




Proposal for the use of the International Classification of Functioning, Disability and Health in the physical therapy evaluation in breast cancer

Proposta de utilização da Classificação Internacional de Funcionalidade, Incapacidade e Saúde na avaliação fisioterapêutica no câncer mamário

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ABSTRACT | INTRODUCTION: Breast cancer is a common disease among women and the treatment is subject to present limitations in daily and social activities. The International Classification of Functioning, Disability and Health (ICF) can be a useful tool to point out the alteration in the functionality of these women. **OBJECTIVE:** To verify the extent to which the content of a physical therapy assessment form for women with breast cancer encompasses the ICF health components and compare with the breast cancer-specific core set. **MATERIAL AND METHOD:** A descriptive study was carried out linking the items of the evaluation form with the ICF categories. Two researchers independently evaluated which categories were more appropriate for each item on the physical therapy evaluation form used for women with breast cancer in a reference hospital in the interior of Minas Gerais, considering the context, response options, and the perspectives adopted in the instruments used. **RESULTS:** 70 ICF categories were listed from the physical therapy evaluation form used in the hospital, involving all its health components. Of the 80 categories of the specific core set for breast cancer, only 21 were equivalent to the evaluation form. **CONCLUSION:** The link between the ICF categories and the assessment form for women with breast cancer encompasses all its health components, but with low equivalence when compared to the breast cancer-specific core set.

KEYWORDS: International Classification of Functioning, Disability and Health. Breast Neoplasms. Physical Therapy Specialty.

RESUMO | INTRODUÇÃO: O câncer de mama é uma doença comum entre as mulheres e o tratamento está sujeito a apresentar limitações nas atividades diárias e sociais. A Classificação Internacional de Funcionalidade, Incapacidade e Saúde (CIF) pode ser uma ferramenta útil para apontar a alteração da funcionalidade dessas mulheres. **OBJETIVO:** Verificar em que medida o conteúdo de uma ficha de avaliação fisioterapêutica para mulheres com câncer de mama engloba os componentes de saúde da CIF e comparar com o core set específico para o câncer de mama. **MATERIAL E MÉTODO:** Estudo descritivo realizando-se a vinculação entre os itens da ficha de avaliação com as categorias da CIF. Dois pesquisadores avaliaram independentes quais as categorias mais adequadas para cada item da ficha de avaliação fisioterapêutica utilizada para mulheres com câncer mamário em um hospital de referência no interior de Minas Gerais, considerando o contexto, opções de resposta e as perspectivas adotadas nos instrumentos utilizados. **RESULTADOS:** 70 categorias da CIF foram elencadas a partir da ficha de avaliação fisioterapêutica utilizada no hospital, envolvendo todos os seus componentes de saúde. Das 80 categorias do core set específico para câncer de mama, apenas 21 foram equivalentes com a ficha de avaliação. **CONCLUSÃO:** A vinculação das categorias da CIF com a ficha de avaliação para mulheres com câncer de mama engloba todos os seus componentes de saúde, entretanto com baixa equivalência quando comparada com o core set específico para o câncer de mama.

PALAVRAS-CHAVE: Classificação Internacional de Funcionalidade. Incapacidade e Saúde. Neoplasias da Mama. Fisioterapia.

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Introduction

In Brazil and worldwide, breast cancer is a common disease among women, being considered the second cause of death in this population.¹ The treatment can be local or systemic and women are subject to present complications such as lymphedema, painful syndromes, peripheral nerve damage and limitation of range of motion of the upper limb, as well as limitation in daily activities.^{2,3}

The International Classification of Functioning, Disability and Health (ICF) defines functioning as the human experience of the dynamic interaction of positive aspects between health status, body structure and function, activity, participation and contextual factors.¹ The ICF can be used from both qualitative and quantitative perspectives. As for the qualitative aspect, it involves the understanding of the interaction between health components and, as far as classification is concerned, the use of categories.^{4,5}

In Brazil, its use, although little used in clinical practice by health professionals, has been gaining familiarity, especially when strategies are proposed to stimulate its practice, such as the core sets. Core sets are brief lists that group the main categories related to health conditions.⁴ Among the various core sets created, there is a specific one for breast cancer that covers 80 categories, 26 referring to body functions, 9 to body structure, 22 to activities and participation, and 23 to environmental factors. As to whether to use the core sets, there is a counterpoint among ICF scholars, in which, on the one hand, there is a greater dissemination for "facilitating" the use, but on the other hand, it regresses within the biopsychosocial approach, for reflecting in the core sets, categories related to the health condition.⁵

Another way to approach the reality of the health services that already present evaluations according to their mission and values is to use the linking rules method, which consists of the conversion of the information obtained by the evaluation (anamnesis, collection of personal data, physical examination, and

application of multidimensional instruments) into the alphanumeric system of the ICF.^{6,7} The methodology offers the possibility of knowing which domains of the biopsychosocial model are present in the outcome evaluation instruments. In addition, it brings to health professionals, managers, and researchers the ability to effectively elucidate which specific domains of functionality are present in the assessment protocols and to propose the complementation with other outcome measures of the biopsychosocial model.^{8,9}

Thus, the present study aims to estimate to what extent the content of a physical therapy evaluation form used for women with breast cancer encompasses the ICF health components and to compare it with the specific core set for breast cancer.

Material and Methods

This is a descriptive study, carried out with the linking rule between the ICF and the items of a physical therapy evaluation form used for women with breast cancer in a reference hospital in the interior of Coroatá - MA. The assessment form contains sociodemographic data (age, sex, profession, marital status, education, work situation at the moment and workload, habits and addictions, medications in use, vital data such as blood pressure, heart rate, weight, height, body mass index), about the breast (lump, location, specific tests, biopsy, family history), about the surgery (breast location, radiotherapy, chemotherapy, hormone therapy, associated complications, nerve involvement, scar aspect, skin sensitivity). In addition, instruments are included:

1. Disabilities of Arm, Shoulder and Hand Questionnaire (DASH): composed of 30 self-applied questions about the degree of difficulty in the performance of daily and social activities, having as reference the week before the evaluation. The scale is punctual and follows the evolution, without score distinction, and infers that a high score indicates great dysfunction.¹⁰

2. Quality of life questionnaires EORTC QLQ-30 and EORTC QLQ-BR 23: composed of 53 questions that include information about cancer-specific symptoms; side effects of treatment; psychological status; physical functioning; personal interaction; and overall health. The higher the value, the higher the quality of life, without specific categorization¹¹, being punctual, following the evolution of the individual.

3. Rosenberg Self-Esteem Scale (RAS): consists of 10 multiple choice questions referring to positive self-image and self-depreciation. Global self-esteem is classified as high with a score above 31 points, medium between 21 and 30 points, and low with scores below 20 points.¹²

4. Biophotogrammetry: measurements of range of motion (ROM) of the movements of shoulder extension, flexion, and abduction, and elbow flexion through the analysis of movements by photographing specific anatomical points (acromion, medial and lateral epicondyles of the humerus, ulnar and radius styloid process, center of the wrist) and standardized in the Kinovea® software Version 0.8.15, year 2014.¹³

5. Perimetry: measurement of the upper limb performed bilaterally every 5 centimeters starting at the wrist crease, at 8 points marked ascending. Information about the evaluation form (availability for use in other sites), please contact the main author. The ICF is a classification of the functioning and of the states related to health, presenting units of classification (the categories) in the domains. This classification features two parts and each of them presents two components. Part one was addressed in the current study, called "Functioning and Disability", which presents the following components: "Functions (b) and Structures (s) of the Body" and "Activities and Participation (d)", for being the components that relate to the items of the physical therapy assessment form for women with breast cancer. Part two concerns the contextual factors (environmental and personal ones).¹ This classification features an alphanumeric system, being the components represented by small letters and the categories represented by numbers. The category becomes meaningful with the presence of the qualifiers at the end, being represented by numbers after a "separator" point. The qualifiers indicate the health problem magnitude.¹

The ICF is a classification of functioning and health-related states, presenting classification units (the categories) within domains. This classification has two parts, and each part has two components. Part one, called "Functionality and Disability", was approached in the present study, presenting the following components: "Functions (b) and Structures (s) of the Body" and "Activities and Participation (d)", for being the components that relate to the items of the physiotherapeutic evaluation form for women with breast cancer. Part two refers to contextual factors (environmental and personal).¹ This classification presents an alphanumeric system, with the components represented by lowercase letters and the categories represented by numbers. The category becomes meaningful with the presence of qualifiers at the end, which are represented by numbers after a "separator" dot. The qualifiers indicate the magnitude of the health problem.¹

The connection of the ICF categories with the items of the physical therapy assessment form for women with breast cancer was carried out following the rules recommended by Cieza et al.¹⁴, using the version of the instrument validated in Portuguese. Two researchers had experience in the practical use of the assessment form and were previously calibrated for the use of the ICF. Next, these researchers independently (blind) connected the items of the assessment form with the ICF categories. Then the categories were confronted, and those items in which there were divergences, a third researcher was invited with the purpose of deciding which category was more adequate.

When analyzing the instruments from the ICF perspective, the health component "body function" was considered in the instruments EORTC QLQ-30 and EORTC QLQ-BR 23, DASH, EAR and in the biophotometry; "body structure" was considered in the information from the medical history form and in the perimetry; "activity/participation" in the instruments EORTC QLQ-30, EORTC QLQ-BR 23, DASH and EAR; while "environmental factors" were considered in the medical history form.

The linking process was organized in a Microsoft Excel 2007 spreadsheet. Subsequently, the ICF categories listed were compared with the core set for breast cancer, verifying the common categories as well as the divergent ones, in order to calculate the frequencies by means of percentages.

Results

The results of the content linked to the instruments are described in Table 1. Seventy ICF categories were listed from the physiotherapeutic evaluation form used in the hospital, being 31 of activity and participation, 30 related to body function, seven to body structures and two to environmental factors.

Table 1. Categories of the International Classification of Functioning, Disability and Health (ICF) (to be continued)

STUDY	BODY FUNCTION
b11420	Orientation concerning oneself
b1263	Mental stability
b1267	Reliability
b1300	Energy level
b134	Sleep functions
b1400	Attention maintenance
b1441	Long term memory
b1800	Personal experience
b1801	Body image
b250	Taste function
b265	Tactile function
b280	Pain sensation
b2801	Localized pain, specified
b28010	Pain in the head or neck
b28014	Pain in the upper limb
b440	Respiratory functions
b5104	Salivation
b5106	Regurgitation and vomit
b5250	Feces disposal
b5253	Faecal continence
b5350	Nausea sensation
b640	Sexual functions
b6401	Functions of the sexual phase
b6406	Functions of the orgasmic phase
b7100	Only one articulation mobility
b7200	Shoulder Mobility
b730	Functions of the muscle strength
b7300	Isolated muscle strength and muscle groups
b740	Functions of muscle endurance
b7800	Muscle stiffness sensation
STUDY	BODY STRUCTURE
s420	Immune system structure
s6302	Breasts and nipples
s7201	Shoulder joints
s73001	Elbow joints
s73011	Wrist joints
s8102	Upper limb skin
s840	Body hair structure
STUDY	ACTIVITY AND PARTICIPATION
d170	To write
d2202	To perform multiple tasks
d2302	To finish a daily routine
d2303	To manage one's activity level
d2400	To deal with responsibilities
d2401	To deal with stress
d4104	To stand up
d4301	To move hands
d4451	To push
d4452	To reach
d4453	To rotate or to twist hands and arms
d470	Transportation use
d5100	To wash parts of the body
d5101	To wash all the body
d5202	To groom one's hair and beard
d5400	To put on clothes
d550	To eat
d5700	To ensure one's physical comfort
d5702	To keep one's health
d6300	To prepare simple meals
d640	To do household chores
d6501	Furniture and house maintenance
d6505	To care for internal and external plants

Table 1. Categories of the International Classification of Functioning, Disability and Health (ICF) (conclusion)

STUDY	ACTIVITY AND PARTICIPATION
d7108	Basic personal interactions
d7702	Sexual relationships
d7608	Family relationships
d8451	To keep a job
d850	Paid labor
d8700	Personal economic resources
d9205	Socialization
d9209	Recreation and leisure
STUDY	ENVIRONMENTAL FACTORS
e1108	Products or substances for personal consumption
e580	Services, systems, and health policies

Note: The highlighted categories are the equivalent ones between the core set and the physical therapy assessment form for women with breast cancer in a referral hospital in the countryside of Minas Gerais.

Twenty-one (30%) categories were equivalent with the breast cancer specific core set. The Body Function component was the one that presented most equivalence (12 out of 26 in the core set), while the environmental factors presented only two out of 23 referred to in the core set.

Of the 48 categories that were verified in the evaluation form and not included in the core set, the components activity and participation (26 categories) were the ones that presented the highest number of surplus categories.

Discussion

The present study aimed at verifying to what extent the content of a physiotherapeutic evaluation form used for women with breast cancer in a reference hospital in the interior of the country encompasses the ICF health components. In this perspective it was evidenced that all health components of the ICF were incorporated into the physical therapy assessment form, corroborating the perspective of examining the individual under the biopsychosocial approach. An assessment based on the ICF conceptual model allows describing the individual about his/her functionality and disability.¹⁵

In addition, when comparing the categories listed on the physiotherapeutic evaluation form with the specific core set for breast cancer, it was observed that there is a certain degree of similarity between the quantity of categories (80 categories of the core set and 70 categories on the evaluation form), but with low equivalence. This result corroborates the study by Carvalho et al.¹⁵, who also identified divergences in the categories listed in the study with women with breast cancer, especially in the activity/participation components. The World Health Organization¹ makes efforts in the construction and dissemination to facilitate the clinical use of the ICF and to interconnect the items of a form already used in a hospital with the ICF categories corroborates for such objective.

Santos et al.¹⁶ conducted a literature review and found few studies addressing the ICF in the context of breast cancer, justifying this lack of use due to ignorance, professional lack of interest, lack of management involvement, and low macro-institutional initiative. From this perspective, adapting the assessment forms already used in the service according to the ICF may be a strategy to enhance this process, meeting both the users' needs and the collection of information for health statistics and information systems. Furthermore, Cieza A et al.¹⁴ suggest that the use of the rules to link instruments to the ICF can help in the creation of a database, aiming at a better operationalization of the ICF categories, besides helping to select and build more accurate assessment forms and a source of quantitative data for the services.

The ICF is organized in a hierarchical way in general to more specific categories, where a more specific level category automatically implies the application of a higher level category (general), while the opposite is not possible.^{17,18} Regarding the connection method carried out in this study, it was observed that the assessment presented a

larger number of more specific level categories than the core set for breast cancer, showing particularities that strengthen what the ICF advocates, i.e., an approach centered on the individual.¹⁷

This ICF coding system tends to generate an impression of high complexity of the tool and this factor can collaborate to the difficulty of applying the ICF. Thus, to first train the professionals with strategies to incorporate the ICF conceptual model in the assessment form, without the immediate need of codes, can be a path towards the amplification of the biopsychosocial model.¹⁶ From the moment that the ICF becomes a common language among the professionals, the acceptance to incorporate its completeness in the routine can become more viable.^{19,20}

The present study presented limitations such as the reduced number of categories arising from environmental factors, as opposed to a predominance of body function categories. The environment in which the form is inserted, that is, the hospital environment, may be related to this finding, since the centrality of the structure and body function component is emphasized and must be taken into consideration, due to the demands related to this level of attention.^{21,22} In addition, the evaluation form encompassed all the health components, foreseeing the perspective of evaluating the individual, reaching the objective of the present study of demonstrating the experience of the process of relation of a form with the ICF categories. Aligning what is done in the service with what is recommended regarding the biopsychosocial model is essential for the planning of oncologic care to women with breast cancer.²³

Finally, it is essential that more studies are carried out to reveal what is practiced in the hospital services of physical therapy care to women with cancer, in addition to expanding the possibilities of implementing the ICF. It is necessary to demystify the ICF by promoting a two-way dialogue in which it is essential, on the one hand, to understand the service, how it works and its demands, from management to patient care, to inform and train professionals about

the current and expanded perspective of health. The purpose is to bring the dynamics of the service closer to the biopsychosocial view, bringing more resoluteness and completeness to health care.²⁴

Conclusion

In this study, the ICF category linking with the physical therapy assessment form used for women with breast cancer in a hospital in the countryside of Minas Gerais encompasses all their health components, with higher prevalence in body function and activity/participation, although with low equivalence when compared with the specific core set for breast cancer.

Authors' contributions

Galaverna LS participated in the conception, design, research data statistical analysis, result interpretation and in the writing of the article. Nogueira MSD participated in the research data collection and data interpretation. Carvalho EM participated in the conception, study design and data interpretation. Carvalho RM and Deloroso FT participated in the study design and data interpretation. Dornelas LF participated in the conception, design, research data statistical analysis, result interpretation, writing of the article and in the final review.

Conflict of interest

No financial, legal, or political conflict, involving third parties (government, companies and private foundations, etc.) was declared concerning any aspect of the submitted study (including, but not limited to grants and funding, participation in advisory board, study design, manuscript preparation, statistical analysis, etc.).

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