual attitudes of individuals in authority positions), e570 (Services, systems and policies of social security), e575 (Services, systems and policies of global social support) and e590 (Services, systems and policies of work and employment) it was the qualifier 9, "non-applicable" that made them "non-relevant".

Table 2 compares the remaining categories of the ICF core sets for generalized chronic pain with the so-called summarized ICF core set. Seven of 9 (78%) categories related to the component BF of the summarized core set were in concordance with the remaining categories of the comprehensive ICF core set and only the categories b147 and b1602, of the summarized core set were not among those considered relevant. On the other hand, only 4 of the categories of the component A&P were considered relevant, indicating a concordance of only 40%. The categories that did not present concordance were d175, d450, d760, d770, d850 and d920.

DISCUSSION

This is a pioneer study in showing the results of the application of the ICF core sets for generalized chronic pain in patients with fibromyalgia. Therefore, it is impossible to make comparisons with other results in literature and the authors preferred to present the results and the logical explanations.

The first aspect that must be taken into account in the analysis of these results is the fact that the patients that participated in this study were close to the end of the rehabilitation program or had recently been discharged.

Fibromyalgia is a chronic condition, of which the cure is not expected and of which therapeutic objective is more associated with the learning of controlling symptoms than with symptom elimination.[9] All patients participating in the study maintained the diagnostic criteria of fibromyalgia, even after the subjective improvement reported at the end of the treatment program. However, it is necessary to stress that, although the pain complaint remained, some gains regarding the functional capacity for the activities of daily living (ADL) and activities of practical living (APL) were documented with this treatment program[8,10] and we believe that the brief group therapy intervention focused on pain, as well as the counseling with social workers helped the patients to deal with the family or community relationship conflicts.

Among the body functions (BF) considered non-relevant, we emphasize some categories that did not present any relevance in the description of the functionality of these patients, such as b260 (Proprioceptive functions) and b270 (Sensory functions related to temperature and other stimuli), as the finding of alterations in these functions at the objective tests of physical examination was rarely positive, despite the usual complaint by the patients. Regarding the b430 category (Hematological functions), laboratory examinations rarely showed any alteration that could not be associated to comorbidity, such as anemia.

The physical conditioning and the learning of stretching and self-massage techniques might have been responsible for the fact that the categories b735 (Muscular tonus functions) and b760 (Voluntary movement control functions) were presented as being non-relevant at the end of the treatment.

The categories related to mental functions, such as the b122 (Global psychosocial functions), b147 (Psychomotor functions), b1602 (Thought content), b164 (Superior cognitive functions) and b180 (Personal experience and time functions) might have been improved by the work carried out at the rehabilitation program,

Table 1
Percentage of "no problem" in each category of the ICF core set for generalized chronic pain. Categories that did not reach a level of significance of 30% are darkened. The categories in bold are those that did not reach a level of significance, according to the chosen criterion.

Body Functions and Structures	% of 9 or 0	Activities & Participations	% of 9 or 0	Environmental Factors	% of 0	% of 9
b122	55.2	d160	44.8	e1101	0	6.9
b126	27.6	d175	48.3	e310	34.4	0
b130	24.1	d220	41.4	e325	44.8	3.4
b134	13.8	d230	27.6	e355	0	0
b140	27.6	d240	24.1	e410	17.2	0
b147	51.7	d410	24.1	e420	31	3.4
b152	24.1	d415	10.3	e425	41.4	3.4
b1602	55.2	d430	10.3	e430	17.2	55.2
b164	62	d450	37.9	e450	3.4	0
b180	65.5	d455	13.8	e455	34.4	0
b260	65.5	d470	27.6	e460	58.6	0
b265	20.7	d475	79.3	e465	58.6	0
b270	79.3	d510	41.4	e570	3.4	27.5
b280	10.3	d540	41.4	e575	0	100
b430	79.3	d570	41.4	e580	0	0
b455	20.7	d620	34.4	e590	3.4	58.6
b640	27.6	d640	6.9			
b710	27.6	d650	34.4			
b730	13.8	d660	72			
b735	37.9	d720	41.4			
b740	13.8	d760	55.2			
b760	72.4	d770	62			
b780	17.4	d845	93.1			
		d850	62			
s 770	27.6	d855	79.3			
		d910	75.9			
		d920	44.8			

with the stimulus to expression and group interaction. The category b1602 (Thought content) was included in the ICF core set for generalized chronic pain because among the items included in it is somatization. The concept of somatization can be questioned according to the understanding of whoever observes the patient, and in the ICF, that is not described, therefore, the authors think that its maintenance in this core set must be questioned until the ICF better describes it.

The d160 categories (Attention concentration) and d175 (Problem-solving) of the A&P component of the ICF core set for generalized chronic pain are usually reported by the patients as limited; however, the objective evaluation through the observation of these patients in the proposed activities during the treatment showed a better performance than the individual report. Once more, the physical conditioning seems to be responsible

Again, the physical conditioning seems to be responsible for the elimination of the category d450 (walking), d510 (clean oneself), d540 (dress oneself) and d620 (Acquisition of property and

services), as well as psychological and social counseling might have interfered in the exclusion of the categories d720 (Complex interpersonal relations), d760 (Family relations) and d770 (Intimate relations). Some categories have little meaning for the women assessed in this sample, such as d475 (Drive), as few of them drove or had a car, d650 (Take care of house objects), as it is not usually a female activity in the cultural context of the country. As the majority of the sample consisted of housewives or retired women, the categories d845 (To get, maintain and leave a job), d850 (Remunerated work) and d855 (Non-remunerated work) did not show to be relevant. Considering that these patients had been participating in therapeutic activities with good adherence and following the instructions, the category d570 (Care after one's health) was considered as "no problem" by 41.1% of the patients. The category d910 (Community life) was not considered relevant, as the associative and community life was not usual according to the description of the ICF. On the other hand, most patients could not describe any type of leisure activity, which in the end, classified

Table 2
Concordance between the categories of the ICF core set for generalized chronic pain considered relevant and those belonging to the summarized ICF core set for generalized chronic pain.

Component	Description	Categories of the ICF core set considered "relevant" for generalized chronic pain	Categories of the summarized ICF core set for generalized chronic pain	Concordance
Body functions	b126	▬		
	b130	▬	▬	
	b134	▬	▬	
	b147		▬	
	b152	▬	▬	
	b1602		▬	
	b265	▬		
	b280	▬	▬	7/9 = 78%
	b455	▬	▬	
	b640	▬		
	b710	▬		
	b730	▬	▬	
	b740	▬		
	b760	▬	▬	
	b780			
Body structures	s 770	▬		0%
Activities and participationst	d175		▬	
	d230	▬	▬	
	d240	▬	▬	
	d410	▬		
	d415	▬		
	d430	▬	▬	
	d450		▬	4/10 = 40%
	d455	▬		
	d470	▬		
	d640	▬	▬	
	d760		▬	
	d770		▬	
	d850		▬	
	d920		▬	
Environmental factors	e1101	▬	▬	
	e310		▬	
	e355	▬	▬	
	e410	▬	▬	
	e430	▬		3/5 = 60%
	e450	▬		
	e570		▬	
	e580	▬		

the category d920 (Recreation and leisure) as non-relevant.

Among the EF, 11 (68.8%) of the 16 categories belonging to the core set were not considered relevant according to the proposed criterion. The 5 remaining categories were: e1101 (Medications), e355 (Health professionals), e410 (Individual attitudes of the members of the nuclear family), e450 (individual attitudes of health professionals) and e580 (Health services, systems and policies), of which 4 are related to the health system. The fibromyalgia patients are known to be great consumers of the public health system[11], which, added to the intensive treatment that they were receiving, justifies the importance attributed to these environmental factors in this sample. An unexpected result was to realize that family (e310) and friends (e325) had little importance for this group of patients at the end of the treatment, as well as social attitudes and norms (e460 and e465), as the general impression is that these support groups markedly interfere in the interpersonal relationships, sometimes positively and sometimes negatively. On the other hand, all the structures of institutional support (Services, systems and policies) selected for this core set were considered non-relevant, except the health-related ones (e580). Many patients did not have health insurance (e570) because they were housewives, and that was the justification for the reduced significance of the policies and systems of work and employment (e590). It is noteworthy that the category e575 (Services, systems and policies of global social support) was qualified as 9 (non-applicable) in all the patients, as the understanding of the researchers is that the policies of social service in Brazil are not in agreement with the ICF description.1 The EF are important modulators of individual functionality, but they are not usually the object of assessment in studies of therapeutic intervention in fibromyalgia.[12]

The summarized ICF core set for generalized chronic pain is a shorter version of the list of categories that describe the functionality of individuals with generalized chronic pain. Differently from the comprehensive version that demands longer to be completed and presupposes the participation of a multiprofessional team, the summarized core set can be applied by only one person and takes less time, as it includes only 24 categories (whereas the comprehensive version has 67).

This study did not support the maintenance of the following categories in the summarized core set of the ICF: b147, b1602, d175, d450, d760, d770, d850, d920, e310 and e570 (Table 2), as, although they were considered relevant by the specialist panel that developed this core set, they do not fit the level of relevance of 30% required by this study. This means that 14 of the 24 categories (58.3%) did not have their relevance validated. Many of these categories might have been influenced by the fact that the patients were at the end of the rehabilitation program, as mentioned before (b147, b1602, d175, d450, d760, d770 and e310), but it is important to mention that some categories in fact do not seem to have any significance for this sample, such as d850 (remunerated work) and e570 (Social security services, systems and policies) due to the fact that most of the sample consisted of housewives. On the other hand, some categories showed to be relevant, according to the chosen criterion of 30% and could be included in the summarized core set to describe

functionality of individuals with generalized chronic pain: b126, b265, b640, b710, b740, d410, d415, d455, d470, e430 and e450.

One of two noteworthy points to be considered as methodological problems of the present study is the sample, which was small, exclusively female, previously selected for participating in the group treatment and that was at the end of the rehabilitation treatment, thus clinically improved, which limits the generalization of the results. Additionally, the chosen level of relevance, 30%, can be considered very stringent, which resulted in the invalidation of many categories (58.2%). The analysis of Table 1 leads to the conclusion that the increase in this level of relevance to 40% would exclude 31 categories (46.3%) and finally, a cutoff with 50% of answers 0 or 9 would result in the exclusion of only 21 categories (31.3%).

CONCLUSION

This study points toward the non-validation of the comprehensive ICF core set for generalized chronic pain, as most of the categories was considered non-relevant according to the criterion chosen by the authors. However, this is an exploratory study, limited by the small-size sample and characteristics that limit the interpretation of the results and by the very stringent criteria to consider the relevance of the core set categories.

On the other hand, the summarized ICF core set for generalized chronic pain showed a higher percentage of relevant categories and might be considered validated by this approach.

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