Validation of categories of the International Classification of Functioning, Disability and Health for the elderly

Validação de categorias da Classificação Internacional de Funcionalidade, Incapacidade e Saúde para pessoas idosas

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Objective: to validate categories of the International Classification of Functioning, Disability and Health directed to the elderly. **Methods:** methodological study of 13 Brazilian gerontologist nurses. We used an electronic form based on the International Classification of Functioning, Disability and Health, composed of 107 items (45 related to Body functions, 38 to Participation and Activity; 24 to Environment). The form was forwarded by email. The items were evaluated on a *Likert* scale of five points ranging from 0 to 1.0. Questions with 80.0% and more than 80.0% of appearance. **Results:** participants validated 21 categories related to Body Functions; 18 categories related to Participation and Activity; three categories related to Environmental Factors. **Conclusion:** biomedical training in nursing may have directed the preferential validation of categories related to the body and less preference to context/environment.
Descriptors: Aged; International Classification of Functioning, Disability and Health; Geriatric Assessment; Nursing.

Objetivo: validar categorias da Classificação Internacional de Funcionalidade, Incapacidade e Saúde direcionadas às pessoas idosas. **Métodos:** estudo metodológico realizado com 13 enfermeiras brasileiras gerontólogas. Utilizou-se um formulário eletrônico, subsidiado na Classificação Internacional de Funcionalidade, Incapacidade e Saúde, composto por 107 itens (45 relacionados às Funções do corpo; 38 à Participação e Atividade; 24 ao Ambiente), encaminhado por e-mail. Os itens foram avaliados em uma escala *likert* de cinco pontos variando de 0 a 1,0. Consideraram-se questões validadas aquelas com 80,0% e mais de aparição. **Resultados:** foram validadas 21 categorias relacionadas às Funções do Corpo; 18 categorias relacionadas à Participação e Atividade; três categorias relacionadas aos Fatores Ambientais. **Conclusão:** a formação biomédica na enfermagem pode ter direcionado maior validação das categorias relacionadas ao corpo e menor ao contexto/ambiente.
Descritores: Idoso; Classificação Internacional de Funcionalidade, Incapacidade e Saúde; Avaliação Geriátrica; Enfermagem.

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Introduction

Aging of the world population has been accelerated in recent times. In Brazil, the average life expectancy is increasing annually due to more effective control of environmental risks, improvement of medical interventions, decreased birth rates and mortality rates in recent decades[1]. Decreased physical and cognitive ability, which can be influenced by genetic and cultural factors and life habits, is sometimes seen to happen with the aging process[2].

Increase the participation of older people in society emerges as a challenge, emphasizing that some practices that can minimize the appearance of chronic diseases that frequently affect these people and can lead them to functional disability are very important. It is necessary that the concept of health may value social, economic and cultural factors that affect the health and the individual behavior of the elderly[3].

There is a need for restructuring health systems and to adapt them to the needs of older people, with regard to functionality. The National Health Policy for the Elderly has as one of its priorities the functional evaluation of the elderly, for planning actions that meet the real needs of these people[4].

Functional evaluation of the elderly is part of the clinical management and aims to assess various dimensions such as the very functional capacity, physical health, cognitive function and emotional state, in addition to social and environmental conditions. It is a multidimensional, dynamic and usually multidisciplinary diagnostic process directed to quantify and qualify the problems and needs of the elderly[5].

There are tools to assess the health of people and there is a need for health professionals/nurses to use specific ways of assessment to consider functionality, disability and health of the elderly. The International Classification of Functioning, Disability and Health stands out among these tools. This is characterized as an international model to classify the impact of diseases on the health condition of people. This is an appropriate tool for identifying the structural and environmental conditions and individual characteristics that interfere with the functionality of people[6], including the elderly.

The model of the International Classification of Functioning, Disability and Health needs to be investigated in the social, political and cultural dimensions. It represents a challenge for all in the sense of exploring the acceptability, validity and impact on different systems, particularly exploring the potential for reformulation of policies that may be more inclusive and equitable[7].

Research studies have used the International Classification of Functioning, Disability and Health in various ways and have focused on various aspects, such as: the biopsychosocial proposal focused on the capacity and possibilities like the guide for research[8]; for comparison with other instruments or as the main instrument[9]; as axis theme for literature research[10].

Some countries have taken measures for the development of a set of strategies to implement the International Classification of Functioning, Disability and Health. These strategies describe the creation of teaching material, the application of the *check list*, the development of *core sets*, the financial support for research projects and the introduction of the Classification in university curricula[11]. In Brazil, research has used the International Classification of Functioning, Disability and Health, with the human functioning as one advantages of this application[12].

The present study had the objective to validate categories of the International Classification of Functioning, Disability and Health directed to the elderly.

Methods

Methodological study, method of acquisition, organization and analysis of data, based on the development, adaptation, validation and evaluation of tools. It has application in all forms of scientific knowledge, being relevant in underexplored topics

when the researcher seeks to build instruments to measure key variables for a given object of study[13].

The survey was conducted in two phases, first phase: preparation of the instrument containing important categories to evaluate the elderly. The categories come from the International Classification of Functioning, Disability and Health; second phase: validation of categories by gerontologist nurses.

In the first phase of the research, the instrument was prepared by eight members of a group of study and research, among them two experts in gerontology by the Brazilian Society of Geriatrics and Gerontology. The instrument was composed of 107 categories (45 related to body function, 38 related to participation and activity, 24 related to the environment). The instrument was presented by means of a *Likert* scale whose scores ranged as follows: never necessary = 0; rarely necessary = 0.25; sometimes necessary = 0.50; often necessary = 0.75; = 1.00 always necessary.

This instrument was developed based on the International Classification of Functioning, Disability and Health - Portugal version[6]and, therefore, it was necessary to sent it for vernacular correction to the Brazilian Portuguese. This phase, called validation of face, corresponds to the moment when *experts* check whether the data collection instrument questions present adequate form and vocabulary for the purpose of measurement[14]. Validation was carried out by five members of the study group and research of the authors of this article, who already had used and/or were using the Classification of Functioning, Disability and Health in dissertations and theses.

After validation, it was found that the instrument was long and in order to facilitate the delivery to participants and their reply, in the second phase of the research was designed an *online* form using Google Doc platform.

Nurses who have PhD in healthcare of elderly participated in the second phase of the study. Inclusion criteria were: professional with PhD in elderly health/ aging/old age, found through the website of the Brazilian Society of Geriatrics and Gerontology; and/ or leader/member of study groups and research on aging, found through the site National Research Council.

Fifty two nurses who met the inclusion criteria were found through curricula *Lattes*. An e-mail inviting nurses to participate in the study was sent to each of the 52 researchers. Among them, 31 accepted the invitation, becoming candidates as possible participants. They received an *email* giving instructions about completing the electronic form, sending them a *link* for returning the responses and the Informed Consent. The deadline of 15 days was established for reply. When necessary, questions were clarified with the help of one of the researchers, through *email* or *Skype*. Only 13 nurses filled and returned the electronic form. Then, a content validation took place, when a group of *experts* checks whether the items of the data collection instrument represent the content about what one wants to evaluate[14].

Data were organized in tables and processed in an electronic database in the program *Microsoft®* *Excel* 2007 (Operating System *Windows* XP, *Microsoft Corporation, Inc.).* In the data analysis, elements of described statistics and absolute averages were considered. The categories that reached 80.0% of agreement were considered validated by the 13 specialists, following guidance from previous research, which also used methodological study[14].

The study complied with the formal require-ments contained in the national and international regulatory standards of research involving human beings.

Results

As for the profile of the 13 nurses who participated in the second phase of the study, all were female, all had PhD in nursing and were active in the

field of gerontology. Three were fellows in research productivity of the National Research Council. Four were experts in gerontology, from the title contest of the Brazilian Society of Geriatrics and Gerontology. Among the participants, 12 were professors and one was a clinical nurse. Nine nurses had more than 51 years of age. Seven have obtained their nursing graduation for over 26 years. Seven had more than 20 years of experience with the elderly.

Initially, the data collection instrument had 107 categories, and after validation by the gerontologist nurses, 42 categories were retained in the final version of the instrument. Some important categories for the functional evaluation of elderly, in the view of the authors, were not validated by research participants. The following figures show the categories related to the body, participation/activity, environmental factors and respective percentage.

Categories related to body functions	%
1. Functions of orientation in relation to: the time, the place, the person.	100.0
2. Functions of sleep: amount, beginning, maintenance and quality.	92.0
3. Functions of attention: maintenance and change.	90.0
4. Functions of memory: short and long term.	100.0
5. Functions of perception: hearing, visual, tactile, spatial vision.	100.0
6. Mental functions of language: reception of oral language.	94.0
7. Sensory functions: vision, hearing, vestibular (position, balance, movement), tinnitus, vertigo, dizziness or sensation of falling, nausea, sensitivity to temperature, to pressure, to noxious stimuli.	96.0
8. Sensation of pain - widespread pain.	92.0
9. Cardiac functions: frequency and rhythm.	100.0
10. Functions of blood pressure: increased, decreased, maintained.	100.0
11. Breath functions: rhythm, depth.	100.0
12. Functions of exercise tolerance: strength, aerobic capacity, fatigue.	88.0
13. Intake functions: bite, chew, manipulating food in the mouth, swallowing.	100.0
14. Defecation functions: elimination, consistency, frequency, continence.	100.0
15. Weight maintenance functions.	86.0
16. Water balance functions - maintenance.	88.0
17. Thermoregulatory functions: body temperature, temperature maintenance.	98.0
18. Urination functions: urination, frequency, continence.	100.0
19. Sexual functions: discomfort associated with menopause.	82.0
20. Functions of joint mobility: general mobility of the joints, general stability of the joints, trembling.	100.0
21. Functions of the skin and related structures: reparative, sensations related to the skin.	86.0

Figure 1 - Categories of components of the International Classification of Functioning, Disability and Health in the Body Functions

Categories related to Activity and Participation	%
1. Intentional sensory experiences: listening.	82.0
2. Application of knowledge: to focus attention.	80.0
3. Take decisions.	82.0
4. Run the daily routine: managing daily routine, complete daily routine, manage their own level of activity.	80.0
5. Dealing with stress and other psychological situations; dealing with crises.	82.0
6. Communication: communicate and receive spoken messages.	92.0
7. Conversation: talk to a person.	92.0
8. Changing basic body position: lie down, sit, stand up, bend over, stay seated, stay standing.	100.0
9. Self Transference: in sitting position, when lying down.	100.0
10. Walk: short distances.	100.0
11. Move: inside the house, outside the house and in other buildings, use transportation.	94.0
12. Self-care: wash oneself, dry up oneself, take care of the skin, take care of the teeth, take care of the hair and shaving, take care of the fingernails, take care of toenails.	100.0
13. Care related with the process of excretion: regulation of urination.	100.0
14. Dress up: dress up clothes, get undressed, put on shoes, take off shoes, chose clothes.	100.0
15. Take care of own health: ensure own physical comfort, control food and fitness, maintain health.	94.0
16. Community life: informal associations.	90.0
17. Recreation and leisure: hobbies, socializing.	90.0
18. Religion and spirituality: organized religion, spirituality.	100.0

Figure 2 - Categories of components of the International Classification of Functioning, Disability and Health in Activity and Participation

Categories related to Environment	%
1. Products and technologies, products or substances for personal use: food, medicine.	82.0
2. Natural environment and man-caused environmental change: climate/temperature.	80.0
3. Support and relationships: family; friends; acquaintances, peers, colleagues, neighbors and community members; personal care providers and personal assistants; health professionals.	100.0

Figure 3 - Categories of components of the International Classification of Functioning, Disability and Health in Environmental Factors

Discussion

The International Classification of Functioning, Disability and Health has the potential to measure the health and the inability of people individually or collectively, considering the dimensions of the body, activity/participation and environmental factors[15]. It uses a biopsychosocial approach in an attempt to achieve more satisfactory manner the biological, individual and social health of a particular person/population[16].

Among the 45 categories related to body function, 21 were validated by the nurses. Body functions are the physiological functions of body systems, including psychological functions. Body refers to the human organism as a whole[6].

Among the 38 categories related to participation and activity, 18 were validated by the research participants. It appears that *activity* is the execution of a task or action by a person and the *participation* is the involvement in a given situation of life[6].

Among the 24 categories related to the environment, only three were validated by the nurses. These make up the physical, social and attitudinal environment in which people live and conduct their life and that can influence positively or negatively on the performance in society, the ability to perform actions or tasks and the functions and the person's body structures[6].

In a research conducted in Portugal carried out to identify the categories of the International Classification of Functioning, Disability and Health mostly referred to classify the population aged at 65 and older, it was observed, in line with the current study, in the functions of the Body: global mental functions; specific mental functions; vision and related functions; functions of the cardiovascular system; functions of the respiratory apparatus; functions related to the digestive tract[15].

The results of this study showed that nurses who validated the categories focused attention on preferably those related to body functions. This data is similar to that found in the aforementioned review[15]. We relate this trend to the biomedical training, which is still being stimulated in the formation of undergraduate courses in Nursing. There is a need to diminish the gap between the most modern concepts of functionality, which include the participation and influence of environmental factors.

The conceptual paradigm of the International Classification of Functioning, Disability and Health tends to offer the different, avoiding the reductionism of biomedical and social models, promoting a comprehensive, integrative and universal perspective of functionality where the person interacts with the physical, social and attitudinal environment[17].

There is a need for more studies using the International Classification of Functioning, Disability and Health in nursing care, especially with regard to its use in the evaluation of patients, demonstrating the capacity of nurses in their specific activities. It is necessary that the International Classification of Functioning, Disability and Health be expanded in nursing, with a view to including this knowledge to those already established in the area of action of nurses[18].

The International Classification of Functioning, Disability and Health becomes relevant as the content taught in training courses for nurses. The *biopsychosocial* approach of the International Classification of Functioning, Disability and Health proves to be necessary for aspects of care as it provides a multi-dimensional look.

Bibliographical research showed that in the area of nursing, the International Classification of Functioning, Disability and Health has been used for nursing rehabilitation, which is privileged area in the teaching and practice of Europe and in occupational health[19]. It is essential to develop and encourage activities that may strengthen the social reintegration of the elderly, helping them to improve in physical, mental and social aspects. In order to achieve this goal, we need joint efforts of different health professionals.

The International Classification of Functioning,

Disability and Health proposes a new paradigm of functionality and disability, as it seeks to avoid reductionism and to promote a comprehensive, integrative and universal perspective of functioning and disability[15].

With regard to the elderly person, the International Classification of Functioning, Disability and Health is an interesting tool to be used by health professionals/nurses, regarding the evaluation of older people. This can contribute to building instruments to be used in the assessment of such persons; to determine the epidemiological profile of the functionality of the elderly and the redesign of nursing care needs[20].

It is important to think in the nursing care directed to the elderly, addressing the International Classification of Functioning, Disability and Health as an important instrument of work, aiming at its power in the contribution to nursing, health, individual, collective, environmental and mainly gerontology-technological actions[20].

As limitation of this study, there was a small number of participants for the validation of the categories of the International Classification of Functioning, Disability and Health has a result of the extensive electronic form.

Conclusion

Validations of categories performed by nurses were more frequent in those related to Body Functions, showing the biomedical influence on the training of nurses. Then the categories entered in activity and participation were the second option of the study participants. In terms of contextual/environmental factors, only three out of the 24 categories presented were validated, showing the need to diminish the gap between the most modern concepts of functionality, which include the participation and influence of environmental factors, as suggested by the International classification of Functioning, Disability and Health.

Collaborations

Santos SSC contributed to the conception and design or analysis and interpretation of data, writing of the article or revising it critically for important intellectual content and final approval of the version to be published. Ilha S, Barlem ELD, Gautério-Abreu DP, Silva BT and Alves IS contributed to the writing of the article, relevant critical review of the intellectual content and final approval of the version to be published.

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