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Original Article

Cross-cultural adaptation and content validity of the Activity Card Sort for Brazilian Portuguese

Adaptação transcultural e validade de conteúdo do Activity Card Sort ao português brasileiro

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Abstract

Introduction: Occupations are the core domain of occupational therapy. They give value and meaning to one's life, and they are influenced by individual characteristics and by the culture. The occupations people are engaged in at a specific point in time compose their occupational repertoire. Nowadays, no measure in Brazil can capture the breadth of occupation in which older adults participate. **Objective:** To describe the process of transcultural adaptation and face validity of the Activity Card Sort (ACS) for Brazilian Portuguese. **Method:** In first-stage, three bilingual independent researchers translated the ACS; the back translation was performed by two Americans fluent in Portuguese and synthesized, creating the Brazilian version. Four experts and 20 older adults analyzed the relevance of the activities and the clearness of the ACS photographs. Descriptive analyses were performed, Fleiss Kappa analyzed agreement between the older adults, and the assessment data were organized and analyzed. **Results:** The ACS-Brazil is composed of 83 activities. Comparing to the original ACS, it is divided into the areas of instrumental, social, high-demand leisure, and low-demand leisure activities. Cultural and semantics adjustments were made to the photographs to reflect the Brazilian environment. **Conclusion:** The ACS-Brazil is a tool that can access the Brazilian older adults' occupational repertoire. It can help occupational therapist's intervention, guiding them through an occupation-based, client-centered approach.

Keywords: Occupational Therapy, Aged, Social Participation, Validation Studies.

Resumo

Introdução: As ocupações são o domínio principal da terapia ocupacional. Elas dão valor e significado à vida das pessoas e são influenciadas pelas características individuais e pela cultura. As ocupações nas quais as pessoas se engajam em um momento específico compõem seu repertório ocupacional. Atualmente, nenhum instrumento no Brasil registra a gama de ocupações em que os idosos participam. **Objetivo:** Descrever o processo de adaptação transcultural e a validade de conteúdo do *Activity Card Sort* (ACS) para o português do Brasil. **Método:** Na primeira etapa, três pesquisadores independentes bilíngues traduziram o ACS. A retrotradução foi realizada e sintetizada por duas americanas com fluência no português do Brasil, criando a versão brasileira. Quatro especialistas e 20 idosos analisaram a relevância das atividades e a clareza das fotografias do ACS. Os dados da avaliação foram sintetizados e foram realizadas as análises descritivas e teste de *Kappa de Fleiss* para análise das equivalências. **Resultados:** O ACS-Brasil é composto por 83 atividades, divididas nas áreas de atividades instrumentais, sociais, de lazer de alta demanda e lazer de baixa demanda. Adaptações culturais e semânticas foram feitas nas fotografias para refletir o contexto brasileiro. **Conclusão:** O ACS-Brasil é uma ferramenta capaz de capturar o repertório ocupacional de idosos brasileiros. Pode ajudar na intervenção do terapeuta ocupacional, guiando-o por meio de uma abordagem baseada na ocupação e centrada no cliente.

Palavras-chave: Terapia Ocupacional, Idoso, Participação Social, Estudos de Validação.

1 Introduction

The occupations in which people engage in daily life give meaning and purpose to their lives (Fox et al., 2017), reflecting the values and influences of a social group and a culture, which favors the construction or affirmation of their identity (Polatajko et al., 2013a). Occupations also have the potential to influence health and well-being, with engagement and performance in occupations considered the central objective of occupational therapy (Polatajko et al., 2013b).

It is important to emphasize that this construction and modification of the occupational repertoire throughout life is influenced by personal and environmental factors and by the characteristics and functions of the occupations (Baum et al., 2005). Thus, when considering the dynamic nature of this triad (person-environment-occupation), it is important to analyze all dimensions that can predict the ability to perform activities, engage in occupations, and participate in social life (Engel-Yeger & Rosenblum, 2017). For that, occupational therapists choose to use different assessment instruments to guide their analysis of the elements involved in human occupation.

Among the existing measures, the Activity Card Sort (ACS) stands out. It is an instrument based on occupation (here understood as participation in a set of activities that make up the individual's occupational repertoire) and centered on the client. Carolyn Baum and Dorothy Edwards originally developed this tool in the United States to measure engagement in daily activities by elderly people with cognitive deficits (Baum & Edwards, 2001). The instrument is in its second edition (Baum & Edwards, 2008) and has been used not only with the population with dementia but also with healthy individuals

(Hamed et al., 2011), people with Parkinson's (Poerbodipoero et al., 2016), with sensory limitations (Roets-Merken et al., 2013; Engel-Yeger & Rosenblum, 2017), multiple sclerosis (Orellano et al., 2012), post-stroke (Spitzer et al., 2011), among others.

In this evaluation based on self-report, we can identify data related to the participation - current and previous - of the elderly people in instrumental activities of daily living, leisure (high and low demand), and social activities (Chan et al., 2006).

Unlike the existing assessment instruments, the ACS uses photographs that represent the elderly people in different activities (Baum & Edwards, 2008). There are three versions of the ACS that vary with the context, that is, the evaluation formats directed to those who are institutionalized (form A), in rehabilitation (form B), or to those who live in the community (form C). The evaluated individuals inform, as response categories, if they have never participated in the activity, if they participate less, if they remain engaged, or if they have stopped doing them today (compared to a past or after an event) (Kniepmann & Cupler, 2014). In this way, we can determine the level of participation through the percentage of activities that are preserved, compared to a previous situation (before the disease, hospitalization, or a certain time, for example) (Orellano et al., 2014).

Clinically, ACS has been used during the initial assessment as a basis for developing an appropriate treatment plan for the individual and/or as a result of the occupational therapy intervention programs (Sabari et al., 2015). This assessment tool has good acceptability, usability, reliability, and validity in the different countries that use it (Engel-Yeger & Rosenblum, 2017), which justifies the importance of developing the ACS version for Brazilian culture. The instrument also covers most (Baum & Edwards, 2008) of the domains of activity and participation provided for in the International Classification of Functionality, Disability, and Health (CIF), of the World Health Organization (Organização Mundial de Saúde, 2003).

Considering the great relevance of using an instrument capable of evaluating participation and engagement in activities and the scarcity of specific instruments of occupational therapy to measure the participation of the elderly population in occupations in Brazil, this study aimed to describe the process of cross-cultural adaptation and content validation of the Activity Card Sort to Brazilian Portuguese.

2 Method

2.1 Study design and ethical considerations

This is a cross-sectional methodological study, in which the cross-cultural adaptation of the Activity Card Sort (ACS) was carried out. The development of the Brazilian version of the ACS was authorized by the Occupational Therapist, Professor Carolyn M. Baum, holder of the copyright.

The Research Ethics Committee approved research by Resolution 466, of December 12, 2012 (Brasil, 2012), under opinion 2,773,267. Participation was voluntary and the elderly participants signed an informed consent form. To ensure anonymity, each research participant received a numeric code.

2.2 Procedures

The process of cross-cultural adaptation followed the recommendations of Beaton et al. (2000) and occurred in five stages. In the first stage, the ACS was translated into Brazilian Portuguese, and three bilingual translators participated independently. In the second stage, the researchers compared the translated versions and synthesized the translation, producing a single version of the Brazilian ACS translation.

In the third stage, a back-translation was carried out independently, with two professionals whose native language was English and who were fluent in Brazilian Portuguese. They had no contact with the original assessment instrument. In this stage, the back-translation was compared with the original version of the ACS and the synthesis of the back-translation was produced. With these data, the researchers created the first version of the ACS instrument for the Brazilian context.

The fourth stage was the analysis of the instrument by the expert committee, who analyzed the clarity, relevance, and equivalence between the translated versions (1st version) and the original version. The committee was composed of four occupational therapists, with a doctorate and a superior experience for five years in the gerontological occupational therapy area. Each expert received the manual with instructions on how to apply the instrument, the first Brazilian version of the ACS, and a form for assessing equivalences. Equivalent items were those that obtained a 75% agreement between the experts. In these cases, the items were modified, deleted, adapted, or maintained, according to the suggestions proposed by the committee. The results are shown here. This process resulted in the Brazilian version of the ACS, which was submitted to the elderly population.

The evaluation produced by the experts was applied to 20 elderly people who lived in the community (fifth stage - pre-test) to analyze the understanding of the instrument and eliminate items not understood. The choice for this number of elderly people was based on the reliability test of the original ACS (Baum & Edwards, 2001). The elderly sample was selected for convenience, as they attended projects aimed at longevity at the educational institution where this research was developed. All the elderly participants lived in their communities, in the West Zone of Rio de Janeiro. To characterize the sample, we collected data related to age, gender, and education. In a complementary way, a cognitive function was tracked, through the Mini-Mental State Examination - MEEM, 2nd edition (Spedo et al., 2018).

For the analysis of content validity, the ACS translated into Brazilian Portuguese was presented to the elderly participants and they answered a 04-point Likert scale to inform about the representativeness of the images and the relevance of the activities described in the instrument. The participants opted for a minimum value of 1 point when informing that "the representation of the image with the description of the action is not clear" or "this activity is not relevant for the Brazilian context"; the value of 2 points, for the answers that informed that it is "unclear or relevant"; 3 points for "partially clear or relevant; up to a maximum value of 4 for those cards where "the representation of the image was very clear" or because "the activity is very relevant". The researchers and two members of the expert committee analyzed the results of the elderly participants and adopted the same recommendation by the expert committee for the analysis of equivalences. Activities were maintained in which at least 50% of participants agreed to be relevant, according to the study carried out in the United Kingdom (Laver-Fawcett & Mallinson, 2013).

After all the phases of the process of cross-cultural adaptation and content validity, we produced a Brazilian version of the ACS and sent it to the author of the instrument who approved the ACS - Brazil.

2.3 Data analysis

The data were stored in a Microsoft Excel® spreadsheet and later transported and analyzed in a database in SPSS (Statistical Package for Social Sciences) for Windows, version 21.0.

We used descriptive statistics in the characterization of elderly participants, including indexes of central tendency (mean) and dispersion (standard deviation) for the age of the participants. To calculate the Z score and percentile of the cognitive tracking test, we used the normative data from the 2nd edition of the Mini-Mental by Spedo et al. (2018). Thus, participants who had up to -1.5 standard deviation did not show a significant reduction in values that could suggest a cognitive decline.

The means and standard deviation were calculated in all items of the assessment instrument to determine the activities commonly performed by the elderly participants in the pre-test. The Kapiss de Fleiss test measured the agreement among the elderly participants regarding the relevance of the item.

In addition to the structured questions, in the questionnaire, there was a field in which the participants could suggest modifications to the photographs, insertions, and exclusions of activities. These data were compiled and analyzed by the first, third, fourth, and fifth authors.

3 Results

Table 1 shows the areas and examples of some activities in the first Brazilian version of the assessment instrument. OACS was translated by three Brazilian professionals fluent in English. All were occupational therapists with more than five years of experience. The back-translation was carried out by two American women fluent in Portuguese, one of whom had a background in health and the other in humanities.

In the translation process, eight items from the original ACS underwent language adjustments to improve the understanding of the actions described on the cards. Thus, verbal expressions (playing or doing, for example) were inserted in the translations. The back-translation synthesis was compared to the original version of the ACS and 14 items showed differences in English expressions, but with no change in the meaning or content of the actions described since the words in English were synonymous with the words that were on the original cards. After analysis, the first Brazilian version of the ACS was formed.

In the construction of the first Brazilian version, in the cards in which the activities were separated by "slash - /", the researchers chose to insert the expression "or" to clarify that the participant could perform one of the tasks or one of the examples inserted in each card. This version was submitted to the expert committee and to the pre-test with the elderly participants to perform the semantic, idiomatic, and conceptual equivalences.

The elderly who participated in the 5th stage - pre-test - were 60 years old or over and lived in the city of Rio de Janeiro. The elderly participants were active and attended activities aimed at active aging that were offered at the educational institution to which the first author is linked.

Table 1. Activity Card Sort translation (examples).

Nº	Original	TS	SBT	First Brazilian version
Area 1	**Instrumental Activities**	**Atividades instrumentais**	**Instrumental Activities**	**Atividades instrumentais**
1	Shopping in a store	Fazer compras em uma loja	Shopping in a store	Fazer compras em uma loja
4	Laundry	Lavar roupa	Doing laundry	Lavar roupas
10	Driving	Dirigir	Driving	Dirigir
17	Resting	Descansar	Resting	Descansar
20	Work (paid)	Trabalho (pago)	Working (paid)	Trabalho (pago)
Area 2	**Low-demand-leisure activities**	**Atividades de lazer de baixa demanda**	**Low-demand leisure activities**	**Atividades de lazer de baixa demanda**
25	Needlecrafts (Knitting, needlepoint, quilting)	Trabalhos manuais com agulhas (tricô, quillting, bordado)	Needlework (knitting, embroidery, quilting)	Trabalhos manuais com agulhas (tricô ou bordado)
28	Computer (e-mail, paying bills, shopping)	Computador (e-mail, pagar contas, compras)	Computer (e-mail, paying bills, shopping)	Usar computador (e-mail, pagar contas ou compras)
37	Playing a musical instrument	Tocar um instrumento musical	Playing a musical instrument	Tocar um instrumento musical
50	Going to the theater	Ir ao teatro	Going to the theater	Ir ao teatro
52	Watching television	Assistir televisão	Watching television	Assistir à televisão
Area 3	**High-demand-leisure activities**	**Atividades de lazer de alta demanda**	**High-demand leisure activities**	**Atividades de lazer de alta demanda**
56	Swimming	Nadar	Swimming	Nadar
61	Walking	Caminhar	Walking	Caminhar
66	Hiking	Fazer trilhas	Hiking	Fazer trilhas
71	Fishing	Pescar	Fishing	Pescar
72	Gardening/Growing Flowers	Jardinagem/Cultivo de flores	Gardening/ Growing flowers	Jardinagem ou cultivo de flores
Area 4	**Social activities**	**Atividades sociais**	**Social activities**	**Atividades sociais**
76	Parties/Picnics	Festas/Piqueniques	Parties/Picnics	Festas ou piqueniques
78	Talking on the telephones	Falar ao telefone	Talking on the telephone	Falar ao telefone
82	Dancing	Dançar	Dancing	Dançar
88	Dating/Spending time with friends	Namorar/Passar tempo com amigos	Dating/spending time with friends	Namorar/Passar tempo com amigos
89	Entertaining at home or club	Se divertir em casa ou no clube	Having fun at home or a club	Se divertir em casa ou no clube
Response categories used in ACS Forms A, B, or C				
a.	Continued to do during illness/injury	Continuou a fazer durante a doença/lesão	Continued to do during illness/injury	Continuou a fazer durante a doença/lesão
b.	Not done prior to the current illness/injury	Não fazia antes da atual doença/lesão	Did not do it before current illness/injury	Não fazia antes da atual doença/lesão

Table 1. Continued...

Nº	Original	TS	SBT	First Brazilian version
c.	Do less since illness/injury	Faz menos desde a doença/lesão	Do less since illness/injury.	Faz menos desde a doença/lesão
d.	Given up due to ilness/injury	Desistiu de fazer devido a doença/lesão	Gave up on doing it due to the illness/injury	Desistiu de fazer devido à doença/lesão
e.	New activity since illness/injury	Nova atividade desde a doença/lesão	New activity since the illness/injury	Nova atividade desde a doença/lesão
f.	Not done since age 60	Não faz desde os 60 anos	Does not do since 60 years old	Não faz desde os 60 anos
g.	Do Now (at the same level as before)	Faz agora (no mesmo nível que antes)	Do now (at the same level as before)	Faz agora (no mesmo nível que antes)
h.	Do less	Faz menos	Do less	Faz menos
i.	Given up	Desistiu	Gave up	Desistiu
j.	Not done prior to the illness/injury or admission	Não fazia antes da doença/lesão ou admissão	Did not do before the illness/injury or admission	Não fazia antes da doença/lesão ou admissão
k.	Done prior to the illness/injury or admission	Fazia antes da doença/lesão ou admissão	Done before the illness/injury or admission	Fazia antes da doença/lesão ou admissão

Legend: TS: translation synthesis; SBT: synthesis of back-translation. Source: The authors (2020).

For these participants, we applied Form C of the first Brazilian version of the Activity Card Sort, that is, the version of the ACS made for elderly people living in the community.

Regarding the characterization of the elderly participants in the pre-test stage, 20 people participated, 14 of whom were female (70%) and 06 male (30%), with a mean age of 68.1 years old (SD = ± 7.14). The educational level of the participants varied between eight and 12 years, with 8 years of study (n = 01.5%), 11 years of study (n = 08, 40%), or above 12 years of study (n = 11, 55%).

By the analysis of the MMSE, no participant had scores that suggested cognitive decline. Even for those who scored below the expected lower limit for age and education, this value was not significant. Thus, it was not suggestive of a decline in the cognitive functions assessed by the instrument. These data ensure that the participants would understand the questions asked in the pre-test (Table 2).

In the expert committee's analysis of the 89 images representing the ACS's activities, occupational therapists agreed (100%) with the relevance of the activities on 46 (51.68%) cards and on one activity (1.1%) all agreed as not relevant (elderly Brazilians going to the casino). In 18 more (20, 22%) cards, the agreement was 75% among the judges. In the remaining 24 activities, the agreement between experts was between 25 and 75%. In line with the recommendations of ACS validation studies carried out in the United Kingdom, activities were maintained in which at least 50% of the participants agreed to be relevant (Laver-Fawcett & Mallinson, 2013).

The elderly who participated in the semantic and cultural equivalence considered that all the activities on the cards represented described activities, with only two elderly people

indicating that the activity of taking care of children was not well represented. The Kappa de Fleiss test compared the agreement of the sample of 20 elderly people regarding the relevance of the ACS-Brazil items. The classification suggested for the coefficient value ranges followed the interpretation of the study by Altman (1999). The test indicated reasonable agreement between the assessment of the elderly, k = 0.317 (95% CI, 0.302 to 0.332), p <0.001.

Table 2. Characterization of the cognitive function of the pre-test participants.

Nº	Age	Years of study	Gross score (max value: 30)	Inferior limit	Z score	Percentile	Indicative
1	73	11	29	22.35	1.39	92	Without cognitive deficit
2	64	14	29	24.4	0.82	80	
3	78	14	30	24.3	1.35	92	
4	72	11	29	22.35	1.39	92	
5	72	11	29	22.35	1.39	92	
6	76	15	26	24.3	-0.65	26	Non-significant decline
7	62	11	27	22.65	0.11	55	Without cognitive deficit
8	68	11	28	22.65	0.49	69	
9	61	13	25	24.4	-1.23	11	Non-significant decline
10	63	11	29	22.65	0.85	81	Without cognitive deficit
11	63	11	29	22.65	0.85	81	
12	62	11	26	22.65	-0.26	40	Non-significant decline
13	70	8	25	17.15	0.62	74	Without cognitive deficit
14	62	13	30	24.4	1.05	86	
15	62	13	27	24.4	-0.32	38	Non-significant decline
16	81	13	26	19.1	0	50	Without cognitive deficit
17	67	15	30	24.4	1.05	86	
18	83	15	29	19.1	0.65	75	
19	60	15	30	24.4	1.05	86	
20	63	15	25	24.4	-1.23	11	Non-significant decline

Source: The authors (2020).

After the 4th and 5th stages, during the analysis of the qualitative data of the interviews, the participants suggested removing cards, adapting environments and objects in the photographs, modifying the terms, separating cards, and inserting new activities. Table 3 describes the suggestions for insertion and removal of cards by experts and the elderly participants.

In **instrumental activities**, most experts suggested replacing the card "cooking dinner" (card nº 07) with "cooking" because many people can cook at lunch or dinner time. For this evaluation instrument, it is important to verify the engagement in this occupation regardless of the period in which this activity is carried out; therefore, the card was changed. Experts and the elderly participants suggested removing the card to "fuel" the car (card No. 11) because, in Brazil, this activity is carried out by third parties.

Table 3. Suggestions for Activity Card Sort - Brazil.

REMOVAL SUGGESTIONS			
Instrumental Activities	**Low-demand leisure activities**	**High-demand leisure activities**	
To fuel (nº 11)	To write letters (nº 43)	To play golf (nº 60)	To go camping (nº 69)
	To go to the casino (nº 48)	To play tennis or other sports with a racket (nº 65)	Canoeing/boating/sailing (nº 70)
		Garden games (nº 68)	
SUGGESTIONS FOR INSERTION			
Instrumental Activities			
Medication care		To use public or private transportation (taxi or mobile transport app	

Source: The authors (2020).

To complement the list of instrumental activities, the experts suggested the insertion of the cards "medication care" and "use public or private transportation (taxi or mobile transport application)", activities commonly performed in Brazilian culture and which were included in the version end of ACS – Brazil.

In **low-demand leisure activities**, the elderly participants and experts did not consider the cards "to write letters" (card No. 43) and "to go to the casino" (card No. 48) to be useful, as they were associated with activities currently unusual or prohibited in the country, respectively. On the other hand, in the cards "manual works" (card nº 25) and "playing cards" (card nº 31), they suggested to remove the examples "quilting" and "bridge" described in the cards, respectively because they are activities usually not performed by Brazilians. "Knitting or embroidery" remained to exemplify handicrafts with needles, as well as "patience or poker" for the card that represents card games.

In the "board games" card (card nº 27) the expression "chess" was inserted next to the already existing example "checkers", as well as the expression "computer games" (card nº 29) was expanded to "computer, cellphone or tablet games", to contemplate those who engage in games, but use other technological devices.

For **leisure in high demand**, most experts and elderly participants pointed out that "playing golf" (card No. 60), "garden games" (card No. 68), "to go camping" (card No. 69), and "canoeing/boating/sailing" (card no. 70) were not representative of the Brazilian context. Despite recognizing that these activities exist in Brazil - except garden games -, the activities mentioned above were associated with people with a very privileged economic situation (such as playing golf and sailing, for example) or because they are activities that are not very carried out by the elderly people in Brazil (camping, for example). Also, most experts (75%) still assessed that the activity "playing tennis or another sport with a racket" was not commonly performed in the country in general, due to the high cost necessary to practice this sport (card nº 65). Thus, they accepted the suggestions for removing such items from the assessment instrument.

On the other hand, all items in **social activities** were considered useful. However, the elderly participants suggested that the card "dating/spending time with friends" (card nº 88) to separate them as "spending time with friends" and the activity "dating" would be included in the card "to be with the spouse or partner" (card No. 87).

Experts and the elderly participants also suggested modifications to the photographic images to contemplate objects that are most recently used and adapt the environments to the Brazilian context. For example, in the card about the practice of team sports, the suggestion was to remove the image of the elderly playing baseball to insert an image of a soccer game. In other images, they suggested more modern objects such as current models of television or the use of cell phones to take photographs, for example. Thus, all the photographs were redone by a professional photographer and, subsequently, approved by the Occupational Therapist, Professor Carolyn Baum, author of the original version of the ACS.

The expert committee also suggested adapting the response categories of the ACS instrument, replacing the terms "illness/injury" with "health problem/illness" and the term "admission" to be replaced by "hospitalization/start of treatment". In version C of ACS-Brazil, they also suggested inserting the response category "new activity" to capture engagement in occupations that were not part of the elderly's repertoire previously and that are part of the current repertoire. After applying the pre-test, the researchers decided to expand the card "does not do it since the age of 60" to "does not do it since the age of 60 or never done", because this way avoided the doubt of which category of answer would be chosen if had engaged in the activity. The process of cross-cultural adaptation was concluded, and the assessment instrument was called ACS-Brazil. The version was sent to the author of the instrument, who approved the entire process of cross-cultural adaptation. This tool resulted in a list of 83 activities, divided into four distinct areas: instrumental activities, low-demand leisure, high-demand leisure, and social activities, shown in Table 4.

Table 4. Example of activities in the Final version of Activity Card Sort - Brazil.

Nº	Card	Nº	Card
Instrumental Activities			
03	Doing the dishes	14	Paying the bills
05	Caring for the garden	16	Resting
06	Taking out the trash	17	Going to the beauty salon or barbershop
Low-demand leisure activities			
22	Watching sports	39	Reading magazines or books
28	Board games (checkers or chess)	45	Going to the museum
29	Using the computer (e-mail, pay bills, or buy)	46	Going to the garden or park
High-demand leisure activities			
55	Swimming	61	Exercising
57	Woodwork	63	Making trails
59	Walking	65	Go fishing
Social Activities			
68	Local or regional travel	76	Dancing
71	Family reunions	79	Participating in activities with children or grandchildren
74	Visiting friends	82	Spending time with friends

Source: The authors (2020).

Finally, Table 5 shows the categories of responses investigated according to forms A (for institutionalization), B (for people recovering from a health/illness problem), or C (for people living in the community) that can be used in the ACS-Brazil instrument.

Table 5. Response categories according to ACS-Brazil Forms A, B, or C.

Form A	He did it before the health problem/illness or hospitalization/start of treatment.
Institutional Version	He didn't do it before the health problem/illness or hospitalization/start of treatment.
Form B	He didn't do it before the current health problem/illness.
Recovery Version	He continued to do it during a health problem/illness.
	He has been doing less since the health problem/illness.
	He gave up doing it due to his health/illness problem.
	New activity since the health problem/illness.
Form C	He hasn't been doing it since he turned 60 or never done.
Version Living in the community	He does it now (at the same level as before).
	He does it less.
	He gave up the activity.
	New activity.

Source: The authors (2020).

4 Discussion

In the occupational therapy process, assessments are the legitimate resources that assist in decision-making during the development of therapeutic plans, and measure the effects of interventions (Katz & Baum, 2012; Sabari et al., 2015), demonstrating part of the professional identity and, consequently, providing data for the professional category to inform about the need to create and organize the offer of its services to the population (Law et al., 2005; Fox et al., 2017).

In the assessment, opting for the use of standardized instruments seems to increase the reliability and rigor for the identification of the variables that these tools propose to analyze. Besides having the standard for their administration and scoring, these measures provide information on reliability and validity, data that are fundamental for the interpretation of results (Unsworth, 2000).

The Activity Card Sort, an instrument translated and adapted into Portuguese in this study, was also translated, validated, and adapted in different countries such as Spain, Puerto Rico, United Kingdom, Israel, Hong Kong, Jordan, Singapore, Holland, Korea South and Australia (Alegre-Muelas et al., 2019; Gustafsson et al., 2017). It is still in the process of cross-cultural adaptation and validation in Germany, Belgium, and Austria. Studies point to excellent validity, internal consistency, and reliability (Katz et al., 2003; Poerbodipoero et al., 2016; Gustafsson et al., 2017).

Considering that the instrument has good psychometric properties and knowing that its validity and usefulness are culturally dependent (Engel-Yeger & Rosenblum, 2017), research on cross-cultural adaptation of the ACS for the Brazilian context was of singular importance.

The implementation of the Brazilian version of the Activity Card Sort (ACS - Brazil) in clinical practice can facilitate the relationship between an occupational therapist and his patient, as the assessment instrument will contribute to a vast knowledge of the individual's occupational repertoire, his level of engagement (current and previous) and participation in instrumental, leisure and social activities (McNamara et al., 2016; Fox et al., 2017;

Tsé et al., 2017). Also, the instrument considers the activities that are most significant for that individual, which favors the implementation of an intervention that values the collaborative process among the elderly, their caregivers/family members, and occupational therapists (Nielsen et al., 2019).

In the world scenario, participation has been a concept widely discussed by the ICF as fundamental to support health (Organização Mundial de Saúde, 2003) and that is fully based on engagement in occupations. Thus, the ACS can be a tool that occupational therapists can use to understand the person-occupation-environment triad and understand how health can be maintained, promoted, or improved through engaging in an occupation.

The translation and adaptation process followed the reference of Beaton et al. (2000) and the one recommended by the authors of the original version of the ACS (Baum & Edwards, 2008). Of the 89 activities of the original version of the assessment, eight were removed due to suggestions from experts and the elderly participants. Most items were removed by a cultural relevance as the central reason. Activities such as playing golf or canoeing, although performed in Brazil, are infrequent. A study carried out in Brazil with the pediatric version of the ACS (PACS) also showed that the practice of these sports is not relevant in the Brazilian population (Pontes et al., 2016).

During the translation and adaptation process, the removal of items was common to other versions, as well as the Brazilian version. In the Israeli version of the ACS, two activities were removed, hunting and bowling (Katz et al., 2003). In the Hong Kong version, activities such as writing letters, riding bicycles, and sewing a quilt were removed (Chan et al., 2006). In the version of the ACS developed in Puerto Rico (Orellano et al., 2012), six activities were removed (among them, hunting, garden games, bird watching, and hiking), while in the Arabic version religious aspects influenced the removal of some items such as betting or going to casinos (Hamed et al., 2011).

On the other hand, during the translation/creation process, the inclusion of new items was carried out in all versions of the evaluation. In the Australian ACS, 12 items were included, such as bingo, surfing the internet, playing bocce, or taking a day trip (Gustafsson et al., 2017). In the Arabic version of the ACS, 19 items were included, six related to religious activities, such as going to the mosque (Hamed et al., 2011). The UK version of ACS included seven new items, which were not present in any previously developed version, such as voting, meditating, and attending evening classes, for example (Laver-Fawcett & Mallinson, 2013). The Spanish version also had items not included in other versions, such as going out for drinks, napping, and looking for a job (Alegre-Muelas et al., 2019). The findings are consistent with the ACS-Brazil, which included two activities, one of which is unprecedented compared to the other versions (medication care).

Regarding the number of items in the evaluation, the Brazilian version has 83 items, a number similar to the original version (89 items), the Australian version (82 items), the Israeli version (88 items), Puerto Rican version (82 items) and the Spanish version (79 items). The highest number of activities was found in the UK ACS (91 items), while the lowest number was found in the Hong Kong ACS, with only 65 items. Again, the cultural factor influenced the number of activities. Since the United Kingdom is composed of four countries, a greater number of activities was necessary to list the occupational repertoire of the population to be assessed.

For the adaptation and validation process, we need further studies to analyze the psychometric characteristics of the ACS-Brazil, verifying its convergent, divergent, and

discriminative validity. However, the steps taken have shown that the evaluation can be configured as a good instrument to measure the repertoire of occupations of elderly Brazilians.

5 Final Considerations

The cross-cultural adaptation process of the Activity Card Sort was adjusted so that the evaluation represented the activities in which the elderly participate in the Brazilian culture. This tool can contribute to the improvement of the provision of occupational therapy services in the country, as this instrument proposes to understand the central domain of this profession: the engagement and participation of individuals in occupations. Also, the ACS-Brazil will compare the occupational repertoire of the elderly people within the national territory and between international studies, as well as it can be useful to outline the treatment plan or to evaluate the intervention programs, over time.

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