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Original Article

Functionality and Communicative Characteristics of Adults with Aphasia Following Acquired Brain Injury and Their Relationship to Caregiver Burden

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ABSTRACT

Aphasia is a common diagnosis among individuals with acquired brain injury (ABI), often resulting in loss of independence and significant caregiver burden. This study analyzed the functionality and linguistic-communicative characteristics of people with aphasia (PWA) and their relationship with caregiver burden. It employed a quantitative, descriptive-correlational, and cross-sectional approach. The sample included 18 adults diagnosed with aphasia following ABI who received care at the Regional Hospital of Talca in 2023, as well as their caregivers. Linguistic performance was assessed using the Spanish version of the Mississippi Aphasia Screening Test (MASTsp), while functionality was measured with the Lawton and Brody Instrumental Activities of Daily Living Scale (IADL), and caregiver burden was assessed using the Zarit Burden Interview. Data were analyzed using descriptive statistics and correlation analysis. Results showed high levels of burden among caregivers of PWA. A significant inverse correlation was found between caregiver burden and the total MAST score ($r_S = -0.561$; $p = 0.016$), as well as moderate to strong correlations with specific MAST subtests. No significant relationship was found between caregiver burden and functionality; however, a significant positive correlation was observed between IADL scores and total MAST scores. In conclusion, this study reveals considerable levels of burden among caregivers of PWA after ABI, primarily associated with the severity of linguistic-communicative impairment rather than overall functionality.

Keywords:
Aphasia; Caregiver Burden; Health Care; Acquired Brain Injury; Speech and Language Therapy; Functional Dependence

Funcionalidad y características comunicativas de personas con afasia tras lesión cerebral adquirida y su relación con la sobrecarga de cuidadores

RESUMEN

La afasia es un diagnóstico frecuente en personas con lesión cerebral adquirida (LCA), lo que implica pérdida de independencia y una gran carga para sus cuidadores. Este estudio analizó la funcionalidad y características lingüístico-comunicativas de personas con afasia (PcA), y su relación con la sobrecarga del cuidador. Se realizó un estudio cuantitativo, descriptivo-correlacional y transversal, con 18 adultos diagnosticados con afasia tras LCA, atendidos en el Hospital Regional de Talca en el año 2023, junto a sus cuidadores. El rendimiento lingüístico se evaluó con el Mississippi Aphasia Screening Test en español (MASTsp), la funcionalidad con la Escala de Lawton y Brody para actividades instrumentales de la vida diaria (AIVD), y la sobrecarga del cuidador con la Escala de Zarit. Los datos se analizaron mediante estadísticos descriptivos y análisis de correlación. Los resultados mostraron altos niveles de sobrecarga en los cuidadores de PcA. Se halló una correlación inversa significativa entre la sobrecarga del cuidador y el puntaje total del MAST ($r_S = -0.561$; $p = 0.016$), así como correlaciones moderadas y fuertes con subpruebas específicas del MAST. No se encontró relación significativa entre la sobrecarga y el nivel de funcionalidad, pero sí una correlación positiva y significativa entre las AIVD y el puntaje total del MAST. En conclusión, el estudio evidencia una importante sobrecarga en los cuidadores de PcA tras LCA, asociada principalmente al nivel de afectación lingüístico-comunicativa y no tanto a la funcionalidad general.

Palabras clave:
Afasia; Carga del Cuidador; Cuidado de la Salud; Lesión Cerebral Adquirida; Fonoaudiología; Dependencia Funcional

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INTRODUCTION

Acquired brain injury (ABI) is one of the leading causes of death and disability in adults (Jackson et al., 2020; Jiménez et al., 2010; Li et al., 2017). In Chile, ABI ranks as the second leading cause of mortality, accounting for 29,542 hospital discharges annually (Chilean Ministry of Health [MINSAL], 2022). For those who survive, ABI often results in the loss of brain functions, leading to motor, sensory, cognitive, and/or communicative deficits, as well as emotional, behavioral, and social disturbances (Andelic et al., 2018).

Aphasia is among the most common diagnoses in patients with ABI-related sequelae (González Mc et al., 2017; Rodríguez-Mauricio et al., 2023). This disorder affects both language comprehension and production, with anomia being its core symptom (Ambiado Lillo, 2019). Aphasic syndromes can be further categorized into fluent and nonfluent types, depending on the characteristics of verbal output. Nonfluent aphasias are typically marked by more severely disrupted speech flow compared to fluent types (Goodglass & Kaplan, 1996).

Evidence indicates that post-ABI aphasia is associated with both cognitive and social difficulties (Messinis et al., 2019), limiting the participation of affected individuals. In addition to these difficulties, post-ABI aphasia has been linked to other complications, such as anxiety, anosognosia, and irritability, particularly among patients with limited awareness of their deficits (Sanz Cortés et al., 2017). For instance, one study found that people with nonfluent aphasia frequently experience depression due to the effort required to communicate their needs (Chapey, 2001). Several studies emphasize the direct relationship between communicative deficits and the onset of depression and anxiety in patients with aphasia, highlighting the need for evidence-based clinical strategies to detect, prevent, and manage these conditions (Hackett & Pickles, 2014; Shehata et al., 2015).

Post-ABI aphasia is also associated with reduced functional recovery, increased mortality, and a lower likelihood of returning to work compared to persons without aphasia (Hachioui et al., 2013). Thus, aphasia has become a predictor of dependency one year after injury and of mortality at ten years post-injury (Tsouli et al., 2009), with emotional, personal, familial, and occupational repercussions for both the affected individuals and their surrounding networks (González Mc et al., 2017).

The evidence indicates that caregiving responsibilities for individuals with functional dependence are typically assumed by family members (Roslin et al., 2023). This is often a close relative (Breinbauer et al., 2009), most commonly children (38.3%), spouses, or partners (33%) (*Servicio Nacional de la Discapacidad* [SENADIS], 2023). The caregiving role is frequently unpaid (Reinhard et al., 2015) and tends to generate significant strain on the immediate support network (Castellanos-Pinedo et al., 2012). Specifically, caregiving can negatively impact caregivers' physical and mental health, finances, and social interactions—a phenomenon known as "caregiver burden" (Prieto-Miranda et al., 2015). This burden manifests as a multidimensional response, encompassing physical, psychological, and emotional problems, as well as social stress and financial pressures directly related to the caregiving experience (Kasuya et al., 2000). Those caring for people with severe cognitive or physical impairments are at the highest risk of being impacted (Riffin et al., 2017).

According to the Third National Disability Study (ENDISC for its acronym in Spanish, *Estudio Nacional de la Discapacidad*) (SENADIS, 2023), 9.8% of the adult population in Chile presents some degree of dependence and requires assistance to perform activities of daily living. Similarly, the National Disability and Dependence Survey (*Encuesta Nacional de Discapacidad y Dependencia*, or ENDIDE) (Chilean Ministry of Family and Social Development [MDSF], 2022) reports that 3.6% of the adult population has moderate dependence, and 2.7% has severe dependence. These data illustrate the magnitude of the phenomenon and underscore the need to recognize and address the circumstances of both dependent people and those who assume caregiving roles.

In the context of ABI, evidence suggests that families of individuals affected by this condition undergo profound personal and social changes, which significantly impact their quality of life (Shindo & Tadaka, 2020). Laratta et al. (2020) emphasize that the progression time of ABI is a critical factor influencing the well-being of spousal caregivers and their families, even in cases of mild and moderate injury. In addition to assisting with basic and instrumental activities of daily living, caregivers frequently assume responsibilities related to medical care (Bookman & Harrington, 2007). Studies indicate that engaging in healthcare-related tasks, including nursing duties, co-therapeutic roles, and logistical management of healthcare services, can have adverse effects on caregivers, leading to increased burden, restricted participation in daily activities, deteriorating health, and reduced occupational productivity (Riffin et al., 2017).

A study involving 1,739 family members and unpaid caregivers of older adults with disabilities found that those engaged in healthcare-related caregiving were five times more likely to report restrictions in meaningful personal activities and three times more likely to report reduced work productivity compared to those not involved in such tasks (Wolff et al., 2016). Consequently, the sustained care demands associated with ABI frequently result in elevated levels of caregiver stress, limited coping resources, and compromised physical and mental health (Walker et al., 2020).

Regarding aphasia, Masuku et al. (2018) highlight that its presence among patients with ABI is a contextual factor that significantly contributes to the emotional distress of caregivers and family members. Similarly, a study conducted in Korea identified aphasia as a comorbidity strongly associated with greater caregiver burden in the context of people with ABI sequelae (Kwon et al., 2023). The authors note that difficulties in communicating with a person with aphasia create considerable psychological strain, particularly for caregivers lacking adequate communication skills and coping strategies. Nonetheless, research specifically examining the relationship between aphasia and caregiver burden remains limited.

Furthermore, caregiver burden has been recognized as a critical factor influencing rehabilitation outcomes in non-clinical settings and should, therefore, be systematically addressed by healthcare professionals (Martín-Carrasco et al., 2013). A review by Karnatz et al. (2021), focusing on caregivers of patients with frontotemporal lobar degeneration, revealed that the caregivers with dependent children, who were predominantly young, found behavioral disturbances to be the most challenging aspect of care. These caregivers emphasized the importance of increasing public and professional awareness of the challenges associated with caregiving.

Several instruments are available to assess caregiver burden, including the Caregiver Self-Assessment Questionnaire *How Are You?* (Epstein-Lubow et al., 2010), the Modified Caregiver Strain Index (Onega, 2018), and the Caregiving Self-Efficacy Scale (Steffen et al., 2002). Among these, the Zarit Burden Interview remains the most widely utilized instrument (Cejalvo et al., 2024). Initially developed for caregivers of individuals with dementia, the scale has since been applied to caregivers of people with various health conditions (Nagata et al., 2018). Comprising 22 items, total scores range from 22 to 110, allowing for classification into “no burden," “mild burden," or “severe burden” (Ankri et al., 2005). In Chile, both the full and abbreviated versions of this instrument were validated in 2009 (Breinbauer et al., 2009).

In summary, while caregiver burden associated with high-dependency care has been extensively studied, the specific impact of linguistic impairments in people with aphasia on caregiver burden remains underexplored. Although a substantial body of research exists on caregiver burden in the context of dementia, which often involves language impairments, the progressive nature of dementia differs from the abrupt onset of aphasia following ABI. Therefore, the objective of this study is to analyze the functionality and linguistic-communicative characteristics of people with aphasia (PwA) and their relationship to caregiver burden.

METHOD

This is a quantitative, observational, descriptive-correlational, and cross-sectional study (Cvetković et al., 2021).

Participants

The study population consisted of adults with aphasia secondary to acquired brain injury (ABI) who received outpatient care at the Physical Medicine and Rehabilitation Unit of Hospital Regional de Talca in 2023, along with their informal caregivers (those providing unpaid support).

The inclusion criteria were: having sustained a single ABI; a diagnosis of aphasia resulting from ABI; a post-injury progression time of less than one year; attendance at speech-language evaluations and/or therapy in the Physical Medicine and Rehabilitation Service of the Hospital Regional de Talca (HRT) following the ABI; and being over 18 years of age. Exclusion criteria included prior suspected or diagnosed dementia; a history of depression or substance dependence (alcohol and/or drugs); sensory impairments (hearing or vision) that could interfere with linguistic performance; and the absence of a caregiver.

Patient recruitment was conducted using purposive and convenience sampling to estimate mean performance measures. The sample included 100% of the patients attending speech-language therapy with a diagnosis of aphasia at the time of data collection.

A total of 18 individuals with aphasia and their caregivers participated in the study. Table 1 presents the distribution of participants by age, gender, educational level, diagnosis, and time since injury.

Table 1. Frequency table for sample characteristics.

		n	%
Age	Between 20 and 40 years	1	5.56%
	Between 40 and 60 years	2	11.11%
	Between 60 and 80 years	13	72.22%
	80 years or older	2	11.11%
Gender	Woman	4	22.22%
	Man	14	77.78%
Educational Level	Unschooled	1	5.56%
	Incomplete Elementary Education	5	27.78%
	Complete Elementary Education	2	11.11%
	Incomplete High School Education	4	22.22%
	Complete High School Education	4	22.22%
	Technical-Vocational Education	2	11.11%
Diagnosis	CVA	16	88.89%
	Brain Tumor	2	11.11%
Progression Time	Under 3 months	7	38.89%
	Between 3 and 6 months	8	44.44%
	Between 6 and 9 months	3	16.67%

CVA = Cerebrovascular Accident

The study was approved by the Scientific Ethics Committee of Hospital San Juan de Dios under protocol number 201 (CEC-HSJD). All participants provided written informed consent. For participants who were unable to read the document, the consent form was read aloud using simple, clear, and accessible language. In most cases, this process was conducted in the presence of the caregivers; however, in some instances, the information was provided separately to the patient and the caregiver. In cases where PwA had comprehension difficulties, the consent process was always conducted in the presence of the caregiver, and verbal information was supplemented with visual aids, such as images and gestures. Pictograms, which were already familiar to participants and had been previously used in communication aids, were used to support comprehension. The distribution of diagnoses is presented in Table 2.

Table 2. Speech and Language Diagnoses

Diagnosis	*n*	%
Nonfluent Mixed Aphasia	3	16.67
Broca's Aphasia	2	11.11
Wernicke's Aphasia	4	22.22
Conduction Aphasia	3	16.67
Anomic Aphasia	6	33.33

Participants' identifying information was anonymized by assigning codes for data tabulation. All data were stored on two separate external hard drives, both protected with passwords accessible only to the principal researcher. The data will be retained for five years before being permanently deleted.

The individual assessment results were reported to the Physical Medicine and Rehabilitation Service and the administration of the HRT. In cases where caregiver burden was detected at a level that potentially affected the health of either the patient or the caregiver, referrals were made to mental health professionals within the hospital through an internal consultation system. Appointment dates and times were scheduled and provided to the patient or caregiver, with rescheduling arranged for those unable to attend. Additionally, following the evaluation, individualized recommendations based on the findings were provided to both patients and caregivers.

Instruments

The Mississippi Aphasia Screening Test, Spanish version (MASTsp) (Romero et al., 2012) was used to assess the linguistic level and diagnose aphasia in PwA. In addition, a series of non-standardized tasks were administered to assess descriptive discourse, automatic and copied writing, and word reading, following diagnostic criteria proposed by González & Toledo (2007). These tasks were selected based on their ability to yield clinically relevant information while optimizing assessment time, given the 30-minute session limit established by the Physical Medicine and Rehabilitation Service.

The Lawton and Brody Scale (Trigás-Ferrín et al., 2011) was used to assess Instrumental activities of daily living (IADL). Caregiver burden was evaluated using the Zarit Burden Interview (Ankri et al., 2005).

Procedures

An initial interview was conducted to collect sociodemographic information on both the PwA and their caregiver, including personal, clinical, and psychosocial background.

Subsequently, a comprehensive speech-language evaluation was performed using the MAST and the selected non-standardized tasks to assess linguistic abilities.

Instrumental activities of daily living were assessed using the Lawton and Brody Scale, which was administered to each patient and/or their caregiver.

Finally, caregiver burden was assessed using the Zarit Burden Interview, administered during a private interview with each caregiver.

Data Analysis

Data were entered using Microsoft Excel and analyzed using SPSS version 19.0. Quantitative variables were summarized using measures of central tendency and dispersion, with a 95% confidence interval (CI). Qualitative variables were reported as frequencies or proportions and displayed using grouped charts. The normality of quantitative variables was assessed using the Shapiro-Wilk test, considering the sample size and a significance threshold of $p > 0.05$ (Ghasemi & Zahediasl, 2012). Correlational analyses were subsequently performed using either Pearson's or Spearman's correlation coefficients, depending on the distribution of the data.

RESULTS

Descriptive statistics were used for both the Zarit Burden Interview and the MAST. Table 3 summarizes the results of this analysis. In addition, frequency tables were created to examine the score distribution on the Zarit Burden Interview, the Lawton and Brody Instrumental Activities of Daily Living Scale, and the MAST (Table 4).

Table 3. Descriptive Statistics.

		M	Md	SD	Min	Max
Zarit	Total Score	56.389	-	14.44	36	89
MAST	Recognition	-	10.000	2.19	2	10
	Writing	-	0.000	2.54	0	10
	Naming	-	6.000	3.95	0	10
	Automatic Speech	4.88	-	3.42	0	10
	Repetition	-	6.500	3.77	0	10
	Yes/No Accuracy	-	17.000	7.03	0	20
	Verbal Instructions	-	9.000	3.68	0	10
	Reading Instructions	-	4.000	4.43	0	10
	Verbal Fluency	-	5.000	3.03	0	10
	Total Score	-	65.000	27.6	6	88

MAST = Mississippi Aphasia Screening Test; M = Mean; Md = Median; SD = Standard Deviation; Min = Minimum Value; Max = Maximum Value.

Regarding the participants' linguistic-communicative profiles, the highest performance was observed on the Recognition subtest, where 83.33% of participants (n = 15) achieved the maximum score, while only one participant (5.56%) obtained the minimum. In contrast, the participants exhibited a lower performance on the Writing, Reading Instructions, and Verbal Fluency subtests. On the Writing subtest, 88.23% (n = 15) scored 3 points or lower. In the Reading Instructions subtest, 58.82% of participants (n = 10) scored 4 or fewer points. On the Verbal Fluency subtest, 44.44% of participants (n = 8) obtained the minimum score, while 50.00% (n = 8) clustered at 5 points.

When estimating functional independence levels (see Table 4), only one participant (5.56%) achieved the maximum score on the Lawton and Brody Scale, indicating complete independence in instrumental activities of daily living. In contrast, three participants (16.67%) obtained the minimum score, indicating maximum dependence. The majority of scores (n = 11; 61.13%) fell within the 0 to 4-point range.

Table 4. Frequency table.

		n	%
Zarit	No Burden	4	22.22%
	Mild Burden	6	33.33%
	Severe Burden	8	44.44%
IADLs	0 points	3	16.67%
	1 point	3	16.67%
	2 points	1	5.56%
	4 points	4	22.20%
	5 points	3	16.67%
	6 points	2	11.11%
	7 points	1	5.56%
	8 points	1	5.56%
MAST	Under 90 points	18	100.00%
	Over 90 points	0	0.00%

IADLs = Instrumental Activities of Daily Living; MAST = Mississippi Aphasia Screening Test.

When analyzing the cases individually, it was observed that of the seven participants who scored between 0 and 2 points on the IADL scale (indicating a high level of dependence), 85.71% were male, and the same percentage were over 60 years of age. Similarly, seven PwA displayed a moderate level of dependence (scores between 4 and 5 points), of whom 85.71% were also male, all over 60 years old. Conversely, only four participants achieved higher levels of independence (scores between 6 and 8 points);

among these, 75% were under 60 years old, with an even gender distribution (50% men and 50% women).

Regarding caregiver burden, the mean Zarit Burden Interview score was 56.389 (SD = 14.439). The fact that the average score exceeded the clinical cutoff of 56 points indicates a substantial proportion of caregivers with high burden levels overall. No participant obtained either the minimum score (22) or the maximum score (110). As shown in Table 4, the majority of caregivers (n = 14; 77.77%) exhibited burden levels ranging from mild to severe.

Normality was analyzed using the Shapiro-Wilk test to assess the distribution of the study's main variables. Additionally, skewness and kurtosis values were calculated for each variable. Table 5 shows the results.

Table 5. Normality Tests.

		Normality Tests					
		Skewness	SE	Kurtosis	SE	S-W	*P*
Zarit	Total Score	0.96	0.536	0.649	1.038	0.920	0.131
IADLs	Total Score	-0.01	0.536	-1.180	1.038	0.922	0.142
MAST	Recognition	-2.567	0.536	6.363	1.038	0.475	0.000
	Writing	2.401	0.550	7.084	1.063	0.676	0.000
	Naming	-0.003	0.536	-1.793	1.038	0.816	0.003
	Automatic Speech	-0.071	0.536	-1.370	1.038	0.908	0.079
	Repetition	-0.324	0.536	-1.560	1.038	0.868	0.016
	Yes/No Accuracy	-0.632	0.536	-1.313	1.038	0.826	0.004
	Verbal Instructions	-0.599	0.536	-1.494	1.038	0.790	0.001
	Reading instructions	0.212	0.550	-2.002	1.063	0.754	0.000
	Verbal Fluency	0.408	0.536	-0.513	1.038	0.752	0.000
	Total Score	-0.233	0.536	-1.614	1.038	0.885	0.032

IADLs = Instrumental Activities of Daily Living; MAST=Mississippi Aphasia Screening Test; SE=Standard Error; S-W= Shapiro-Wilk Statistic; p=Significance Level

The normality tests yielded mixed results. On the one hand, a normal distribution was observed for the Zarit Burden Interview scores (Shapiro-Wilk = 0.920; $p = 0.131$) and the Instrumental Activities of Daily Living scores (Shapiro-Wilk = 0.922; $p = 0.142$). On the other hand, most MAST subtest scores showed non-normal distributions ($p < 0.05$), except for the Automatic Speech subtest (Shapiro-Wilk = 0.908; $p = 0.079$).

Based on these mixed results, bivariate Shapiro-Wilk tests were subsequently conducted to determine the most appropriate statistical approach (parametric or non-parametric) for each correlational analysis. Pearson or Spearman correlation coefficients were then calculated accordingly. The results are shown in Table 6.

Table 6. Bivariate normality tests and linear correlation analysis.

		Bivariate Normality Tests		Linear Correlation Analysis			
				Pearson		Spearman	
		S-W	*p*	*r*	*p*	r_S	*p*
Zarit	IADL	0.891	0.040	—	—	-0.435	0.071
	MAST	0.836	0.005	—	—	-0.561	0.016*
	Recognition	0.477	0.000	—	—	-0.115	0.648
	Writing	0.719	0.000	—	—	-0.530	0.029*
	Naming	0.838	0.006	—	—	-0.538	0.021*
	Automatic Speech	0.850	0.008	—	—	-0.383	0.116
	Repetition	0.892	0.042	—	—	-0.335	0.174
	Yes/No Accuracy	0.841	0.006	—	—	-0.430	0.075
	Verbal Instructions	0.839	0.006	—	—	-0.293	0.238
	Reading instructions	0.873	0.025	—	—	-0.707	0.002*
	Verbal Fluency	0.888	0.036	—	—	-0.260	0.297
IADL	MAST	0.944	0.344	0.735	0.001*	—	—
	Recognition	0.519	0.000	—	—	0.365	0.137
	Writing	0.735	0.000	—	—	0.476	0.053
	Naming	0.930	0.196	0.706	0.001*	—	—
	Automatic Speech	0.958	0.569	0.707	0.001*	—	—
	Repetition	0.963	0.655	0.395	0.105	—	—
	Yes/No Accuracy	0.978	0.923	0.715	0.001*	—	—
	Verbal Instructions	0.987	0.994	0.743	0.001*	—	—
	Reading instructions	0.892	0.050	0.583	0.014	—	—
	Verbal Fluency	0.938	0.263	0.475	0.047	—	—

IADLs = Instrumental Activities of Daily Living; MAST=Mississippi Aphasia Screening Test; SE=Standard Error; S-W= Shapiro-Wilk Statistic; p=Significance Level; r=Pearson's Correlation Coefficient; rS=Spearman's Correlation Coefficient. *p<0.05; **p<0.01;***p<0.001

An inverse and statistically significant correlation was observed between caregiver burden and the total MAST score (rS = –0.561, *p* = .016). When examining the relationship between burden and MAST subtests, moderate correlations were found for the Writing (rS = –0.530, p = .029) and Naming (rS = –0.538, p = .021) subtests, with a robust correlation observed for the Reading Instructions subtest (rS = –0.707, p = .002). No relationship was found between caregiver burden and level of functionality.

Conversely, a positive and statistically significant correlation was found between IADLs and the total MAST score (r = 0.735, p = 0.000). Regarding functionality and MAST subtests, moderate correlations were observed for Verbal Fluency (r = 0.475, p = .047) and Reading Instructions (r = 0.583, p = .014), with strong correlations in Naming (r = 0.706, p = .001), Automatic Speech (r = 0.707, p = .001), Yes/No Accuracy (r = 0.715, p=0.000), and Verbal Instructions (r = 0.743, p=0.000).

Regarding aphasia type and caregiver burden, all caregivers of PwA with comprehension impairments reported burden levels ranging from mild to severe. Among four individuals diagnosed with Wernicke's aphasia, one caregiver experienced mild burden (52 points), while the other three reported severe burden levels (60, 61, and 70 points). For caregivers of PwA with mixed nonfluent aphasia, one reported mild burden (50 points), and two reported severe burden (56 and 70 points).

In contrast, the Zarit Burden Scale results for caregivers of PwA with expressive deficits but preserved comprehension varied widely, ranging from no burden to severe burden. Among caregivers of Broca's aphasia patients, one reported no burden (36 points), while another experienced mild burden (53 points). For caregivers of patients with conduction aphasia, one reported no burden (38 points), another mild burden (52 points), and a third severe burden (85 points). Lastly, among caregivers of people with anomic aphasia, two reported no burden (44 and 45 points), two reported mild burden (47 and 50 points), and two reported severe burden (57 and 89 points).

Concerning functionality in IADLs, individuals with mixed nonfluent aphasia showed the highest levels of dependence, scoring between 0 and 1 point on the Lawton and Brody scale. Wernicke's aphasia patients scored between 0 and 4 points, while those with conduction aphasia scored between 2 and 5 points. The highest levels of independence were observed in participants with anomic and Broca's aphasia, scoring between 4 and 8 points, and between 6 and 7 points, respectively.

DISCUSSION

Research on the impact of aphasia caused by ABI has primarily focused on the deficits experienced by the affected individuals (Messinis et al., 2019). However, given the fundamental companionship role that caregivers of PwA fulfill and the high demands involved, it is crucial to examine caregiver burden and the factors influencing it. Consequently, this study aimed to identify the level of burden experienced by caregivers of PwA and to determine whether the linguistic and functional characteristics of the care recipients affected caregiver burden.

The results indicate that caregivers experience high levels of burden. These findings align with prior evidence presented by Karpa et al. (2020), who analyzed the lived experiences of family units. Family members reported high levels of burden, noting that the primary negative consequences included elevated stress, impaired functioning, and a lack of resources. Nevertheless, they also highlighted strengths developed to overcome these challenges, such as resilience and adaptability. Similarly, Stiekema et al. (2020) reported that the most frequently mentioned difficulties by families were related to healthcare services, particularly their interactions with healthcare professionals. Families emphasized perceived restrictions in their participation in the therapeutic process, as well as a lack of understanding and active listening from healthcare staff.

Collectively, these results highlight the importance of understanding the characteristics and needs of PwA and their caregivers to provide appropriate and relevant support. In this regard, Roslin et al. (2023) emphasize the importance of developing support programs for caregivers before they take on this role. Their proposal involves planning the discharge of patients post-ABI by implementing programs that train and support family caregivers. The authors suggest that such programs enhance caregivers' confidence and preparedness, thereby positively impacting their health status and quality of life.

Furthermore, the results of this study indicate that all participating caregivers were family members of the patients. The majority were women, primarily a partner or spouse, followed by daughters and sons, who reported high levels of overall burden. This caregiver profile aligns with findings from studies carried out both in Chile and internationally, which indicate that caregiving responsibilities are predominantly assumed by women aged between 35 and 64 years (Espín Andrade, 2008; Jofré & Mendoza, 2005; MDSF, 2022). Regarding partners, a cross-sectional study conducted in Italy (Laratta et al., 2020) reports the negative impact of caregiving on partners, especially during the chronic phase of caregiving.

Regarding the relationship between linguistic profile and caregiver burden, an inverse and statistically significant correlation was observed between the total MAST score and the caregiver burden index. This finding suggests that caregivers of individuals with poorer linguistic performance exhibit higher levels of burden in the present study. It is noteworthy that, although most caregivers in this study experienced severe burden levels, those reporting lower burden were caregivers of PwA with MAST scores above 67 points and good performance on oral language comprehension tasks. While no previous studies have specifically examined caregiver burden in relation to linguistic difficulties in PwA, this finding is consistent with research involving other types of disabilities, which suggests that the degree of patient disability is directly related to caregiver burden (Camak, 2015; Zhu & Jiang, 2018).

Additionally, a strong correlation was observed between written instruction comprehension and caregiver burden, as well as moderate correlations between impairment in writing and naming abilities and caregiver burden. This may be explained by the fact that difficulties at this level frequently hinder the reintegration of PwA into the workforce (Greig et al., 2008) and reduce their capacity to travel independently and attend scheduled appointments, among other activities (Dalemans et al., 2010). Consequently, these limitations could result in increased caregiver burden, both financially and in terms of time management.

In contrast, no correlation was observed between IADL performance and caregiver burden. This finding differs from studies indicating that caregiver burden is associated with the care recipient's level of dependency (Corbalán Carrillo et al., 2013; Souza et al., 2017). This discrepancy may be related to the characteristics of the sample, as the study included a small number of participants with diverse communicative profiles, ages, and etiologies. Additionally, it may be linked to the relatively recent caregiving experience among participants, with most of them having provided care for less than six months. In this regard, research by Bermejo-Toro et al. (2020) suggests that the time elapsed since the injury is inversely related to positive aspects of caregiving. Finally, caregivers in the sample also presented heterogeneous characteristics such as gender, age, socioeconomic status, marital status, and education level—all factors that can influence perceptions of burden (Zepeda-Álvarez et al., 2019).

Notably, a positive correlation was observed between total MAST scores and IADL scores. This suggests that higher linguistic performance is associated with greater independence in instrumental activities of daily living and vice versa. This result aligns with previous evidence indicating that aphasia is associated with reduced work capacity and poorer functional recovery (Kadojić et al., 2012). Furthermore, MAST scores correlated with both IADL outcomes and caregiver burden, suggesting that linguistic abilities impact both independence in IADLs and caregivers' perceptions of burden. However, given the absence of a direct correlation between caregiver burden and IADLs, further research is necessary to explore possible indirect relationships among these variables.

A more detailed examination of MAST subtests revealed that expressive language tasks—naming and automatic speech—strongly correlated with IADL scores. At the comprehension level, IADLs demonstrated a strong correlation with accuracy in yes/no tasks and instruction comprehension. Moderate correlations were also observed between IADLs and verbal fluency, as well as written instruction comprehension. These findings suggest that the autonomy and independence–therefore, the participation–of PwA are influenced by limitations in interpersonal interaction (Ketterson et al., 2008). Such limitations can generate frustration both for the individual and their communication partner (Mazaux et al., 2013).

In summary, the results of this study suggest a high level of burden among caregivers of PwA. They further highlight a relationship between the linguistic-communicative characteristics of persons with aphasia and caregiver burden. These findings provide an invitation to expand therapeutic perspectives by considering aphasia severity when developing care plans. Moreover, they reaffirm the importance of actively involving caregivers and their families in the therapeutic decision-making process. In this regard, Tezel et al. (2021) emphasize that reducing caregiver burden requires long-term professional follow-up for both PwA and their caregivers. Therefore, it is essential to develop programs that include continuous monitoring and support for caregivers after discharge.

According to Kwon et al. (2023), the follow-up care for PwA and their caregivers requires an interdisciplinary team that addresses the various factors contributing to caregiver burden, including communicative difficulties that affect the quality of personal relationships between PWAs and their caregivers. In this context, incorporating the role of the caregiver and their level of burden into the assessment and rehabilitation process broadens the scope of the speech-language therapist's practice. Consequently, the professional can serve as a key agent in identifying and preventing caregiver burden, as well as providing strategies that facilitate effective communication between caregivers and PwA. It is also essential to consistently provide caregivers with clear, timely, and ongoing information regarding the condition of their family member, as well as their diagnosis, prognosis, and therapeutic objectives, as this can help reduce the uncertainty and stress inherent to the process.

Among the limitations of this research, it is essential to note the small sample size, which may have limited the precision of the results and the ability to detect more complex patterns. Therefore, it is not possible to assert that the findings of this study are representative of the broader population of PWA with post-ABI sequelae. Moreover, the study was conducted in a single healthcare facility, whose care practices and protocols may differ from those of other institutions. Hence, a larger multicenter sample would allow for stratification and minimize potential confounding variables, thereby enhancing the validity of the results.

Furthermore, it is worth noting that comorbidities in both PwA and caregivers were not explored in depth, which could have influenced perceptions of burden. For example, factors such as reduced patient mobility or the presence of mental health disorders in caregivers may modulate caregiver burden. Likewise, contextual variables such as access to support networks or the caregiver's economic situation could also affect burden levels. The omission of these complementary variables limits the comprehensive understanding of factors influencing caregiver burden. Including these dimensions in future research could provide a more holistic view of the phenomenon.

Thus, the scope of this study and its conclusions are limited to the present sample, and the results should be interpreted as indicative trends warranting further investigation. Future studies are recommended to employ larger sample sizes, allowing for the stratification of the study group and thereby broadening the scope of the findings. Moreover, developing a more detailed profile of caregiver characteristics may yield relevant insights into protective or risk factors associated with higher levels of burden among caregivers of PwA.

CONCLUSION

The results of this study reveal significant levels of burden among caregivers of persons with aphasia following acquired brain injury. Although the sample was heterogeneous in terms of aphasia type, age, etiology of the ABI, and socioeconomic factors, a correlation was observed between the degree of linguistic-communicative impairment in PwA and their functional status. Additionally, higher levels of caregiver burden were associated with more severe aphasia profiles. These findings underscore the need for further research on this phenomenon with larger and more diverse samples, as well as greater acknowledgment of the role and burden that caregivers of individuals with communication difficulties experience.

Considering caregiving statistics reported by the National Disability and Dependency Survey in Chile (MDSF, 2022), which indicates that 58.6% of adults with severe dependency have a caregiver, the results of this study highlight the need to broaden care approaches for PwA. Accordingly, the role of the closest healthcare network and the environment of PwA is crucial, as is the inclusion of measures aimed at supporting caregiving responsibilities.

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