


Original Article

# Actions in assistive technology with hospitalized women<sup>1</sup>

## *Ações em tecnologia assistiva com mulheres hospitalizadas*

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### **Abstract**

**Introduction:** Hospitalization can render women's health more fragile for a variety of reasons, potentially impacting their autonomy and independence. Within this scenario, interventions using assistive technology can enhance women's occupational performance. **Objective:** To discern the assistive technology actions undertaken by occupational therapists for women in hospital settings. **Method:** This descriptive, retrospective, and exploratory study with a quantitative approach was conducted from August to December 2021. It utilized secondary data from 155 medical records of women who received occupational therapy in neurology, oncology, and mental health wards at a university hospital in Recife, state of Pernambuco, Brazil. Instruments included a structured questionnaire for characterization and a checklist to trace assistive technology actions. Data analysis was performed using Microsoft Excel. **Results:** Out of 155, 48 patients benefited from assistive technology interventions by occupational therapists. These interventions included evaluation services, prescription, manufacturing, use guidance, and training. The primary devices were orthoses for upper limbs and aids for activities of daily living in the neurology sector, with cushions being prominent in the oncology sector. A common goal was the enhancement of occupational performance. **Conclusion:** Most assistive technology actions occurred in the oncology and neurology wards, focusing on low-cost products. There is a recognized need to refine the monitoring process for assistive technology use, invest more in assistive technology services, and promote research in this field to generate further evidence.

**Keywords:** Self-help Devices, Functionality, Occupational Therapy, Women's Health.

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### **Resumo**

**Introdução:** A saúde da mulher pode se tornar mais frágil durante a internação hospitalar por diversos motivos, o que pode afetar sua autonomia e independência. Nesse contexto, intervenções em tecnologia assistiva podem ser realizadas para favorecer o desempenho ocupacional da mulher. **Objetivo:** Identificar quais ações em tecnologia assistiva são realizadas por terapeutas ocupacionais com mulheres no contexto hospitalar. **Método:** Estudo descritivo, retrospectivo e exploratório, de abordagem quantitativa, realizado de agosto a dezembro de 2021, por meio de dados secundários extraídos de 155 prontuários de mulheres que foram assistidas em terapia ocupacional nas enfermarias de Neurologia, Oncologia e Saúde Mental em um hospital universitário do Recife, PE, Brasil. Foram utilizados como instrumentos um questionário estruturado de caracterização e um *checklist* de rastreamento de ações em tecnologia assistiva. Para análise dos dados, foi utilizada estatística descritiva por meio da planilha eletrônica do Microsoft Excel. **Resultados:** 48 pacientes receberam intervenções dos terapeutas ocupacionais em tecnologia assistiva, contemplando os serviços de avaliação, prescrição, confecção, orientação de uso e treino, tendo como principais dispositivos órteses de membros superiores e de auxílio para atividades de vida diária no setor de neurologia e o coxim no setor de oncologia, apresentando como predominância nos objetivos o favorecimento do desempenho ocupacional. **Conclusão:** Foi identificado o predomínio das ações de tecnologia assistiva nas enfermarias de oncologia e neurologia com produtos de baixo custo; necessidade de melhorar o processo de acompanhamento de uso da tecnologia assistiva e de se investir no serviço de Tecnologia Assistiva; aumento de estudos sobre essa temática para gerar evidências.

**Palavras-chave:** Dispositivos de Autoajuda, Funcionalidade, Terapia Ocupacional, Saúde da Mulher.

## **Introduction**

Women's health refers to the set of actions aimed at health prevention, care, promotion, protection, and recovery, carried out across low-, medium-, and high-complexity care. These actions aim to reach women throughout all life stages, considering the specificities of different age groups and populations (Brasil, 2004).

Souza Araújo et al. (2020) discuss how these individuals benefit from actions that provide full health assistance, whether preventive or rehabilitative, regardless of the various physical, social, or mental conditions they experience throughout life.

Regarding high-complexity care, the delivery of health care by professionals follows various characteristics that impact these individuals' well-being, such as length of hospital stay, routine disruption, types of deformities, surgical procedures, and their consequences and/or changes in functionality. Individually or collectively, these factors directly impact individuals' occupational performance (Florisbal & Donelli, 2017).

According to the International Classification of Functioning, Disability, and Health (ICF), these changes, during hospitalization, can result in disabilities of various levels, affecting body functions and structures, participation in activities, and environmental factors surrounding individuals (Organização Mundial da Saúde, 2020a).

The ICF emphasizes, within this care and support service process, how environmental factors impact functionality and can be mitigated through adaptations or the use of personal supports (Assistive Technology tools) (Organização Mundial da Saúde, 2020a).

What the ICF classifies as a facilitator includes appropriate assistive technology, further noting that the use of these facilitators can prevent a disability or activity limitation from becoming a participation restriction, since the actual performance of an action is enhanced (Organização Mundial da Saúde, 2020a).

The Technical Aids Committee (CAT) defines Assistive Technology (AT) as:

An area of knowledge, with an interdisciplinary characteristic, that encompasses products, resources, methodologies, strategies, practices, and services directed to promote functionality related to activity and participation for people with disabilities, impairments, or reduced mobility, aiming at their autonomy, independence, quality of life, and social inclusion (Brasil, 2009, p. 9).

However, when discussing the definition of AT, it is evident that several other terminologies are also applied to this concept, such as technical aids, support technology, assistive devices, self-help devices, and assistive equipment, whose use is influenced by the theoretical framework (Bersch, 2017).

For practical purposes, it is essential to classify AT aiming to organize the field of knowledge, which can be used for research, promoting public policies, organizing services, cataloging, and database creation (Sartoretto & Bersch, 2017).

Bersch (2017) classifies AT into 12 categories: daily life aids; augmentative alternative communication (AAC) and supplementary alternative communication (SAC); computer accessibility resources; environmental control systems; architectural projects for accessibility; orthoses and prostheses; postural adaptation; mobility aids; aids for the blind or visually impaired; aids for the deaf or hearing-impaired; vehicle adaptations, and sports and leisure.

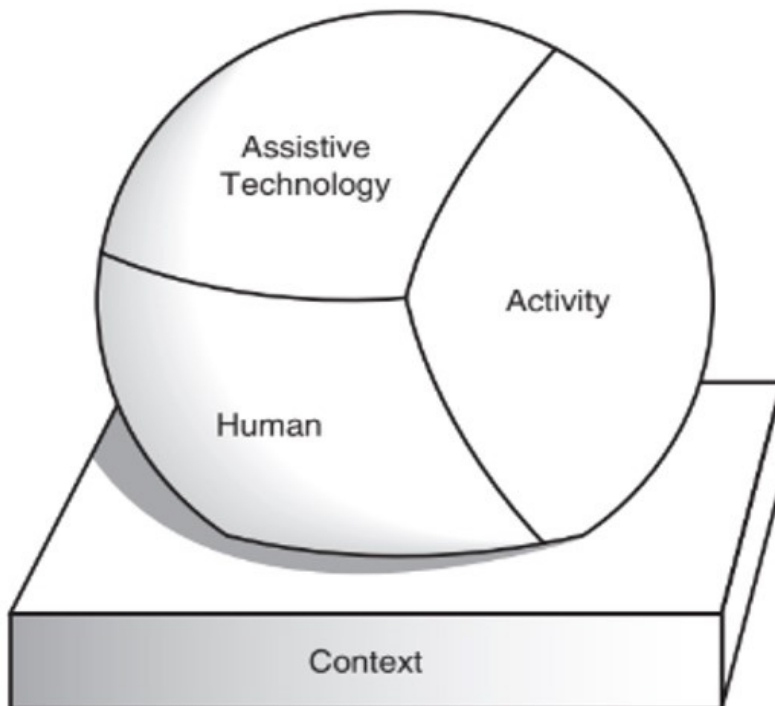
According to Resolution no. 458 of the Federal Council of Physical Therapy and Occupational Therapy (COFFITO), from November 2015, occupational therapists are tasked with evaluating the potentials, difficulties, and needs of individuals in using products, resources, AT methods and strategies, practices, and services. They also instruct, train, prescribe, execute, develop products and resources, and monitor the use of assistive devices that support occupational performance, promote physical and mental comfort, and facilitate participation in activities of daily living (ADL) (Brasil, 2015; Verdiani et al., 2016).

Given this, occupational therapists play a crucial role, offering a wide range of services in the application of technology, which includes assessment, recommendation, prescription, justification of need, awareness and acceptance resources, customization, training, integration, and follow-up (Marins & Emmel, 2011).

Reaffirming the expertise of the occupational therapist in hospital settings, COFFITO established, through Resolution no. 429/2013, the recognition and performance of the occupational therapist in hospital contexts. This aims at the protection, promotion, prevention, recovery, rehabilitation, and palliative care of both the individual and the collective, based on the concept of comprehensive and

humanized health care. Through occupational-therapeutic diagnosis, the execution and use of methods, techniques, and resources relevant and suitable for hospital settings are determined (Brasil, 2013).

The hospital context has specific characteristics in the application of AT, which should be considered in this study. According to the theoretical model of AT titled Human Activities Assistive Technology (HAAT), the introduction of an AT aims to facilitate the activity of a human being in a particular context, as illustrated in Figure 1 (Cook & Polgar, 2015):



**Figure 1.** HAAT Model. *Source:* Cook & Polgar (2015).

Regarding the prescription of AT, the environment of use is also considered by the Matching Person & Technology (MPT) model, which proposes an approach centered on the user and the environment (Scherer & Craddock, 2002).

Among the potential users of AT and various contexts are hospitalized women. According to Kjekken et al. (2005), Amaral (2016), and Paula (2017), women experience health conditions that result in greater functional limitations, with a loss of working capacity and quality of life. They often require AT resources that present efficacy in treatment. In this context, it is understood that women, during hospitalization, have some limitations that can significantly interfere with their ADL, reduce autonomy and independence, and/or lead to disability. It is the responsibility and skill of the occupational therapist to assess, plan, prescribe, and create resources that facilitate the occupational performance of this population.

The objective of this study was to identify which AT actions are carried out by occupational therapists with hospitalized women.

## Method

This is a descriptive, retrospective study with a quantitative approach. The data were collected at the Hospital das Clínicas of the Federal University of Pernambuco (HC-UFPE) from the medical records of the Neurology, Oncology, and Mental Health sectors. The information was obtained from the Medical Archive and Statistics Service (SAME) and the Process and Information Technology Management Sector (SGPTI) - Master Tools Systems, for 2018 and 2019.

The inclusion criteria involved women who received occupational therapeutic interventions, with an occupational therapist assigned to their inpatient department during 2018 and 2019. Women were excluded if there were no records of occupational therapy treatments in their medical records, and those who received outpatient treatments, as the outpatient service is different from inpatient care.

Data were collected between August and December 2021 and the study was approved by the Ethics Committee for Research with Human Beings of HC-UFPE under opinion no. 4.690.920. The data were compiled using the Structured Questionnaire for Participant Characterization and the Assistive Technology Action Tracking Checklist.

For the questionnaire, sociodemographic, economic, and clinical data were requested. For the checklist, information on the AT used in the hospital was requested: type of AT service provided (evaluation, prescription only, manufacture only, prescription and manufacture, use guidance, training, and how many times the AT service was performed); the area of AT (among the 12 recognized areas); the name of the assistive product; the materials used in the product (and if not described, write as 'not specified'); the characterization of AT (cost: low-cost/simple or high-cost/sophisticated; manufacture: commercial/pre-fabricated, individualized/adapted from a commercial AT, individualized/fully tailored); the purpose of the AT; and the environment for which the AT was indicated (hospital, home, other/which?). Both were added to two files via the Survio online platform, which was used as a tool for data collection and organization.

To determine the sample size, the calculation equation for proportion studies in finite populations was used, given by:

where,

$z$  = the quartile of the standard normal (1.96, considering a 95% confidence coefficient);

$p$  = the expected prevalence of women who received AT interventions in the evaluated service ( $p=0.5$ );

$q$  = the expected prevalence of women who did not receive AT interventions in the assessed service ( $p=1 - p=0.5$ );

$d$  = the sampling error ( $d=0.05$ );

$N$  = the total number of female patient records found in 2018 and 2019 in the Neurology, Oncology, and Psychiatry departments ( $N=74, 151, \text{ and } 33$ , respectively, totaling a population of 258 patients).

Considering a 95% significance level, a 5% error margin in the estimate, an expected 50% prevalence for patients who received AT interventions, and a total of 258 records from 2018 and 2019, the total sample for this study is 155 records.

The collection was stratified, where the number of records in each service was proportional to the total number of registered records in that service. Thus, the numbers of records for each service were as follows: 44 from Neurology, 91 from Oncology, and 20 from Psychiatry. The sample selection in each stratum was random until the number of records for each sector was reached (Arango, 2001).

The initial approach to the records was started through the SGPTI – Master Tools Systems, which were sent to the main researcher. A screening was conducted using the census of the occupational therapists’ attendance records from the department head’s archive. The patient list was then directed to SAME for record sorting and selection.

The collected data were transcribed and exported to a Microsoft Excel® spreadsheet, tabulated, and analyzed using descriptive statistics. Later, operations for separating numbers, percentages, charts, and analogous groupings were performed according to the study objectives.

## Results

The findings from the 155 records revealed that most of the women assessed are aged 52.01 ±15.55 years on average. The baseline sociodemographic characteristics of the participants are described in Table 1. All results are presented as percentages.

**Table 1.** Characterization of the socio-demographic and economic profile of hospitalized patients during 2018 and 2019.

<b>Origin</b>							
Rural Area				Urban Area			
11%				89%			
<b>Race</b>							
Mixed		Black		White		NI	
76%		7%		13%		3%	
<b>Marital status</b>							
Single		Married/Stable Union		Divorced		Widowed	
41%		41%		5%		11%	
						2%	
<b>Family Income</b>							
>4 minimum wages		2–4 minimum wages		1–2 minimum wages		<1 minimum wage	
--		8%		22%		4%	
						3%	
						63%	
<b>Educational Level</b>							
Complete higher education		Incomplete higher education		Complete high school		Incomplete high school	
12%		2%		23%		2%	
						16%	
						24%	
						16%	
						5%	
<b>Ward</b>							
Oncology				Neurology			
59%				28%			
				Psychiatry			
				13%			
<b>Use of Assisted Technology</b>							
Yes				No			
29%				71%			

\*NI: Not informed. Source: Prepared by the authors.

Table 2 displays the characterization of AT interventions categorized by ward: oncology, neurology, and psychiatry. No AT usage was found in the psychiatry sector; thus, the following data pertains to 135 records, identifying 48 interventions by occupational therapists using AT. The only professional, other than the occupational therapist, who prescribed AT was the nurse in the oncology sector.

Regarding the AT prescription, it is noted that the majority was made exclusively by occupational therapists (oncology 96% / neurology 100%), with a focus on the following services: evaluation (oncology 83% / neurology 89%), prescription and fabrication (oncology 87% / neurology 63%), usage orientation (100% in both sectors), and training (oncology 21% / neurology 47%).

Among the assistive devices used, the aids for ADL are emphasized (oncology 12% / neurology 50%), cushion (oncology 76% / neurology 6%), positioning device (oncology 12% / neurology 50%), and mobility aids (oncology 12% / neurology 6%). Moreover, it is highlighted that of all the ATs used in the sectors, the upper limb orthotic resources and services (28%) and mobility aid (6%) were only used in the neurology sector.

Based on the information provided, there is evidence that for AT interventions in oncology, the majority require 1 to 2 consultations (21/67%), whereas, in neurology, most require 1 consultation (42%), and some more than 4 consultations (26%). Used exclusively in the hospital environment of two sectors (oncology 100% / neurology 95%) and composed of low-cost materials (oncology 87% / neurology 84%), hence individualized – fully customized (oncology 87% / neurology 65%).

**Table 2.** Characterization of tracking interventions in AT across wards.

<b>Professional who prescribed the AT</b>						
	Occupational Therapist			Other professionals		
Oncology	96%			4%		
Neurology	100%			NR		
<b>AT Service</b>						
	Assessment	Prescription	Prescription and Crafting	Usage guidance	Training	
Oncology	83%	NR	87%	100%	21%	
Neurology	89%	NR	63%	100%	47%	
<b>Number of Appointments</b>						
	1	2	3	>4		
Oncology	21%	67%	12%	NR		
Neurology	42%	16%	16%	26%		
<b>Assistive Devices</b>						
	For ADL – Bathing / Eating	Upper Limb Orthoses	Cushion	Positioning	Mobility	NI
Oncology	12%	SR	76%	12%	SR	SR
Neurology	50%	28%	6%	6%	6%	6%
<b>Purpose of the AT</b>						
	ADL	Orthoses and Prostheses	Postural Adjustment		Mobility	
Oncology	12%	29%	75%		NR	
Neurology	58%	32%	16%		5%	
<b>Environment</b>						
	Hospital			Home		
Oncology	100%			SR		
Neurology	95%			5%		

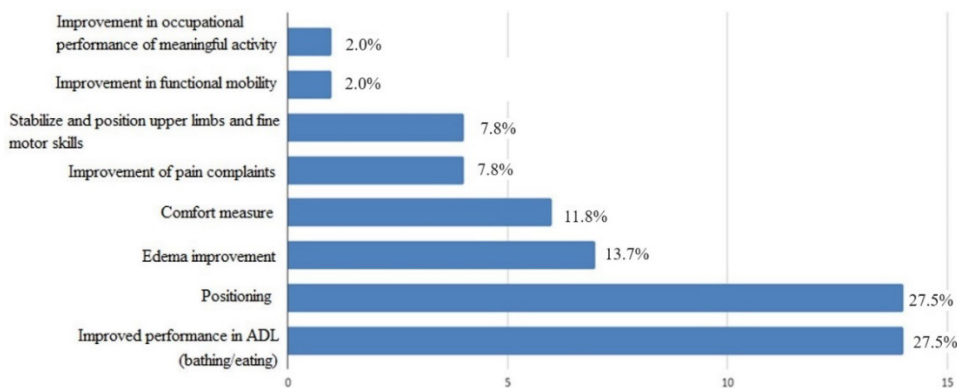
**Table 2.** Continued...

	Cost of the AT		
	Low-cost/Simple	High-cost/Sophisticated	
Oncology	87%	13%	
Neurology	84%	16%	
	Specificity of the AT		
	General	Specific	
Oncology	96%	4%	
Neurology	58%	42%	
	Origin of the AT		
	Custom-made	Commercial Pre-fabricated	Custom-made from commercial
Oncology	87%	13%	--
Neurology	66%	22%	12%

NR: Not reported. NI: Not informed. ADL: Activities of daily living. AT: Assistive Technology. Source: Prepared by the authors.

Regarding the purposes of the assistive devices used in interventions, there is a predominance in improving performance in ADL (e.g., bathing/eating) and positioning (27%). However, other goals were identified, such as edema improvement (14%), comfort measures (12%), pain complaint improvement (8%), stabilization and positioning of the upper limbs and fine motor skills (8%), improvement in functional mobility (2%), and enhancement in occupational performance in significant activities (2%), as described in Figure 2.

Devices for edema and pain complaint improvement and enhancement of fine motor skills, although not identified as AT but rather as rehabilitation technology, were included in this study since professionals classified them as such in the records.



**Figure 2.** Distribution of the purposes of assistive devices used in interventions. Source: Prepared by the authors.

Concerning the comparison between the assistive devices used in the interventions and the diagnosis of the participants (Table 3), it is noticeable that there is a predominance in the use of cushions for other oncological diseases (21%), apart from breast cancer and cervical cancer (17%). There is also the use of assistive devices for eating and/or bathing (37%) and upper limb orthoses (21%) for other neurological conditions (as described in the footnote of Table 3).



**Table 3.** Assistive Technology in the oncology and neurology wards by diagnosis.

Oncology	Cushion	Positioning device	Adaptation for eating utensils	Assistive device for eating/bathing	Adaptation for bathing	
Colon cancer	8%	--	4%	--	--	
Breast cancer	17%	--	--	4%	--	
Cervical cancer	17%	--	--	--	4%	
Squamous cell carcinoma	8%	--	--	--	--	
Endometrial cancer	8%	4%	--	--	--	
Other oncological pathologies <sup>1</sup>	21%	4%	--	--	--	
Neurology	Cushion	Positioning device	Mobility aid	Adaptation for ADL(eating/bathing)	Upper limb orthoses	NI
Stroke	5%	--	--	--	5%	5%
Parkinson's	--	--	5%	5%	--	--
Meningitis	--	5%	--	5%	--	--
Other neurological pathologies <sup>2</sup>	--	5%	--	37%	21%	--

NI: Not informed. ADL: Activities of daily living. 1: Non-Hodgkin lymphoma, colorectal adenocarcinoma, peritoneal adenocarcinoma, metastatic adenocarcinoma, mucinous adenocarcinoma, neuromyotonia, peritoneal carcinoma, supraglottic laryngeal cancer, cholangiocarcinoma, diffuse large cell lymphoma, lymphoplasmacytic lymphoma, hepatic mass, myasthenia gravis, melanocytic malignant neoplasm, gallbladder neoplasm, intestinal neuroendocrine tumor, iliac fossa tumor, pelvic tumor. 2: Hypereosinophilic syndrome, Alzheimer's, Takayasu arteritis, rheumatoid arthritis, global cerebellar ataxia, mixed ataxia, cerebellar atrophy, atrioventricular block/optic neuritis, sudden motor deficit, calcium metabolism disorders, fibromyalgia, hemiparesis, stress urinary incontinence, myelodysplasia/febrile neutropenia, thoracic myoclonus, neuromyelitis optica, ischemic ocular neuropathy, neurosyphilis, spastic paraparesis, multiple cranial nerve palsy, paresis/dystrophy, chronic inflammatory demyelinating polyneuropathy, sensory-motor polyneuropathy, spastic quadriplegia, motor deficit syndrome/spastic quadriplegia, maniatiform syndrome, myeloradicular syndrome, stage iv thymoma (pleura), cerebral venous thrombosis, Burkitt's tumor. *Source:* Prepared by the authors.

## Discussion

Based on the collected data, the average age of the participants was 52 ±15 years. This observation agrees with what other authors indicate, suggesting that hormonal, genetic, environmental, and even idiopathic factors predispose women to disease. Estimates suggest that 10–20% of women over 50 have an increased risk of developing cancer and/or one or more neurological disorders due to biological changes and/or cumulative exposure throughout life to predisposing factors (Silva & Silva, 2005; Organização Mundial da Saúde, 2020b).

Regarding the sociodemographic profile of the evaluated participants, when one ties such variables as race, ethnicity, and economic vulnerability to illness factors, it is clear that these conditions result in greater difficulty accessing health services as a preventive measure. Consequently, this leads to late diagnoses and a decrease in disease treatments. Given this assumption, studies show that between 5 and 15% of people who need assistive products come from low- and middle-income countries (Brasil, 2004; Sugawara et al., 2018).

As for diagnoses, there is a predominance of various types of neurological diseases (22%), breast cancer (16%), other oncological diseases (13%), and cervical cancer (9%). Studies indicate a predominance in females of conditions that cause functional limitation (Kjeken et al., 2005; Paula, 2017; Amaral, 2016).

Analyzing these illnesses, it is noted that neuropathology is highly debilitating and requires support for ADL. Concerning oncological diseases, the disability is mainly

related to its treatment and can lead to insomnia, anorexia, bed rest, loss of social interaction, decreased work and recreational activities, and increased pain symptoms (Pimenta et al., 1997). Complications associated with ADL and occupational roles are prominent in this context, leading us to refer to the concept of functionality. According to the Organização Mundial da Saúde (2008), functionality encompasses areas based on a bodily, individual, and societal perspective (Carvalho, 2013).

Given this premise, in a hospital setting, the focus of care tends to be the treatment of acute problems and the maintenance of affected skills. These can suffer exacerbated detrimental effects during hospitalization, significantly impacting everyday life and the autonomy of patients if not identified, treated, or prevented early (Quadro Dorneles et al., 2014).

Thus, it is worth noting that AT can be configured as one of the strategies used to enhance the occupational performance of hospitalized patients. It is recognized as a fundamental element in rehabilitation and social inclusion, fostering functionality, improved independence, and the autonomy of people with disabilities, impairments, or reduced mobility (Mendonça, 2012).

In this context, Bauer et al. (2011) state that studies have shown that AT serves as a facilitating tool to recover functionality, and improve occupational performance, positioning, stabilization, and other purposes. It is especially useful when applied in a hospital environment, thereby validating the findings of this study.

Consequently, when correlating the diagnoses of neuropathologies and the devices used for these patients, what emerges are assistive devices for ADL and upper limb orthoses, as shown in the study by Amaral et al. (2017), which focused on individuals with Parkinson's disease and interventions using ADL tools. This was also observed in the study by Bez et al. (2021), which researched stroke patients using upper limb orthoses, and in the study by Rodrigues et al. (2015), which demonstrated the use of orthoses and ADL tools for individuals with degenerative diseases of the central nervous system. Such results corroborate the findings of this study.

However, when correlating oncological pathologies and the use of AT, Brazilian studies have identified the use of AAC (Santos Araújo et al., 2018), an area of AT not observed in the present study. However, concerning the use of cushions, prevalent in this research, other studies have shown their use for patients admitted to the ICU and/or diagnosed with COVID-19, as well as in geriatric wards (Marins, 2011; Santos et al., 2020; Marcelino, 2020; Empresa Brasileira de Serviços Hospitalares, 2021).

Given this, when comparing the clinical condition of patients using cushions and oncological patients in middle or advanced treatment stages, coupled with hospitalization, one can find some signs and symptoms consistent with those documented in other studies. These include swelling, pain complaints, pressure ulcers, incontinence, prolonged bed rest, difficulty sitting up, and reduced joint flexibility (Brasil, 2020; Lima et al., 2013; Mello et al., 2021).

In connection with these factors, as demonstrated by the results of this study, one can identify the objectives for using such resources: improving positioning, reducing swelling, providing comfort, and alleviating pain, among others, as the data from this study show. Therefore, based on the aforementioned points, the use of such resources is justified for the oncological population, especially when linked to the purpose of using cushions.

As mentioned in the results, other AT devices were identified, aimed at rehabilitation. According to Bersch (2017), one should differentiate AT from other technologies, such as those related to the medical and rehabilitation fields. This type of technology aims to facilitate and enhance professional performance, whether in assessment or therapeutic intervention.

It is worth noting that the previously mentioned resources are predominantly low-cost, created by occupational therapists since the service does not have in its supply arsenal the necessary materials for producing high-cost resources. According to Françani et al. (2009), low-cost AT proved effective for individuals with functional limitations, helping improve their autonomy.

Bersch (2017) and García (2017) assert that to provide an AT service the professional must perform an assessment, select the appropriate device, provide guidance, and train on the use of the resource, which supports the interventions of this study. However, other evidence also emphasizes the need for monitoring during implementation and adaptation, reassessments, and any necessary adjustments (Silva & Carraretto, 2021; Bersch, 2017). This was not done for the target population of this study, likely due to the high turnover of admissions in the sectors evaluated, which was evident in the number of services performed in this research; discontinuity of follow-up care after hospital discharge; and a lack of technical knowledge related to AT by other health professionals, directly affecting the care provided, which should occur multi-professionally (Silva & Carraretto, 2021).

For this reason, concerning the healthcare team, the use of AT faces significant impacts marked by intra-hospital disarticulation regarding the encouragement of shared prescriptions, referrals, and awareness of the need for this service. Thus, there is a lack of training and/or adaptations predominantly made during follow-up, leading to misuse or unawareness. This can cause frustration or annoyance in the individual, exacerbated by difficulty in acceptance and immaturity, leading to abandonment and renunciation of the AT, as well as wasting the service time that the professional allocates for everything from production to intervention (Missio & Queiroz, 2018).

If the user is not covered by all the procedures of the AT service, which culminate in receiving the AT with proper training, being followed up, and achieving success in the use of AT, the risk of discontinuing its use will increase, which may cause financial losses for the public system, the user, and the team (World Health Organization & United Nations Children's Fund, 2022).

Therefore, it is essential to structure a service delivery system that involves the use of multidisciplinary rehabilitation protocols adapted to patients' needs (García, 2017). There is a need to ensure that the assessment, prescription, dispensing, and follow-up processes are carried out by a multidisciplinary team of qualified professionals (emphasizing the importance of continuing education).

## **Conclusion**

In the Assistive Technology Service performed by occupational therapists in Oncology and Neurology wards, the most prevalent phases were assessment, prescription, and production. This pointed to the need for greater investment in strategies, within the hospital context, in the phase of monitoring the use of assistive products.

Regarding the devices, aids for ADL and upper limb orthoses in the neurology sector, and cushions in the oncology sector stood out. Their purpose was to improve occupational performance, positioning, and comfort measures. The importance of care provided using AT in interventions by occupational therapists was also evident, along with the urgency to increase multi-professional team knowledge on this theme.

Limitations of this study include the absence of an occupational therapist in various clinics where there could be AT intervention, because of the reduced number of occupational therapists in the hospital. The access limitation to medical records established by SAME combined with the data collection period of the Residency Program impacted the sample size.

It should be highlighted that it is essential to expand studies focused on ward hospitalized patients who greatly benefit from AT interventions. It is also emphasized the importance of increasing investments in continuing education for the health care team, together with the procurement of supplies for high-cost resources offered to patients, which can be assessed and indicated according to the patient's purpose and need.

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### Author's Contributions

Allan dos Santos Cipriano: organization of the data and writing of the manuscript. Juliana Fonsêca de Queiroz Marcelino, Luciana Silva do Nascimento, and Danielle Carneiro de Menezes Sanguinetti: manuscript proofreading. Aline Mendes Lacerda: statistical analyses. All authors approved the final version of the text.

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