

Functioning of hospitalized people in vulnerable communication by the ICF

Funcionalidade de pessoas hospitalizados em vulnerabilidade comunicativa pela CIF

Funcionalidad de las personas hospitalizadas con vulnerabilidad comunicativa por el CIF

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Abstract

Introduction: Hospitalized patients, due to various causes, may present impairment of speech and language which may lead them to a situation of communicative vulnerability, influencing its functioning. The ICF - International Classification of functioning, Disability and Health is adopted to perform this analysis, under this perspective. **Purpose:** To analyze the language and functioning of people in communicative vulnerability, under intensive or semi-intensive care at the hospital, according to ICF, as a concept basis. **Methods:** Descriptive and cross-sectional study, composed by 18 participants. Data collected through: (i) hospital chart survey analysis, in order to characterize sociodemographic profile and clinical conditions of the participants; (ii) application of ICUCS - Intensive Care Unit Communication Screening Protocol; (iii) introduction of AAC - Augmentative and Alternative Communication and (iv) field journal (entries of reports). The results were analyzed by ICF and then performed descriptive statistic analyses. **Results:** Most participants were alert and could comprehend simple commands, from which 39% presented severe problems regarding language expression. Regarding activity and participation, 50% presented severe difficulty of speaking and 33% of starting and keeping conversations. Regarding environmental, family and health professionals factors, they have all been appointed both as facilitators and barriers to communication. AAC was seen as a communication facilitator. **Conclusion:** Participants presented alteration of oral language expression, preserved comprehension and difficulties in activity and participation with impact in environmental factors, being AAC a communication facilitator. Reassurance of applicability of ICF in hospital context, directed to people in communicative vulnerability, regarding ample and humanized treatment.

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Resumo

Introdução: Pacientes hospitalizados, por causas diversas, podem apresentar comprometimentos de fala e linguagem que os coloquem em situação de vulnerabilidade comunicativa, influenciando sua funcionalidade. Adota-se a Classificação Internacional de Funcionalidade, Incapacidade e Saúde (CIF) para análise, sob esta perspectiva. **Objetivo:** Analisar a linguagem e funcionalidade de pessoas em vulnerabilidade comunicativa, em cuidados intensivo e semi-intensivo no hospital, pela CIF, como base conceitual. **Método:** Estudo descritivo e transversal, constituído por 18 participantes. Para a coleta de dados realizou-se: (i) levantamento dos prontuários, para caracterização do perfil sociodemográfico e das condições clínicas dos participantes; (ii) aplicação do protocolo ICUCS (*Intensive Care Unit Communication Screening Protocol*); (iii) introdução da Comunicação Suplementar e/ou Alternativa (CSA) e (iv) diário de campo (registro dos relatos). Os resultados foram analisados pela CIF e realizada análise estatística descritiva. **Resultados:** A maioria dos participantes estava alerta e compreendia comandos simples, sendo que 39% apresentaram problema grave de expressão de linguagem. Quanto à atividade e participação, 50% apresentaram dificuldade grave no falar, 33%, em iniciar e em manter conversas. Quanto aos fatores ambientais, familiares e profissionais de Saúde foram apontados tanto como facilitadores quanto como barreiras para a comunicação. A CSA foi vista como facilitadora da comunicação. **Conclusão:** Os participantes apresentaram alteração de expressão da linguagem oral, com compreensão preservada e dificuldades de atividade e participação, com impacto nos fatores ambientais, sendo a CSA uma facilitadora da comunicação. Reafirma-se a aplicabilidade da CIF no contexto hospitalar, para pessoas em vulnerabilidade comunicativa, para cuidado ampliado e humanizado.

Palavras-chave: Fonoaudiologia; Barreiras de Comunicação; Sistemas de Comunicação no Hospital; Sistemas de Comunicação Alternativos e Aumentativos; CIF.

Resumen

Introducción: Los pacientes hospitalizados, por las causas diversas, pueden presentar deterioro de la funcionalidad del habla y del lenguaje que se sitúa en el discurso comunicativo, lo que influye en su funcionalidad. Se utiliza la Clasificación Internacional del Funcionamiento de la Discapacidad y de la Salud (CIF) para análisis desde esta perspectiva. **Objetivo:** Analizar el lenguaje y la funcionalidad de personas en vulnerabilidad comunicativa, en cuidados intensivos y semiintensivos hospitalarios, utilizando la CIF, como fundamento conceptual. **Método:** Estudio descriptivo y transversal, con 18 participantes. La recogida de datos incluyó: (i) estudios de las historias clínicas, para caracterizar el perfil sociodemográfico y las condiciones clínicas de los participantes; (ii) la aplicación del protocolo ICUCS (*Intensive Care Unit Communication Screening Protocol*); (iii) la introducción de la Comunicación Aumentativa y Alternativa (CAA) y (iv) un diario de campo (registro de informes). Los resultados se analizaron por la CIF y se realizó un análisis estadístico descriptivo. **Resultados:** La mayoría de los participantes estaban alerta y entendían órdenes sencillas, el 39% presentaron graves problemas para expresarse en el lenguaje. En cuanto, a la actividad y la participación, el 50% tenía graves dificultades para hablar, y el 33%, para iniciar y mantener conversaciones. Los factores ambientales, los miembros de la familia y los profesionales sanitarios fueron identificados tanto como facilitadores como obstáculo para la comunicación. Se consideró que el CAA facilitaba la comunicación. **Conclusión:** Los participantes presentaban alteración en la expresión del lenguaje oral, con entendimiento resguardado y dificultades en la actividad y la participación, con impacto en los factores ambientales, siendo la CAA facilitadora de la comunicación. Se reafirma la aplicabilidad de la CIF en el contexto hospitalario, para personas en vulnerabilidad comunicativa, para la atención ampliada y humanizada.

Palabras clave: Fonoaudiología; Barreras de la Comunicación; Sistemas de Comunicación en el Hospital; Comunicación Aumentativa y Alternativa; CIF.

Introduction

Individuals may face communication difficulties during a hospitalization due to various causes, including mechanical, neurological, sensory, physical, and/or psychological factors^{1,2}. This can place them in a situation of communicative vulnerability, which is defined in the hospital context as follows:

Decreased ability to speak, listen, read, remember, and write due to factors inherent to individuals (such as deficits in expressive and receptive language, hearing, vision, memory, etc.) or external factors (noisy environment, use of mechanical ventilation, not speaking the local language, or even having religious practices that are not understood or accepted by the care team)³.

Individuals in communicative vulnerability, experiencing difficulties in communication, feel more frustrated, fatigued, anxious, and less participative in their treatment^{4,5}. They are also subject to increased medication use, longer sedation times, and longer hospital stays, leading to higher hospitalization costs⁶. Studies monitoring these individuals after hospital discharge show the impact of language impairments in their lives, particularly in conditions caused by a stroke, for example, and how their participation becomes limited⁷. On the other hand, research analyzing the communication between patients in communicative vulnerability and the care team has shown that despite communication difficulties between these partners, it is an important source for the quality of care provided⁸.

Furthermore, even though the compromise and/or absence of orality directly impact people's daily lives and care, communicative vulnerability is often not seen as a health aggravating factor. This may be associated with the fact that hospital care still relies on the biomedical model⁹, which emphasizes treating symptoms and diseases. However, Health's humanization policy and the comprehensive clinical approach advocate for a biopsychosocial model, where the individual should be seen in its entirety, including physical, environmental, psychological aspects, activities performed, and communication¹⁰.

Given that communication impacts not only speech but also the activities of daily living of individuals in communicative vulnerable situations, in a clinical or therapeutic evaluation based on a broad concept of health, it is important to propose evaluating patients beyond the diagnosis

and symptoms presented¹¹. This explains the use of the International Classification of Functioning, Disability, and Health (ICF)¹² in this study, which also considers the impact of the diagnosis on the activities and participation of individuals in their daily lives, as well as reflects on how environmental factors can act as facilitators or barriers in the lives of this population group. As for individuals in communicative vulnerability, an international study shows that the attitude of close individuals, awareness of communication difficulties, and changes in the environment may be facilitators or barriers to communication².

Despite research using the ICF has been conducted in different contexts In Brazil, only few studies have focused on the hospital environment^{13,14}. A Guiding Guide for the use of the ICF in Speech-Language Pathology was developed in 2013¹⁵ by the Brazilian Federal Council of Speech-Language Pathology and Audiology. Other authors¹⁴ proposed a checklist for the use of the ICF in speech-language pathology care in the hospital setting, which includes categories related to body functions and activity and participation. This questionnaire was created based on responses from speech-language pathologists on a website, where could select the ICF categories necessary to assess patients in a hospital context, thus creating a checklist.

The proposal to use the ICF aims to classify the person's functioning. According to the ICF¹², functioning "is a comprehensive term for body functions, body structures, activities, and participation. It denotes the positive aspects of the interaction between an individual (with a health condition) and the contextual factors of that individual (environmental and personal factors)." In other words, it helps understand the consequences of health conditions and environmental factors on people's lives. Thus, it is possible to complement the diagnosis beyond the disease, which can contribute to comprehensive care during hospitalization and rehabilitation, as discussed in another study¹⁶. These authors emphasize that the use of the ICF enables differentiated speech-language pathology care in various hospital units and at different stages of intervention, promoting a comprehensive analysis of the health condition and care in the hospital setting. Therefore, the focus of this study is on speech-language pathology intervention for individuals with complex communication needs in

semi-intensive and intensive care units at a teaching hospital in the State of São Paulo.

Purpose

To investigate the functioning of hospitalized individuals in communicative vulnerability in intensive and semi-intensive care, using the ICF as a conceptual framework.

Method

Study Design

This is a descriptive, cross-sectional study that is part of a Doctoral Degree project. The study was approved by the Research Ethics Committee of the institution under the Decision No. 1,678,046. The research was authorized by the hospital superintendent, and consent forms were signed by the responsible parties of the involved hospital units. The study was presented to the participants for agreement, and they signed the Informed Consent Form (ICF).

Sample Composition

The research consisted of 18 participants in a communicative vulnerability situation, admitted to the Neurosurgery and Neurology Wards and the Neurology and General Intensive Care Units (ICUs) of a teaching hospital in the State of São Paulo, from 2016 to 2020. The sample was obtained by convenience, in a non-probabilistic manner, based on patient referrals by members of the care team of the wards where the participants were admitted.

It should be noted that the teaching hospital where the research was conducted does not have contracted Speech-Language Pathology professionals for bedside care, and the study was conducted voluntarily. In addition to presenting the research proposal, explanations were provided to the care team about communicative vulnerability and the possibilities of intervention by the speech-language pathologist in the hospital setting. There was a positive reception, and over time, the team, particularly Neurology and Speech-Language Pathology

residents, as well as the Nursing team, referred individuals to the researcher for the study.

The following inclusion criteria were defined for participant selection: individuals in a communicative vulnerability situation, i.e., those with compromised oral language, preserved comprehension, admitted to the wards or Intensive Care Units (ICU), aged 18 and older.

In turn, the exclusion criteria were as follows: Glasgow Coma Scale less than 9, moderate or severe cognitive impairment, and advanced dementia, excluding those who were unable to communicate with the researcher and when the individual and/or their legal guardians did not consent to participation in the study.

Procedures for data collection

The data collection procedures involved: (i) reviewing medical records for characterizing the sociodemographic profile (age and gender) and clinical conditions of participants (diagnostic hypothesis and/or underlying disease, types of causes of the problem), location of hospitalization, and referrals; (ii) application of the ICUCS protocol (Intensive Care Unit Communication Screening Protocol)¹⁷, adapted by the researchers¹⁸, and (iii) indication of Supplementary and/or Alternative Communication Systems (SACS) by the lead researcher.

Since this research was conducted in the hospital setting, all materials were adapted to be properly sanitized to avoid contamination risks. On the other hand, for this same reason, some proposals could not be developed, and materials such as paper and pen for writing could not be used.

The Intensive Care Unit Communication Screening Protocol (ICUCS) is a screening of communicative skills for hospitalized patients. It corresponds to a quick test of the total or partial presence of alertness changes, speech motor changes, comprehension deficits, communication forms, and indicates the presence or absence of movement, assisting in the indication of augmentative and alternative communication systems, when necessary. See CHART 1, which shows the ICUCS screening.

Chart 1. Version of the ICUCS protocol adapted and translated by the author¹⁷

Categories	Participants N/(F%)		
	Yes	No	Partial
Alertness			
Is patient alert?			
Can patient follow commands?			
Assess oral motor skills			
Preserved oral motor skills			
Assess comprehension			
Understands without assistance, visual or oral cues			
Use of glasses			
Use of hearing aids (Personal Sound Amplification Product)			
Use of dentures			
Available resources			
Choices of communication strategies			
Does patient have a reliable 'yes' and 'no' signal?			
Can the patient point?			
Reading and writing			

The ICF¹³ can be divided into two parts, with the first referring to body functions and activity and participation (functioning and disability), and the second referring to environmental and personal factors that can impact the person positively or negatively, classified accordingly. In the case of activity and participation categories and environmental factors, a positive qualifier (+) means that the category is a facilitator, while a negative (-) indicates a barrier.

Body function components can be qualified as positive (+) or negative (-) and are represented by letters (b) for body functions and (d) for activity and participation. Activity and participation components, on the other hand, can be qualified as facilitators (+) or barriers (.). The ICF uses alphanumeric language, meaning each component is followed by a number code representing the category to be evaluated and can be classified by a qualifier.

Using the data recorded by the lead researcher regarding ICUCS and the field diary, including participant and family reports regarding the indication and use of proposed SACS, along with the researcher's own notes related to participants, family, and the care team, the ICF classification was performed using a checklist developed for this study (see CHART 2) for the analysis of linguistic and functional conditions of the study group.

Regarding the items: "Using communication devices and techniques" (d3600) and "Assistive products and technology for communication (e1251)," it is noteworthy that, in this study, the forms of communication used by participants were analyzed. Concerning the use of Supplementary and/or Alternative Communication Systems, gestures, writing, eye blinking, and low-tech communication boards were considered.

Chart 2. ICF Checklist developed by the researchers for the analysis of linguistic and functional conditions of the study participants

Body functions (b)
State of consciousness (b1100)
Reception of oral language (b16800)
Expression of spoken language (b16810)
Expression of written language (b16811)
Articulation functions (b320)
Activities and participation (d)
Speaking (d330)
Receiving spoken messages (d310)
Receiving nonverbal messages (d315)
Receiving written messages (d325)
Producing nonverbal messages (d335)
Starting a conversation (d3500)
Sustaining a conversation (d3501)
Reading (d166)
Using communication devices and techniques (d3600)
Environmental factors (e)
Assistive products and technology for communication (e1251)
Immediate family (e310)
Health professionals (e355)
Individual attitudes of immediate family members (e410)
Individual attitudes of health professionals (e450)

Data Analysis Procedures

Results were analyzed based on the ICF, followed by statistical analysis of data summary (frequency).

For participant response classification, the proposed ICF¹² qualifiers were considered, according to performance in ICUS and CSA activities proposed by the researcher, as explained in Chart 3.

Chart 3. Description of the use of qualifiers

ICF	Percentage Level of ICF	ICUS Protocol	E.g.: Speaking (D330) ICUS Test: Count from 1 to 10 and answer questions)
0 - no problem	0-4%	Patient performed the tasks without difficulty	E.g.: Patient had no alterations in oral language
1 - Mild issue	5-24%	Patient performs the proposed task with slight difficulty	E.g.: Patient had mild dysarthria or slight impairment of speech intelligibility
2 - Moderate issue	25-49%	Patient partially performs the requested task	E.g.: Patient had significant impairment in speech intelligibility, but it is still possible to partially understand the discourse
3 - Severe issue	50-95%	Patient does not perform the proposed task or performs it with great difficulty	E.g.: Patient attempts to speak, but the speech is not intelligible
4 - Complete issue	96-100%	Patient does not perform the proposed task and presented total impairment of the assessed skill	E.g.: Patient has anarthria or another alteration that completely prevents speech.

Results

Table 1 shows the characterization of participants in terms of gender, age group, and clinical

conditions related to the diagnostic hypothesis and/or underlying disease.

Tables 2, 3, and 4 show participant results classified by the ICF.

Table 1. Characterization of participants (N=18)

Categories		No. of Participants	Participants (F%)
Sex	Female	7	38.88
	Male	11	61.11
Age group	18 to 25 years old	2	11.11
	26 to 35 years old	2	11.11
	36 to 45 years old	3	16.66
	46 to 55 years old	4	22.22
	56 to 65 years old	1	5.55
	66 to 75 years old	5	27.77
	>76 years	1	5.55
Diagnostic Hypothesis or Underlying Disease	Myasthenia Gravis	3	16.66
	Stroke/Aphasia	5	27.77
	ALS (Amyotrophic Lateral Sclerosis)	3	16.66
	Locked-In Syndrome	2	11.11
	Cavernoma	1	5.55
	Tuberculosis (CNS TB)	1	5.55
	Encephalitis	1	5.55
	Devic's Disease	1	5.55
	Guillain-Barré Syndrome (GBS)	1	5.55
	Duchenne Muscular Dystrophy	1	5.55
Life-supporting Devices	Does not use	8	44.44
	Tracheostomy	4	22.22
	Mechanical Ventilation	6	33.33

Table 2. Classification of participants regarding body functions

Body Functions(b)	Qualifiers No. of Subjects / %						
	0	1	2	3	4	8	9
State of consciousness (b1100)	16 (89%)	2 (11%)	0	0	0	0	0
Reception of oral language (b16800)	15 (83%)	3 (17%)	0	0	0	0	0
Expression of spoken language (b16810)	0	2 (11%)	3 (17%)	5 (28%)	7 (39%)	0	0
Expression of written language (b16811)	3 (17%)	2 (11%)	3 (17%)	2 (11%)	0	0	8 (44%)
Articulation functions (b320)	0	2 (11%)	3 (17%)	7 (39%)	6 (33%)	0	0

Table 3. Classification of participants regarding activity and participation

Activity and Participation(d)	Qualifiers No. of Subjects / %						
	0	1	2	3	4	8	9
Speaking (d330)	0	1 (6%)	2 (11%)	6 (33%)	9 (50%)	0	0
Receiving spoken messages (d310)	13 (73%)	3 (17%)	0	0	0	0	0
Receiving written messages (d325)	13 (73%)	5 (28%)	0	0	0	0	0
Producing nonverbal messages (d335)	3 (17%)	2 (11%)	3 (17%)	2 (11%)	0	0	8 (44%)
Starting a conversation (d3500)	0	2 (11%)	3 (17%)	7 (39%)	6 (33%)	0	0
Sustaining a conversation (d3501)	1 (6%)	2 (11%)	8 (44%)	5 (28%)	2 (11%)	0	0
Reading (d166)	6 (33%)	1 (6%)	2 (11%)	0	0	0	9 (50%)
Using communication devices and techniques	3 (17%)	6 (33%)	4 (22%)	3 (17%)	0	0	2 (11%)

Table 4. Classification of participants regarding environmental factors

Environmental factors (e)	Qualifiers No. of Subjects / %										
	0	1	2	3	4	8	9	.1	.2	.3	.4
Assistive products and technology for personal use in daily living (e1151)	0	0	0	3 (17%)	11 (6%)	0	3 (17%)	1 (6%)	3 (17%)	3 (17%)	5 (28%)
Assistive products and technology for communication (e1251)	0	2 (11%)	1 (6%)	8 (44%)	4 (22%)	0	3 (17%)	0	0	0	0
Health professionals (e355)	3 (17%)	5 (28%)	2 (11%)	1 (6%)	0	0	1 (6%)	0	5 (28%)	0	0
Immediate family (e310)	0	1 (6%)	4 (22%)	6 (33%)	5 (28%)	0	0	0	0	0	0
Individual attitudes of health professionals (e410)	5 (28%)	5 (28%)	3 (17%)	0	0	0	1 (6%)	0	3 (17%)	0	1 (6%)
Individual attitudes of immediate family members (e450)	0	0	4 (22%)	6 (33%)	6 (33%)	0	0	1 (6%)	1 (6%)	0	0

Discussion

The results show the impacts of communicative vulnerability on the functioning of hospitalized individuals with language/communication complaints using the ICF as a conceptual basis and classification tool.

Regarding participant profiles, a higher concentration of elderly individuals is observed in the studied group. This population is known to be more susceptible to experiencing a stroke¹⁹, which is line with findings of higher incidence among participants with this diagnosis. Despite he slight predominance of males, no studies were found

indicating that men have a greater tendency toward communicative vulnerability. Regarding the causes of communication difficulties, a variety is observed in this population, related to both neurological and mechanical issues, as pointed out in other studies^{1,6}. Tracheostomy and mechanical ventilation appeared frequently, consistent with various works related to the population in a vulnerable communication situation^{20,21}.

As shown in the results, ICF categories for state of consciousness (b1100) and reception of oral language (b1680) were preserved for most participants. Other research also shows that patients with complex communication needs are alert and understand what is said, even if they cannot speak^{1,21}.

Regarding Expression of spoken language (b1680) and articulation functions (b320), most participants had impairments, at varying scales, with a significant portion experiencing complete expression problems. Similar results were found by other authors. A study²² classified hospitalized patients with diagnoses such as: Ischemic stroke, traumatic brain injury, and Guillain-Barré syndrome using the ICF, identifying language and speech impairments ranging from mild to complete, with gains after speech-language pathology therapy. Another study²³ analyzed patients who had a stroke using the ICF in outpatient follow-up and also identified difficulties in articulation functions (b320), fluency, and speech rhythm.

Regarding activity and participation functions related to reading and writing, their analysis was hindered by the clinical conditions of participants but also by the lack of necessary resources, such as glasses in some cases, and often due to contact precaution measures that did not allow the use of paper and pen in activities with participants.

Concerning contact precaution and contamination issues, a study²⁴ discusses the process, difficulties, and necessary adaptations for implementing low (e.g., writing and paper communication boards) and high-tech Augmentative and Alternative Communication at the bedside (e.g., tablets and computers), as tools for assessment or intervention must not become a source of contamination for the patient and/or the healthcare team. Similarly to this study, other studies have addressed that patients using glasses, hearing aids, and other resources often do not have easy access to them within the hospital^{1,25}.

Regarding the activity and participation of individuals related to oral language, most had impaired performance in categories such as speaking, producing oral messages (d310), initiating (d3500), and maintaining conversations (d3501). If these skills are impaired, communication for individuals with communicative vulnerability is reduced, as also emphasized by other research^{2,20}. Some participants had severe expression problems, including total absence of speech and severe mobility difficulties, which hinder communication, including expressing fundamental basic needs such as pain, hunger, or cold. Studies with individuals with complex communication needs indicate that even though these individuals often cannot express basic needs, they desire to communicate about various topics²⁶.

The ICF allows professionals to have a comprehensive view of individuals with communicative vulnerability beyond the organic dimension, i.e., the impaired body function. Activity and participation results demonstrate that communication difficulties impact the daily lives of the studied group. The findings are in line with other studies^{23,27} that analyzed individuals with aphasia using the ICF, in the same Teaching Hospital but in the outpatient context. Their results showed that, after discharge, these individuals continued to face difficulties in their daily activities due to communication challenges.

Regarding environmental factors, in some ICF categories, they can be classified as both facilitators and barriers for individuals. For example, life-support equipment was indicated as a facilitator as it helps people breathe and stay alive, but it can also serve as a barrier to communication. Some studies²⁰⁻²¹ with mechanically ventilated patients found impairments in the communication of these individuals, indicating the need for alternative communication methods.

Family members, healthcare professionals, as well as their attitudes, were classified as both facilitators and barriers. Family members are sometimes interpreters for individuals in communicative vulnerability, as seen in other research^{28,29}, making them potential facilitators. However, when they are outside the hospital environment, there is no one to assume this role, restricting the communication of the hospitalized person. However, some family members establish communication methods and point out these means to the care team, which

happened in some of the cases studied here and is seen as a significant facilitator. In other cases, some family members speak on behalf of the person in communicative vulnerability, becoming a barrier since the family member does not necessarily reflect what the person wants to communicate. These difficulties were also found in other studies^{29,30}.

Although crucial in-patient care in general, healthcare professionals were often classified as barriers to communication. Little time to communicate due to the routine of urgent clinical care, lack of understanding or knowledge of the communication possibilities of individuals in communicative vulnerability were some findings encountered here and in other studies. The authors²⁸ of a literature review reported that the attitudes of healthcare professionals can be barriers for people with aphasia, as these professionals sometimes speak for them, but the attitudes may also be facilitators if they can open to communication. For patients hospitalized in the ICU, clinical condition, medical interventions, and prognosis are important factors that can influence communication between the team and the patient. A research²³ highlights that barriers related to healthcare professionals were small when compared to the lack or difficulty of access to care.

The assistive products and technology for communication (e1251) were seen as facilitators and include the Augmentative and Alternative Communication (AAC). Research^{2,28} has identified that AAC can enhance the language of individuals with complex communication needs, and its use increases patient satisfaction with their participation in care and the hospital environment³⁰.

The results highlight that analyzing hospitalized individuals in communicative vulnerability using the ICF allowed us to observe that communication difficulties go beyond body functions. They impact activity and participation functions and are also influenced by environmental factors.

A proposal by speech-language pathologists in the hospital setting¹⁴ indicated that the professionals in this study did not select environmental factors to compose the ICF checklist for bedside use. This author hypothesizes that the lack of use of assistive technologies in the hospital environment by speech-language pathologists may have influenced this choice, although she emphasizes the importance of these factors.

It is known that language intervention and the implementation of AAC in the hospital setting still

need to be more widespread in Brazil. International authors^{2,28-30}, who focused their studies on environmental issues, reported on how these aspects can impact communication. Findings in line with this research show that environmental factors, available and used AAC resources, and the attitudes of communication partners, whether family members or healthcare professionals, influenced dialogical relationships with the individuals studied.

The findings of this study demonstrate that, in addition to neurological, mechanical, and psychogenic causes, environmental factors constitute important factors causing/exacerbating communicative vulnerability in the hospital setting, even though it begins with the impairment of a body function and hinders the activity and participation of these individuals, influencing decision-making regarding their treatment and life. This reaffirms the importance of the applicability of the ICF in the hospital setting in line with other works^{16,17}.

However, as these authors¹⁶ address, the challenges for the use and implementation of the ICF in the hospital context, especially in semi-intensive and intensive care units, as studied, depend on various factors such as training and knowledge of the ICF by the healthcare team, service routine, and feasible time for its inclusion, patient turnover, and others. On the other hand, its use can contribute to a unified language¹⁵ and a comprehensive approach to health in the care of individuals in communicative vulnerability^{16,17}.

Conclusion

Despite the diverse profile among the participants studied found in this study regarding the causes of their health conditions, the situation of communicative vulnerability was present in various diagnostic hypotheses encountered.

Nearly the entire study group exhibited alterations in oral language, preserved comprehension, and an alert state of consciousness. The analysis, based on the ICF, demonstrated that communication difficulties were not only related to body functions but also to activity and participation functions.

Environmental factors served both as facilitators, in some cases, and as barriers to communication, in others, potentially exacerbating the situation of communicative vulnerability that originated from a difficulty related to a body function.

These findings are of great relevance, considering that environmental factors such as family members, healthcare professionals, and life support equipment constitute an important part of the context for hospitalized individuals in communicative vulnerability while admitted.

Empowering teams, family members, and proposing Augmentative and Alternative Communication (AAC) systems proved to be necessary for this population, aiming to transform contextual factors (environmental and personal) into facilitators for individuals in communicative vulnerability and enabling them to participate more actively in their care, in line with a comprehensive health approach. For this purpose, it is crucial to emphasize the need for a specialized language and communication professional as part of the care team in the hospital setting.

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