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Marina Garcia de Souza Borges[1]
Adriane Mesquita de Medeiros[2]
Stela Maris Aguiar Lemos[2]

Characterization of communication disorders according to the categories of the International Classification of Functioning, Disability and Health - Children and Youth (ICF-CY)

Caracterização de aspectos fonoaudiológicos segundo as categorias da Classificação Internacional de Funcionalidade, Incapacidade e Saúde para Crianças e Jovens (CIF-CJ)

Keywords

Speech, Language and Hearing Sciences
International Classification of Functioning
Disability and Health
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ABSTRACT

Purpose: Characterize the performance of outpatients regarding aspects of communication disorders according to the categories of the International Classification of Functioning, Disability and Health - Children and Youth Version (ICF-CY). **Methods:** This is a descriptive, observational study based on a retrospective analysis of secondary data collected at a Speech-language Pathology outpatient clinic of the public health network, from records of patients aged 5-16 years, evaluated between 2010 and 2014. Elements of anamnesis and assessment reports were analyzed with identification of ICF-CY categories related to the following components: Body Functions, Activities and Participation, and Environmental Factors. These categories were defined as the study variables, stored as categorical variables, and had their frequency distribution investigated by descriptive statistical analysis. **Results:** One hundred eighty medical records were included in the study, and 65 of the 168 pre-selected categories were identified. As for the component Body Functions, 13 items were verified, with the category related to impairment in Mental functions of language as the most frequently mentioned. Of the 34 categories identified in the component Activities and Participation, Learning to read - Performance and Doing housework - Performance were the ones that most frequently presented difficulties. Of the 18 categories of the component Environmental Factors, the one described in most reports as Barrier was Individual attitudes of acquaintances, peers, colleagues, neighbors, and community members. **Conclusion:** Changes were found in categories of the three components of the ICF-CY analyzed, indicating the existence of issues that affected the functional performance regarding aspects of communication disorders of children and adolescents assisted at an outpatient environment.

Descritores

Fonoaudiologia
Classificação Internacional de Funcionalidade
Incapacidade e Saúde
Criança
Adolescente
Ambulatório Hospitalar

RESUMO

Objetivo: Caracterizar o desempenho em aspectos fonoaudiológicos de pacientes ambulatoriais segundo as categorias da Classificação Internacional de Funcionalidade, Incapacidade e Saúde para Crianças e Jovens (CIF-CJ). **Método:** Trata-se de estudo observacional descritivo, baseado em análise retrospectiva de dados secundários coletados em serviço fonoaudiológico ambulatorial da rede pública, com prontuários de pacientes com idades entre 5 e 16 anos avaliados entre 2010 e 2014. Foram analisados elementos dos relatórios de anamnese e avaliação, sendo identificadas categorias da CIF-CJ referentes aos componentes Funções do Corpo, Atividades e Participação e Fatores Ambientais. As categorias presentes foram definidas como as variáveis do estudo. Todas foram armazenadas como variáveis categóricas, sendo realizada análise descritiva por meio da distribuição de frequências. **Resultados:** Foram incluídos 180 prontuários e das 168 categorias pré-selecionadas, 65 foram identificadas. Para as Funções do Corpo, 13 itens foram verificados, sendo a categoria com mais frequência referida em que se observa deficiência a funções mentais da linguagem. Para as 34 categorias identificadas pertencentes às Atividades e Participação, as mais frequentemente apontadas como dificuldade foram: aprender a ler – desempenho e realização das tarefas domésticas – desempenho. Das 18 categorias dos Fatores Ambientais, a descrita na maior parte dos relatórios como Barreira foi a atitudes individuais de conhecidos, pares, colegas, vizinhos e membros da comunidade. **Conclusão:** Foram verificadas alterações em categorias dos três componentes da CIF-CJ analisados, indicando a existência de questões que afetaram o desempenho funcional em aspectos fonoaudiológicos de crianças e jovens atendidos em ambiente ambulatorial.

Correspondence address:
Marina Garcia de Souza Borges
Avenida Alfredo Balena, 190, sala 249, Belo Horizonte (MG), Brasil, CEP: 30130-100.
E-mail: ninaborgesvh@hotmail.com

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Study conducted at the Departamento de Fonoaudiologia, Universidade Federal de Minas Gerais, Belo Horizonte (MG), Brasil.

[1] Hospital das Clínicas, Universidade Federal de Minas Gerais – UFMG - Belo Horizonte (MG), Brasil.

[2] Departamento de Fonoaudiologia, Universidade Federal de Minas Gerais – UFMG - Belo Horizonte (MG), Brasil.

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INTRODUCTION

Within the scope of Speech-language Pathology (SLP) assistance, in the areas of health as well as of education, speech-language therapists should work in collaboration with other professionals as a team[1]. A recent reformulation in the Brazilian SLP Code of Ethics describes, as one of the general duties of speech-language therapists, the encouragement of inter- and trans-disciplinary professional practice whenever possible[2]. An important attribute to guarantee integrated work is effective communication, through common and unified language, in the description of health conditions. This is one of the main objectives of the International Classification of Functioning, Disability and Health (ICF)[3] and its derivative version, the International Classification of Functioning, Disability and Health - Children and Youth (ICF-CY)[4].

Published in 2007, the ICF-CY was designed to describe the health, functioning and disability conditions of individuals aged 0-18 years because of the particularities presented by this group of the world population[4]. In addition to the standardized language to be used by teams and to the description of functional issues, the ICF and ICF-CY are proposed within the Biopsychosocial Model, which integrates characteristics of the medical and social models, providing a cohesive view of the biological, individual and social health perspectives[5]. This model and its perspectives enable the realization that diseases can be the result of changes in functionality rather than the cause of those changes, in addition to the visualization of the influence that the context in which the person lives can have on the incapacity generated by diseases[6]. Perception of these aspects is fundamental for the accomplishment of quality work in health care.

Within the field of SLP, the use of both the ICF and ICF-CY is still poorly systematized, mainly in the Brazilian scientific literature and daily practice of professionals. In order for some barriers such as the lack of knowledge and the extent of classifications to be broken, reference tools to assist with this are being developed and disseminated[7]. Other advances have been observed in the development of core sets, or lists of essential items, to describe the health of specific groups and groups with clinical conditions directly associated with SLP. Some examples are those aimed at approaching patients with hearing loss[8] and Attention-deficit Hyperactivity Disorder (ADHD)[9].

Therefore, the objective of this study was to characterize the performance of outpatients regarding aspects of communication disorders according to the categories of the ICF-CY.

METHODS

This is a descriptive, observational study based on a retrospective analysis of secondary data collected at a Speech-language Pathology (SLP) outpatient clinic of a hospital belonging to the public health network.

Medical records of patients aged 5-16 years assisted between March 2010 and December 2014, whose anamnesis and assessment reports were fully available for consultation, were included in the study. The choice of this age group was due to the greater variability of evaluated aspects, as well as to the larger number and type of protocols used. Exclusion criteria comprised the medical records of patients who did not perform hearing assessment before or during the evaluation period and those who presented the following confirmed or suspected diagnoses: hearing loss of any degree, intellectual deficit, or Global Developmental Delay (GDD).

Based on the International Classification of Functioning, Disability and Health - Children and Youth (ICF-CY)[4] and on the ICF-CY Guidelines on Speech-language Pathology[7], issued in 2013 by the Brazilian Federal Speech-language Pathology and Audiology Council, 168 categories from three ICF-CY components were listed, namely, 29 from Body Functions, 80 from Activities and Participation, and 59 from Environmental Factors, to describe aspects of the functionality of human communication and its disorders, as described in Chart 1.

Careful reading of the anamnesis and assessment reports was performed, and identification and description of the ICF-CY categories were conducted according to the following stages:

1. Content identification in the reports that refer to the categories by determining their presence;
2. Application of the qualifiers to the categories as follows: 0 – no change or 8 – with change, but without specified intensity.

The analysis focusing only on the qualifiers that would define the existence or not of changes/barriers/facilitators without specifying their degree was based on the proposal to include the ICF in the Brazilian public information system[10].

The presence of the categories and the existence or not of changes were described according to each component as follows:

- Body Functions component: whether "the category is described and there is presence of impairment" or "it is described and there is absence of impairment";
- Activities and Participation component: whether "the category is described and there is presence of difficulty" or "it is described and there is absence of difficulty";
- Environmental Factors component: whether "the category is described and it is a barrier", "it is described and it is a facilitator", or "it does not apply".

Data were entered in Excel® spreadsheet and the descriptions of the ICF-CY categories were defined as the study variables, all categorical, and investigated by descriptive statistical analysis through frequency distribution. The categories whose data in the reports did not present complete description and those that did not apply to the medical records analyzed were excluded. The analysis were processed in SPSS 19 software for Windows®.

This study was approved by the Research Ethics Committee of the Universidade Federal de Minas Gerais under protocol no. CAAE 47193615.9.0000.5149. The Committee also approved a request for waiver of an Informed Consent Form (ICF) for the study accomplishment.

Chart 1. Pre-selected categories of the International Classification of Functioning, Disability and Health - Children and Youth (ICF-CY)

Components	Chapters	Categories
Body functions	Mental functions	Specific mental functions - b140-b189
	Sensory functions and pain	Hearing and vestibular functions - b230-b249
		Additional sensory functions - b250-b269
	Voice and speech functions	b310-b399
	Functions of the cardiovascular, hematological, immunological and respiratory systems	Functions of the respiratory system - b440-b445
	Functions of the digestive, metabolic and endocrine systems	Functions related to the digestive system - b510
Activities and participation	Learning and applying knowledge	Purposeful sensory experiences - d110-d129
		Basic learning - d130-d159
		Applying knowledge - d160-d199
	General tasks and demands	d210-d220, d250-d299
	Communication	Communicating – receiving - d310-d329
		Communicating – producing - d330, d335, d345-d349
		Conversation and use of communication devices and techniques - d350-d399
	Self-care	d550-d570, d599
	Domestic life	Acquisition of necessities, other specified and unspecified - d629
		Doing housework - d640
		Caring for household objects and assisting others - d650-d660
	Interpersonal interactions and relationships	General interpersonal interactions - d710-d729
		Particular interpersonal relationships - d730-d760, d779-d799
	Major life areas	Education - d810-d825, d835-d839
		Work and employment - d859
		Economic life – Engagement in play - d880
	Community, social and civic life	d910-d999
Environmental factors	Products and technology	e110-e155, e165-e199
	Support and relationships	e310-e399
	Attitudes	e410-e460, e498-e499
	Services, systems and policies	e510-e599

RESULTS

The study included 180 medical records from patients assisted between March 2010 and December 2014. Of the 168 previously selected ICF-CY categories, 65 were identified. During the reading, the presence or not of changes verified in the anamnesis or in the assessment process was also verified in the described categories, and were classified according to the ICF-CY components.

Regarding the Body Functions component, 13 items were considered. The categories in which impairment was most frequently reported were as follows: b167 - Mental functions of language (69.4%), b172 - Calculation functions (61.9%), b320 - Articulation functions (55.3%), and b230 - Hearing functions (42.0%). The following categories showed predominance of the description of difficulty: b156 - Perceptual functions (82.0%), b163 – Basic cognitive functions (74.7%), b140 - Attention functions (73.5%), and b510 - Ingestion functions (66.9%). The Calculation functions and Fluency and rhythm of speech were considered categories to which the case "Does not apply" (26.2% and 68.9%, respectively). This judgment was due to the fact that part of the study sample presented insufficient schooling to be evaluated with respect to mathematical operations, as well as to the absence of complaints regarding fluency impairments (Table 1).

With respect to the Activities and Participation component, of the 80 initial categories, 34 were described in the reports, and 21 of these jointly covered both the Performance and Capacity qualifiers. The categories were distributed among those that best indicated aspects associated with Communication and Speech-language Pathology and those related to Other Actions.

Table 1. Frequency distribution of the categories of the ICF-CY Body Functions component

Body Functions component	Described category	
	Presence of impairment N (%)*	Absence of impairment N (%)*
b140 - **Attention functions** [a]	27 (26.5)	75 (73.5)
b144 - **Memory functions** [a]	67 (41.1)	96 (58.9)
b156 - **Perceptual functions** [a]	31 (18.0)	141 (82.0)
b163 - **Basic cognitive functions** [a]	42 (25.3)	124 (74.7)
b164 - **Higher-level cognitive functions** [a]	58 (40.6)	85 (59.4)
b167 - **Mental functions of language** [a]	125 (69.4)	55 (30.6)
b172 - **Calculation functions** [a]	78 (61.9)	15 (11.9)
b230 - **Hearing functions** [a]	74 (42.0)	102 (58.0)
b310 - **Voice functions** [a]	74 (41.6)	104 (58.4)
b320 - **Articulation functions** [a]	99 (55.3)	80 (44.7)
b330 - **Fluency and rhythm of speech functions** [a]	17 (9.4)	39 (21.7)
b440 - **Respiration functions** [a]	64 (36.4)	112 (63.6)
b510 - **Ingestion functions** [a]	58 (33.1)	117 (66.9)

* N (%): absolute frequency and percentage; [a] Each analyzed category presented different total data according to the number of observations of each item

In the categories referring to Communication and Speech-language Pathology, the following were most frequently cited as presenting difficulty: d140 - Learning to read - Performance (84.9%), d161 - Directing attention – Performance (77.3%), d170 – Writing - Capacity (76.6%) and d145 - Learning to write - Capacity (75.0%). The categories described with the

highest percentage as presenting difficulty were d155 - Acquiring skills – Capacity (100.0%), d210 - Undertaking a single task – Capacity (100.0%), d115 - Listening – Capacity (99.4%), and d350 – Conversation – Capacity (98.9%). The following categories did not applied to the whole study sample: d130 - Copying – Performance (97.2%), d130 - Copying - Capacity (98.9%), d131 - Learning through actions with objects – Capacity (99.4%), d140 - Learning to read - Capacity (21.1%), d145 - Learning to write - Capacity (14.4%), d166 - Reading - Performance (33.7%), d166 - Reading - Capacity (18.6%), d170 - Writing - Performance (30.8%), d170 - Writing - Capacity (18.3%), d172 - Calculating - Performance (78.0%), d172 - Calculating - Capacity (26.2%), d325 - Communicating with - receiving - written messages - Performance (33.7%), d325 - Communicating with - receiving - written messages - Capacity (18.6%), d345 - Writing messages - Capacity (22.5%) (Table 2).

As for the categories regarding Other Actions of the Activities and Participation component, those described with the highest percentage for presenting difficulty were d640 - Doing housework - Performance

Table 2. Frequency distribution of the Communication and Speech-language Pathology categories of the ICF-CY Activities and Participation component

Activities and Participation component		Described category	
		Presence of difficulty N (%)*	Absence of difficulty N (%)*
Purposeful sensory experiences			
d110 - Watching [a]	**Performance**	27 (21.6)	98 (78.4)
d115 - Listening [a]	**Performance**	26 (21.0)	98 (79.0)
	Capacity	1 (0.6)	179 (99.4)
Basic learning			
d130 - Copying [a]	**Performance**	0 (0.0)	5 (2.8)
	Capacity	0 (0.0)	2 (1.1)
d131 - Learning through actions with objects [a]	**Performance**	4 (2.6)	147 (97.4)
	Capacity	0 (0.0)	1 (0.6)
d133 - Acquiring information [a]	**Performance**	29 (24.8)	88 (75.2)
d137 - Acquiring concepts [a]	**Capacity**	37 (22.3)	129 (77.7)
d140 - Learning to read [a]	**Performance**	62 (84.9)	11 (15.1)
	Capacity	105 (58.3)	37 (20.6)
d145 - Learning to write [a]	**Performance**	66 (61.7)	41 (38.3)
	Capacity	135 (75.0)	19 (10.6)
d155 - Acquiring skills [a]	**Performance**	4 (2.6)	147 (97.4)
	Capacity	0 (0.0)	180 (100.0)
Applying knowledge			
d161 - Directing attention [a]	**Performance**	102 (77.3)	30 (22.7)
	Capacity	27 (26.5)	75 (73.5)
d166 – Reading [a]	**Performance**	61 (64.2)	2 (2.1)
	Capacity	105 (61.0)	35 (20.3)
d170 – Writing [a]	**Performance**	68 (65.4)	4 (3.8)
	Capacity	134 (76.6)	9 (5.1)
d172 – Calculating [a]	**Performance**	8 (19.5)	1 (2.4)
	Capacity	78 (61.9)	15 (11.9)
d175 - Solving problems [a]	**Performance**	50 (31.6)	108 (68.4)
	Capacity	4 (2.2)	176 (97.8)
General tasks and demands			
d210 - Undertaking a single task [a]	**Performance**	10 (9.1)	100 (90.9)
	Capacity	0 (0.0)	180 (100.0)
d250 - Managing one's own behavior [a]	**Performance**	59 (32.8)	121 (67.2)
	Capacity	11 (6.1)	169 (93.9)
Communicating - receiving			
d310 - Communicating with - receiving – spoken messages [a]	**Performance**	3 (1.7)	177 (98.3)
	Capacity	3 (1.7)	177 (98.3)
d325 - Communicating with - receiving – written messages [a]	**Performance**	61 (64.2)	2 (2.1)
	Capacity	105 (61.0)	35 (20.3)
Communicating – producing			
d330 – Speaking [a]	**Performance**	4 (2.2)	176 (97.8)
	Capacity	4 (2.2)	176 (97.8)
d335 - Producing nonverbal messages [a]	**Capacity**	18 (29.0)	44 (71.0)
d345 - Writing messages [a]	**Capacity**	81 (57.0)	29 (20.4)
Conversation and use of communication devices and techniques			
d350 – Conversation [a]	**Performance**	3 (1.7)	177 (98.3)
	Capacity	2 (1.1)	178 (98.9)

* N (%): absolute frequency and percentage; [a] Each analyzed category presented different total data according to the number of observations of each item

(61.4%) and d820 - School education - Performance (48.0%). Those most frequently described as not presenting difficulty were d550 – Eating - Capacity (100.0%), d560 – Drinking - Capacity (100.0%), d920 - Recreation and leisure - Performance (98.9%) and d880 - Engagement in play - Performance (98.8%). Among the analyzed categories, d815 - Preschool education - Performance (93.3%), and d820 - School education - Performance (6.9%) did not apply to the entire study sample (Table 3).

Concerning the Environmental Factors component, 18 categories were described. The following were identified as Barriers: e425 - Individual attitudes of acquaintances, peers, colleagues, neighbors and community members (25.6%) and e410 - Individual attitudes of immediate family members (12.2%). The ones most often described as Facilitators were e130 - Products and technology for education (100.0%), e165 - Assets (100.0%), e310 - Immediate family (100.0%) and e325 - Acquaintances, peers, colleagues, neighbors and community members (100.0%) (Table 4).

Table 3. Frequency distribution of the categories regarding Other Actions of the ICF-CY Activities and Participation component

Activities and Participation component		Described category	
		Presence of difficulty N (%)*	Absence of difficulty N (%)*
Self-care			
d550 - Eating [a]	**Performance**	6 (3.4)	169 (96.6)
	Capacity	0 (0.0)	176 (100.0)
d560 - Drinking [a]	**Performance**	4 (2.3)	171 (97.7)
	Capacity	0 (0.0)	176 (100.0)
d599 - Self-care, unspecified [a]	**Performance**	25 (15.8)	133 (84.2)
Household tasks			
d640 - Doing housework [a]	**Performance**	89 (61.4)	56 (38.6)
General interpersonal interactions			
d720 - Complex interpersonal interactions [a]	**Performance**	27 (15.0)	153 (85.0)
	Capacity	0 (0.0)	180 (100.0)
Particular interpersonal relationships			
d750 - Informal social relationships [a]	**Performance**	31 (17.7)	144 (82.3)
d760 - Family relationships [a]	**Performance**	15 (8.8)	156 (91.2)
Education			
d815 - Preschool education [a]	**Performance**	3 (1.7)	9 (5.0)
d820 - School education [a]	**Performance**	84 (48.0)	79 (45.1)
Economic life			
d880 - Engagement in play [a]	**Performance**	0 (0.0)	162 (98.8)
	Capacity	0 (0.0)	2 (1.1)
Community, social and civic life			
d920 - Recreation and leisure [a]	**Performance**	2 (1.1)	175 (98.9)
d930 - Religion and spirituality [a]	**Performance**	11 (6.9)	148 (93.1)

* N (%): absolute frequency and percentage; [a] Each analyzed category presented different total data according to the number of observations of each item

Table 4. Frequency distribution of the categories of the ICF-CY Environmental Factors component

Environmental Factors component	Described category		Does not apply N (%)*
	Barrier N (%)*	Facilitator N (%)*	
e110 - Products or substances for personal consumption [a]	1 (0.6)	55 (30.6)	124 (68.9)
e125 - Products and technology for communication [a]	7 (3.9)	11 (6.1)	162 (90.0)
e130 - Products and technology for education [a]	0 (0.0)	180 (100.0)	0 (0.0)
e140 - Products and technology for culture, recreation and sport [a]	1 (0.6)	162 (99.4)	0 (0.0)
e165 – Assets [a]	0 (0.0)	180 (100.0)	0 (0.0)
e310 - Immediate family [a]	0 (0.0)	180 (100.0)	0 (0.0)
e315 - Extended family [a]	1 (1.6)	63 (98.4)	0 (0.0)
e320 – Friends [a]	5 (3.2)	153 (96.8)	0 (0.0)
e325 - Acquaintances, peers, colleagues, neighbors and community members [a]	0 (0.0)	17 (100.0)	0 (0.0)
e355 - Health professionals [a]	1 (1.1)	91 (98.9)	0 (0.0)
e360 - Other professionals [a]	3 (10.0)	27 (90.0)	0 (0.0)
e410 - Individual attitudes of immediate family members [a]	22 (12.2)	40 (22.2)	118 (65.6)
e415 - Individual attitudes of extended family members [a]	8 (4.4)	3 (1.7)	169 (93.9)
e420 - Individual attitudes of friends [a]	7 (3.9)	4 (2.2)	169 (93.9)
e425 - Individual attitudes of acquaintances, peers, colleagues, neighbors and community members [a]	46 (25.6)	18 (10.0)	116 (64.4)
e530 - Utilities services, systems and policies [a]	13 (7.2)	167 (92.8)	0 (0.0)
e570 - Social security services, systems and policies [a]	0 (0.0)	23 (12.8)	157 (87.2)
e580 - Health services, systems and policies [a]	9 (9.3)	88 (90.7)	0 (0.0)

* N (%): absolute frequency and percentage; [a] Each analyzed category presented different total data according to the number of observations of each item

DISCUSSION

In the three components of the International Classification of Functioning, Disability and Health - Children and Youth (ICF-CY) contemplated in this study: Body Functions, Activities and Participation, and Environmental Factors, the large number of categories identified reflects the diversity of health conditions and functional characteristics that may be present in the population aged 5-16 years referred to Speech-language Pathology (SLP) evaluation. In view of this result, it is possible to observe the multiplicity of aspects to be studied from the perspective of the ICF in SLP.

Analysis of the results concerning the components Body Functions and Activities and Participation showed that categories associated with language, learning, or school issues were described as altered with high frequency. This fact can be justified by the complexity of the demand and the specificity of cases referred to outpatient services. It can also be explained by the large number of complaints found in the medical records analyzed for the age group about reading and writing disorders and school difficulties, which are often more concrete and easier to be identified by parents, caregivers, or other professionals. The quality of parental stimuli, the socioeconomic level, parental schooling, and school environment may also explain this finding, considering that they interfere with the acquisition and development of language in children[11].

With respect to the Body Functions component, almost half of the pre-selected categories were contemplated in this study. This number was higher than those found in other reviews and original articles previously published, with respective selection of two[12], three[13], seven[8], and twelve[14] categories. Other studies found a larger number of categories: seventeen[15] and thirty[16]. Such findings reflect the differences of context and populations with distinct health conditions, as well as the difference in methodological approach of each study.

Among the categories selected in the present study, the ones that were most frequently described in previous studies were those related to hearing functions (b230)[8,14,15,17], specific mental functions (b140)[8,16], (b144)[8,16], (b156)[14,15], and voice functions (b310)[13,15].

Moreover, the study that described the largest number of categories similar to those of the present survey, five in all, proposed a checklist as a first outline to create a core set to describe children with cleft lip and palate[15]. This larger number of coincident categories may be due to the need for a broad approach to the functional profile of patients in both studies, given the different types of SLP demands in each population.

Of the categories most frequently described as presenting impairments, the Mental functions of language (b167) were considered impaired when language aspects such as phonology, morphology, syntax, lexical development, etc. were inadequate. The Calculation functions (b172) were described as impaired when, according to the expected for the age group, patients presented inadequate performance in arithmetic evaluations. The Articulation functions category was classified as with difficulty when an organic or functional impairment was identified, affecting speech production and characterizing a phonetic disorder, or in the case of impairment in the assessment of the praxes.

Although the medical records of patients with a previous diagnosis of hearing loss were excluded, the category Hearing functions (b230) was present, with high percentage for the description of difficulty. This finding was due to the fact that the Hearing function was composed, in addition to Sound detection (b2300), of auditory processing skills, also assessed. Sound discrimination (b2301), Localization of sound source (b2302), Lateralization of sound (b2303), and Speech discrimination (b2304) are categories that may be frequently compromised in patients with SLP disorders in the age group included in the present study.

The literature presents studies that have also used the qualifiers indicated to the ICF-CY Body Functions component to describe patients with SLP disorders. In a research conducted with schoolchildren with hoarseness, among the categories selected as the most affected, the only one that coincides with those of the present study was Voice functions (b310)[13]. An international integrative review of the literature that aimed to identify articles describing characteristics of children who had a stroke using the ICF structure, found that, within the Body Functions component, the most commonly reported categories were those in Chapter b1 (mental functions), a finding also verified in the present study, and Chapter b7 (neuromusculoskeletal and movement-related functions)[12]. A Brazilian study whose objective was to characterize the profile of patients with cochlear implants cared in a rehabilitation hospital through the ICF-CY verified that most of participants presented the qualifier 0, that is, they did not have an impairment in the categories that indicated aspects associated with the reception and expression of spoken language. As for the hearing functions, most of them were also not impaired at the time of the study and were already users of electrical device for stimulation of the auditory nerve[14].

Regarding the Activities and Participation component, similarly to the present study, a large number of categories were verified in other publications that used the ICF and ICF-CY[14-16]. Surveys conducted with children and youth, whose results most resembled those of this study, focused on functional issues of patients with cleft lip and palate[15] and cochlear implant users[14]. This result reflects the complexity of the communicative process, as well as the fact that patients with impairments in this area tend to present a significant number of difficulties, which restrict their participation and limit their activities. This applies to most SLP disorders, especially in the area of language, in which other processes such as speech and hearing are also correlated.

With respect to the frequency analysis of the description of difficulty in the categories of the Activities and Participation component, it was observed that those with higher occurrence referred to the Chapters of basic learning (d140 and d145) and applying knowledge (d161 and d170), verified with complaints or assessments regarding written language issues. In addition, difficulties were also frequent in the categories Domestic life (d640), indicated by reports of problems in performing household tasks, and Major life areas (d820), where there is inadequacy of the processes of insertion and follow-up in the school environment. Such predominance is due to the age group

of patients, in which there is integration of the learning and communicative processes.

Within the process of creating a core set for Attention-deficit Hyperactivity Disorder (ADHD), a study evaluated the opinion of experts regarding the concepts that significantly characterize the issues of functionality and impairment in patients with this diagnosis. As a result, for the Activities and Participation component, the category d820 – School education was identified in more than half of the responses, a result similar to that of the present study. Of the categories referring to General tasks and demands (d250 – Managing one's own behavior) and Interpersonal interactions relationships (d750 – Informal social relationships and d720 – Complex interpersonal interactions), which coincided in both studies more frequently, the description of difficulty was not verified[16].

In a research conducted with parents of schoolchildren who presented hoarseness, the categories of the Activities and Participation component mentioned as the most affected were those associated with Communication (d330 – Speaking and d350 – Conversation), Particular interpersonal relationships (d750 – Informal social relationships and d760 – Family relationships), School education (d820), and Recreation and leisure (d920)[13]. When compared to the findings of the present study, distinct results were verified for all categories except for d820. This difference may be due to the profile of patients in each study and to the specificities of each of the complaint contexts.

In the aforementioned study, the frequency of complaints was also verified before and after speech therapy, with a reduction in the number of references in all ICF-CY selected categories, indicating that this classification may be of great assistance in the pre- and post-intervention analyses and in the evaluation of therapeutic efficacy[13].

As for the ICF-CY Environmental Factors component, approximately one-third of the pre-selected categories were described. Other studies selected 25[15] and 20[16] categories as relevant for this component. The large number of categories verified reinforces how much contextual factors can affect aspects of functionality and impairment in individuals[4]. It is through the analysis of Environmental Factors that issues such as mobility, access to goods and services, such as health and leisure, and social interactions are classified and assessed in relation to their impact, positive or negative, on the patients' lives[18].

The present study corroborates previous research when it highlights the importance that the presence of the Immediate Family (e310) has as a Facilitator and support network[13,16,19]. In a survey conducted with adult patients with aphasia, there were fewer cases in which the presence of the Immediate Family in the patients' lives was considered a complete Barrier, but the authors did not justify such a finding[19]. It is worth emphasizing the difference between the categories found in Chapter three of the ICF-CY - Support and relationships (e310-e399) compared with the categories in Chapter four - Attitudes (e410-e499). The first describes people who provide practical support to the individual, as well as the amount of support provided, whereas the latter describes the opinions or beliefs of others (family, friends, community, etc.) about the individual[4].

Data from this study demonstrated that all parents and/or legal guardians reported in the anamnesis that the patients had the practical support of their immediate family; however, over a third of the sample that presented the category e410 - Individual attitudes of immediate family members considered it a Barrier. It should be emphasized how important the role of the family is as the first communication nucleus and source of stimulation of children and youth in the processes of acquisition, development and comprehension of language and in other issues that interfere with the communicative processes.

Regarding other types of support, in addition to the family, in this study, the description of the Other professionals (e360) category was made due to the existence of educational professionals in the life of patients. These and the Health professionals (e355), similarly to the findings of other surveys, were considered as Facilitators[15,16]. The literature also reports how the presence and performance of trained education professionals in the correct guidance to parents are useful to optimize child language development[11].

Among the results, it worth noting the Products or substances for personal consumption (e110) category, characterized more frequently as a Facilitator, in the form of access to the use of medicine in cases where they were necessary[16].

The use and analysis of the ICF have enabled greater knowledge about the demands, including those of difficulties in functionality, their severity, and the impact of interventions, as well as the verification of which environmental factors can be associated[20]. In the publications, it was possible to observe mobilization for the selection of the categories that best apply to the functional characterization of the different profiles of patients with SLP disorders. Nevertheless, it was observed that most of them only described the categories that could be used with patients of specific profiles, without making use of the qualifiers.

It is noteworthy that, at the time of the stages of outline and data collection and analysis of this research, the 2015 version of the ICF, in which the classification for children and youth is incorporated into that of adults, was not yet available[21], thus the ICF-CY version published in Portuguese in 2011 was used[4].

Limitations to this study include the fact that it was based on analysis of secondary data from medical records, which restricted the possibilities of using the qualifiers, preventing the performance of qualitative analysis of impairment severity. Furthermore, due to the assistance flow of the service listed as the study scenario, there are cases in which analysis of the data may have been diminished.

As advances, the present study worked with a more comprehensive approach of the categories that can describe patients, children and youth, with SLP complaints, presenting an overview of the characterization of these individuals through the ICF-CY. This choice was also adequate in view of the fact that the study scenario receives patients with different types of complaints and levels of complexity.

Similarly to the studies for the development of the core set and checklist, this research contributes to the structuring of possibilities in the use of the ICF in the clinical routine, because

one of the greatest challenges regarding the application of this instrument is due to the extension of its classification[15].

CONCLUSION

This study identified 65 categories of the International Classification of Functioning, Disability and Health - Children and Youth (ICF-CY) that enable description of the functional performance in Speech-language Pathology (SLP) of patients, children and adolescents, assisted in the outpatient setting. In view of this result, the present study demonstrated possibilities to broaden the discussion on the use of the ICF in work practice, especially in the public health service, favoring the use of common language in the definition of functionality, incapacity, impairment and their prevalence in SLP.

It is also worth mentioning the proposal that, in a second moment, the categories considered as most prevalent should be used to characterize patients with SLP disorders, both pre- and post-therapy, as a means to assess the effectiveness of the strategies worked and the evolution of functional aspects.

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Authors contributions

MGSB: Bibliographic review, collection and analysis of the data, and writing, correction, formatting and approval of the manuscript.
AMM and SMAL: Study design and orientation, construction of the project, data analysis, and approval of the manuscript.