https://doi.org/10.23925/2176-2724.2021v33i3p481-489

Supplementary and alternative communication in the elderly population and its relationship with activities of daily living: a systematic review

Comunicação suplementar e alternativa na população idosa e sua relação com as atividades de vida diária: uma revisão sistemática

Comunicación complementaria y alternativa en la población anciana y su relación con las actividades de la vida diaria: una revisión sistemática

*Carolina Avance Assef**
*Danielle dos Santos Cutrim Garros**
*Jáima Pinheiro de Oliveira***
*Aila Narene Dahwache Criado Rocha**

Resumo

Introdução: A população brasileira vem mantendo tendência de envelhecimento, resultando em alterações nos aspectos físicos e cognitivos do indivíduo. Algumas dessas alterações podem diminuir a perda da oralidade e levar a dificuldade de interação do indivíduo com o coletivo. **Objetivo:** Buscamos identificar de que maneira a Comunicação Suplementar e Alternativa (CSA) vem sendo relacionada com o público idoso em produções científicas e como objetivo específico, buscou-se relações entre o uso de recursos de CSA e as atividades de vida diária (AVD) nesta população. **Método:** O levantamento de artigos foi realizado em quatro bases de dados (Scielo, BDTD, BIREME e PubMed). Foram incluídos

* Universidade Estadual Paulista Júlio de Mesquita Filho. Faculdade de Filosofia e Ciências, São Paulo, SP, Brazil.
** Universidade Estadual Paulista Júlio de Mesquita Filho. Faculdade de Educação, São Paulo, SP, Brazil.

Authors'contributions:
CAA: study design; methodology; data collect; outline of the article.
DSCG: critical review; guidance.
JPO, ANDCR: critical review.

Correspondence email address: Carolina Avance Assef - carolinaassef@yahoo.com.br
Received: 14/10/2020
Accepted: 16/04/2021

somente estudos que apresentavam intervenções com o uso de CSA que envolvessem a população idosa e as AVD. A qualidade metodológica das investigações foi avaliada por meio do *check-list* PRISMA, sendo registrado no PROSPERO-International Prospective Register of Systematic Reviews e para análise dos dados, foi utilizado o *software* Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires (IRaMuTeQ®). **Resultados:** Ao final das buscas foram obtidos um total de três artigos para compor o *corpus* de análise da revisão e todos foram avaliados com alta qualidade metodológica. As intervenções utilizadas nos estudos foram: confecções de álbuns e pranchas de CSA e livros de memória. **Conclusão:** Ao final da revisão ficou evidenciado que a CSA teve um impacto significativo para diferentes sujeitos, com diferentes intervenções que compuseram os estudos aqui apresentados.

Palavras-chave: Idoso; Saúde Suplementar; Auxiliares de Comunicação para Pessoas com Deficiência e Atividades Cotidianas.

Abstract

Introduction: The Brazilian population has been maintaining an aging trend, resulting in changes in the individual's physical and cognitive aspects. Some of these changes can decrease the loss of orality and lead to the difficulty of the individual's interaction with the collective. **Objective:** We seek to identify how Supplementary and Alternative Communication (CSA) has been related to the elderly public in scientific productions and as a specific objective, we sought relationships between the use of CSA resources and activities of daily living (ADL) in this population. **Method:** The survey of articles was carried out in four databases (SciELO, BDTD, BIREME and PubMed). Only studies that included interventions with the use of CSA that included the elderly population and the ADL were included. The methodological quality of the investigations was assessed using the PRISMA check-list, being registered in the PROSPERO-International Prospective Register of Systematic Reviews and for data analysis, the software Interface de R pour les Multidimensionnelles de Textes et de Questionnaires (IRaMuTeQ®). **Results:** At the end of the searches, a total of three articles were obtained to compose the *corpus* of analysis of the review and all were evaluated with high methodological quality. The interventions used in the studies were: confection of albums and boards of CSA and memory books. **Conclusion:** At the end of the review, it was evidenced that the CSA had a significant impact for different subjects, with different interventions that comprised the studies presented here.

Keywords: Elderly; Supplemental Health; Communication Aids for Disabled and Activities of Daily Living.

Resumen

Introducción: La población brasileña ha venido manteniendo una tendencia de envejecimiento, resultando en cambios en los aspectos físicos y cognitivos del individuo. Algunos de estos cambios pueden disminuir la pérdida de oralidad y conducir a la dificultad de la interacción del individuo con el colectivo. **Objetivo:** Buscamos identificar cómo la Comunicación Suplementaria y Alternativa (CSA) se ha relacionado con el público anciano en producciones científicas y como objetivo específico, buscamos relaciones entre el uso de los recursos de CSA y las actividades de la vida diaria (ADL) en esta población. **Método:** La encuesta de artículos se realizó en cuatro bases de datos (SciELO, BDTD, BIREME y PubMed). Solo se incluyeron los estudios que incluyeron intervenciones con el uso de CSA que incluyeron a la población anciana y las AVD. La calidad metodológica de las investigaciones se evaluó mediante el *check-list* PRISMA, registrado en el PROSPERO-Registro Internacional Prospectivo de Revisiones Sistemáticas y para el análisis de datos, el *software* Interface de R pour les Multidimensionnelles de Textes et de Questionnaires (IRaMuTeQ®). **Resultados:** Al final de las búsquedas se obtuvo un total de tres artículos para componer el *corpus* de análisis de la revisión y todos fueron evaluados con alta calidad metodológica. Las intervenciones utilizadas en los estudios fueron: confección de álbumes y tableros de CSA y libros de memoria. **Conclusión:** Al final de la revisión, se evidenció que el CSA tuvo un impacto significativo para diferentes sujetos, con diferentes intervenciones que componían los estudios aquí presentados.

Palabras clave: Anciano; Salud Complementaria; Equipos de Comunicación para Personas con Discapacidad e Actividades Cotidianas.

Introduction

The aging of Brazilian population has been growing more since 2012, maintaining this trend in recent years with a gain of 4.8 million of elderly people, corresponding to a growth of 18% of this age group, becoming increasingly representative in the country and overcoming the 30.2 million mark in 2017.[1]

The World Health Organization (WHO) considers aging as:

> A sequential, individual, cumulative, irreversible, universal, non-pathological process of a mature organism deterioration, proper to all members of a species, in order the time makes it less able to cope with the stress of the environment.[2]

Thus, the aging process is caused by progressive changes produced in the body, in which the body undergoes physiological and biological actions. Thus, natural changes are observed in the physical and cognitive aspects of the individual.[3] In this way, some changes resulting from this process, may decrease or promote sensory loss such as, reduction or loss of hearing, orality, among others, and thus, end up resulting in difficulties in the interaction between individuals and leading to likely social exclusion.[4]

In this context, it is known that communication allows a link between individuals and acts as a guiding thread that allows human beings to express their desires, feelings and dissatisfactions. However, if communication is somehow impaired or inefficient, whether due to some neurological dysfunction or any other factor, it may interfere with the quality of life, the performance of the elderly individual and their occupations.[4]

In this way, it becomes important that alternative and supplementary communication enters with a facilitating function or as an alternative method of communication, if this is the case of more serious dysfunctions that present sequels such as stroke and other aphasias.[5]

CSA is understood as an interdisciplinary, of practice and research area, which involves a set of services, resources and strategies used to solve everyday communication challenges of people who have some type of oral language commitment, in the meanings of production and in the interaction senses. Among CSA's resources, it is possible to identify sets of graphic signs, grouped into syntactic and semantic categories, in addition to the use of written words, alphabet, photos and concrete objects.[6]

The graphic symbols can be organized from low-tech resources, such as a board or a communication folder, and also high-tech resources, such as computers and tablets, which, through implementation, elaboration and access to symbols, are transformed in communication.[6]

According to Oliveira's study[7], the context related to CSA has an interdisciplinary characteristic by aggregating knowledge and awareness from different areas, including Occupational Therapy, that contributes when communication is supporting a subject's inefficient or ineffective performance in different areas of your life, for example, in performing Instrumental Activities of Daily Living (IADL) and Activities of Daily Living (ADL).

ADL is understood as self-care tasks, such as: dressing, eating, walking and going to the bathroom. And IADL are the skills of the individual in the community or at home, for example: making a call, driving, washing clothes, taking medications, among others[8]. Thus, Marra et. al[9] developed a study aimed at assessing ADL in elderly people with different levels of dementia, whose results indicated the degree of dementia directly influences the performance of these activities. Other evidence pointed out the use of different forms or recognition, such as CSA, can help the performance of these elderly people.

Franco et. al[10] studied the intervention through the communication board, and cards made with information from lyrics and similar objects, with the objective of cognitive training, verifying after the intervention, an improvement in the functional communication of patients that presented aphasia after Cerebrovascular Accident (CVA).

Based on what was exposed, considering communication and sensory changes resulting from aging, sometimes enhanced by disease processes that occurred at this stage, and the role of the CSA, which is to reduce function disability and promote better performance in daily tasks, it is understood the need to highlight research carried out in this context.

This study has as general objective to investigate in scientific productions, how the CSA relates to the elderly public, and as a specific goal, the search for relationships between the use of alter-

native communication resources and the ADL in this population.

Methods

To carry out this systematic review study, the PRISMA check-list protocol was adopted, with PROSPERO 2020 CRD42020184414 registration[11].

The studies that made up this review were scientific productions, including articles and theses, which presented CSA interventions with the elderly population, considering the last ten years, from January 2010 to December 2019, with focus at up-to-date evidence. Blind searches were carried out by two researchers who obtained the same search results, in the period of May 2020, using Portuguese and English languages.

The scientific bases used for searches in this review were: *Scientific Electronic Library Online (Scielo), with a focus on Health and Aging journals, National Digital Library of Theses and Dissertations (BDTD), Latin American and Caribbean Information Center in Health Sciences (BIREME) and US National Library of Medicine Health (PubMed).*

As standardization and organization, some descriptors were used, always linked to the term Elderly. The descriptors used were: idoso, saúde suplementar, auxiliares de comunicação para pessoas com deficiência e atividades cotidianas, in Portuguese, and in English the descriptors were: elderly, supplemental health, communication aids for disabled and activities of daily living.

For searches, the following filters were established: Filter 1 (F1) the ways for selecting the texts to be analyzed, in a first moment (period, titles and abstracts): period (last ten years, between 2010 to 2019); the titles of the texts should contain at least one of the descriptors selected for this search and; in the abstract, articles were considered which contained, somehow, aspects related to CSA.

After this first filter (F1), the papers were opened and in view of the Method item, a categorization of the studies was elaborated (F2). They were splitted to establish criteria for the third filter (F3). The criteria used were: the word is related to the elderly or to contemplate, in some way, the use of CSA with this population; In addition, the focus of the papers should be the presence of some intervention with CSA, which can also relate to ADL.

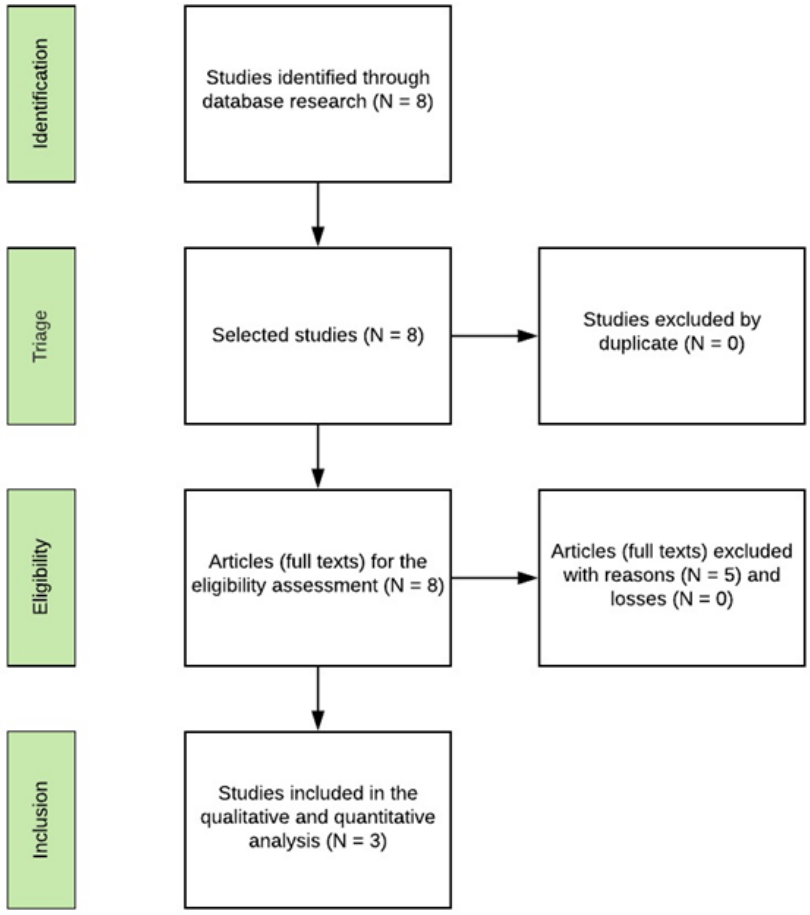
To exclude the researches, we analyzed if they strictly followed the inclusion criteria described above and, thus, research that did not address interventions involving elderly and/or research that even addressed the elderly population, but their main focus was not CSA intervention with this specific population were excluded. Researches that did not have ADL were not excluded, as this was the most specific objective that could either be achieved or not.

The data extraction processes took place by searching the databases, reading and analyzing the abstracts and texts. The data extraction from papers on the use of CSA in elderly interventions was performed after the application of all filters. For the analysis of the risk of bias in the methodology of the studies, it was observed in each one, if the methods proposed by the papers were correlated to the elderly population and its objective, as well as, if they were confirmed through the results and discussions.

As an additional analysis, the included papers were analyzed using the Interface of *R pour les Analyses Multidimensionnelles de Textes et de Questionnaires (IRaMuTeQ®)*[12]. This program makes it possible to carry out a statistical analysis on textual corpus and about tables/individuals/words.

For the analysis of the texts in this software, a *corpus* was built with a summary of all the texts found from the research in the databases. Then, all abstracts of articles were considered in a single text file in the notepad, recorded with the .txt format and encoded in Unicode UTF-8. In addition, the text was introduced by four asterisks (****) followed by a series of variables introduced with one asterisk (*) separated by a space. As it is a small *corpus*, the variables established in the present research were: Paper1, Paper2 and Paper3.

Results



Legend: result of the flowchart present in the PRISMA protocol
Source: Elaborated by the authors, 2020.

Figure 1. Flowchart of PRISMA

Figure 1 (one) shows the flowchart, with the results of searches in the databases, *Scielo*, BDTD, PubMed and BIREME. In which, 8 (eight) studies were obtained; those were submitted to the new filter, which led to the exclusion of 5 (five) studies from Scielo database for the following reasons: 3 (three) did not exhibit interventions with CSA involving the elderly population and 2 (two) only quoted the CSA, but their studies presented other means of communication, focusing on the use of cell phones by the elderly, and thus resulting in their exclusion for this research. At the end, there were 3 (three) of the total articles found in the databases. There was no exclusion due to duplicates and/or losses.

Chart 1. Main information of the selected articles

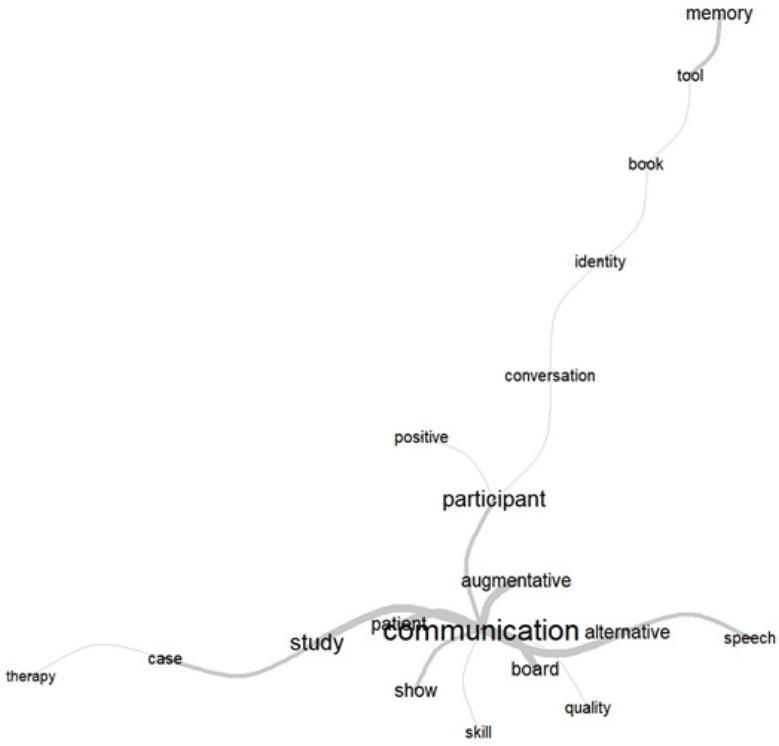
Title of Article	Data bases	Year	Intervention used and function
Intervention in aphasia with the use of supplementary and / or alternative communication	Scielo	2015	Visualization and making of records for an alternative communication album in order to verify an improvement in functional communication in patients who presented aphasia after stroke
In-hospital quality assessment of patients unable to speak who use alternative and expanded communication.	Scielo	2011	Making communication boards using the Boardmaker® software for hospitalized patients who are unable to communicate using speech.
Conversations about self-identity in Alzheimer's disease: memory books of alternative and augmentative communication as an aid.	BIREME	2014	Use of a memory book to verify if its introduction could have an impact on conversations about self-identity, by increasing the 'self-positive' conversational content and improving conversational skills.

Legend: final result of the articles that corresponded to the methodology: title, databases, year and intervention used.
Source: Elaborated by the authors, 2020.

Franco et. al 10	Bandeira et. al 14	Taibo et. al 15	
			Generation of Random Sequence
			Control Group
			Follow-up Time
			Participants' Ages
			Incomplete outcomes
			Initial and Final Evaluation

Legend: To consider the colour green for low risk of bias; yellow risk of uncertain bias and red high risk of bias.
Source: Elaborated by the authors, 2020.

Figure 2. Risk of individual study bias: low, uncertain and high.



Legend: result of the insertion of the articles in the IRaMuTeQ®12 software that presents a relationship between the terms that appear most frequently in the selected articles.
Source: Elaborated by the authors, 2020.

Figure 3. Statistical Similitude Analysis.

Discussion

Thus, at the end of the searches, we identified a total of 3 (three) studies that met the inclusion criteria for this review, with 2 (two) studies in Portuguese and 1 (one) in English. As indicated in Chart 1 (one), the 3 (three) studies included in this research used CSA resources as interventions for individuals who had impaired in communication skills. Franco et.al[10] made records for CSA albums and sought to verify whether there would be an improvement in functional communication in patients who manifested aphasia after stroke, which is one of the characteristics of this neurological condition[13].

At the end of the study, as a result of the intervention, the participants had improved communication, in addition to having contributed to obtaining benefits in the rehabilitation process and also promoting the evolution of reading skills in which they previously presented difficulties.

In the study of Bandeira et. al[14] sought to build tables with CSA boards, using the *Boardmaker*® software for patients hospitalized and unable to communicate by speech and who were anxious about their health status and unable to identify the days of the week, months and times. After being made, the boards were printed and laminated. The patients were placed on the bed with the head elevated between 30 and 45º so that they could see the communication boards in the best way.

At the end of the intervention with these tables, the study presented that the quality of patient's life was better after using the boards, revealing the importance of communication between patient-team and patient-family.

Finally, in the last study by Taibo et. al[15], memory books were made for each one of the participants with the help of their family members. These being, three elderly women with Alzheimer's Disease (AD) with mild, moderate and severe degree, respectively, identified by the Mini Mental State Examination (MMSE) to categorize the level of dementia of each participant. This exam consists of a questionnaire composed of a total score of 30 points.[16]

The intervention focused on the roles that each performed within their routine activities. The books were like binders containing eleven pages in plastic, with an image of the subject and a sentence on each page that represented the theme of the figure. The objective was to verify the contribution of one of the CSA tools on the maintenance of self-identity carried out by individuals with AD.

In the end, it was clear that the CSA resource helped all participants and especially the participants with moderate AD, to focus their attention on relevant and personal information and, also helped the participants in accessing internal memories. In addition, it helped them to maintain their identity in conversations, reducing repetitive and ambiguous expressions and thus improving the quality of communication.

For the discussion of Figure 2 (two), analyses of the risk of bias in each of the studies were carried out. Low risk of bias, uncertain risk and high risk were presented The less risks the study shows, the better its methodological quality.[17]

Thus, in relation to the item: Generation of Random Sequence, the study by Bandeira et. al[14] and Taibo et. al[15] presented inclusion and exclusion criteria for the selection of study participants, offering a low risk. Considering that Franco et. al study pointed to an uncertain risk, due to the fact that the inclusion and exclusion criteria for the selection of participants in the research were not presented.

For the Participants' Ages item, Franco et. al[10] carried out their studies with two individuals, whose ages were 53 and 77 years, while in the study by Bandeira et. al[14] participated 30 people aged 20 to 70 years, and in Taibo et. al[15] three elderly women participated, two aged 86 and one aged 87. Thus, the studies by Franco et. al[10] indicated a risk of uncertain bias because interventions were used with people in different ranges of human development and this is uncertain to verify whether the participants performed the same or not with the interventions used. The study by Taibo et. al[15] showed a low risk of bias, since in this study, the participants' ages were similar.

Regarding the Follow-up Time, the study by Franco et.al[10] pointed to an uncertain risk of bias, since it did not make it clear whether the intervention continued to be used after the four stages of production during the service or not. In the study by Bandeira et.al[14], the risk of bias is high, as no duration and time of follow-up have been indicated. In the study by Taibo et.al[15], the risk of bias in this category was low, as he described his follow-up period and the total time.

In addition, none of the studies presented a Control Group to verify the applied interventions

and, therefore, it is not clear whether the results were positive due to the tools used or some other external factor. However, the three studies obtained a low risk of bias in relation to the category of the Initial and Final Evaluation, since all presented an evaluation both at the beginning and at the end, to identify whether the intervention really provided significant and positive considerations.

As Incomplete Outcomes, Franco et. al[10] and Taibo et al[15] demonstrated a low risk of bias as they did not present any loss of participants during the follow-up, while in the study by Bandeira et. al[14], the risk of uncertain bias was identified, as 30 people were included, but it was not described if at the end all remained.

Therefore, the study by Franco et.al[10] demonstrated that the CSA intervention was used more in a supplementary than in an alternative way, improving the functional communication of the two aphasic participants after stroke; this was because they did not present greater difficulties and, in this way, it ended up not being used to replace the oral communication, which could occur, if the patients in the study had a greater impairment of their functions. As in the study by Taibo et. al[15], there was help for the participants to maintain communication for a longer time to seek their internal memories during their use, being used in a supplementary way.

For statistical analysis, in this research, we used the Similitude graph. (Figure 3). This type of analysis is based on the theory of graphs and allows to identify connections between texts through words that appear more in each one and that help in the identification of the structure of the representation.[18]

Making a brief explanation of these connections, it is clear that **communication** in all included studies is defined as a fundamental part for social interaction and without it the human being loses part of his **autonomy** to express their feelings and desires. In the study by Bandeira et. al[14], the authors demonstrate how important communication is within hospitals and when an inpatient for some reason is unable to communicate, he fails to understand his own health status and can often end up losing track of time, days and weeks and so, becomes a target of anxiety and distress.

It is also possible to observe in different environments, the use of CSA as a tool to **intervene** in the absence of communication, as well as its reduction, being able to assist in an **alternative** or **supplementary** way, contributing to increase the quality of life of these people who need somehow to have this resource. For this reason, CSA appeared in the three studies, significant for recovering and returning the individual's **ability** to communicate with greater independence and autonomy.

The biggest limitation of this study was in relation to the number of bases used, which ended up resulting in few researchers analyzed.

For final considerations, we identified that we did not reach the specific objective of the study, which was to seek the relationship of the CSA involving the elderly and the ADLs being identified a scarcity of scientific productions on this subject in the databases included in the study. We also observed that of the 3 (three) studies included, none were carried out by occupational therapists and thus the ADL, which is an occupational therapist's tool, allow us to discuss the publications of these professionals in relation to their own object of study, being this subject, little research by these professionals involving the elderly population.

Another consideration that we pointed out here was that studies involving CSA. demonstrate that its use has been used by individuals who have cognitive impairment according to some neurological dysfunction, as observed in the study by Franco et. al[10] and Bandeira et. al[14], which may also be associated with physical changes such as, for example, post-stroke.

Conclusion

We believe that this article has fulfilled its main objective, namely: to carry out an investigation in scientific productions in order to identify how the CSA has been approached in studies already published involving the elderly population. It became clear that the CSA acts promisingly to ensure that the subject continues to express his wishes and desires more independently. We alert to the need to expand the databases and consequently, to expand the knowledge addresses here, so that the findings regarding CSA in this population are disseminated and described in the most diverse life situations. Thus, here is also the suggestion for occupational therapists to develop research in this area, addressing ADL, as well as IADL, since the gains and positive points it can bring are expressively significant.

We are grateful to the National Council for Scientific and Technological Development (CNPq) for supporting research in the country and for granting a scientific initiation scholarship to carry out this research in the year 2019-2020.

References

1. IBGE- Instituto brasileiro de geografia e estatística. Número de idosos cresce 18% em 5 anos e ultrapassa 30 milhões em 2017. Estatísticas Sociais [Internet]. 2018 [acesso em 5 de may]; Disponível em: https://cod.ibge.gov.br/3JVW5

2. Ciosak SI, Braz EC, Maria A, Nakano NGR, Rodrigues J, Alencar RA, Rocha CA, Leandro DA. Senescência e senilidade: novo paradigma na atenção básica de saúde. Rev Esc Enferm USP [online]. 2011 [acesso em 2020 jun 20]; 45(2):1763-8. Disponível em: http://www.revistas.usp.br/reeusp.

3. Teixeira INDO, Guariento ME. Biologia do envelhecimento: teorias, mecanismos e perspectivas. Ciênc Saúde Colet [online]. 2010 [acesso em 2020 jun 20]; 15(6): 2845-57. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-81232010000600022&lng=en.

4. Santos PA, Heidemann ITSB, Marçal CCB, Arakawa BAM. A percepção do idoso sobre a comunicação no processo de envelhecimento. Audiol Commun res [Internet]. 2019 [acesso em 2020 jun 21]; 24: 2058. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S2317-64312019000100312&lng=en.

5. Romano N, Chun RY. A comunicação suplementar e alternativa na percepção de familiares e fonoaudiólogos: facilitadores e barreiras. CoDAS [Internet]. 2018 [acesso em 2020 jun 24]; 30(4): 23-38. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S2317-17822018000400302&lng=en.

6. ISSAC Brasil. International Society for Augmentative and Alternative Communication - Brasil, [Site]. 2015 [acesso em: 2020 jun 07]; Disponível em: http://www.isaacbrasil.org.br/.

7. Oliveira FIW. Comunicação alternativa. Rev bras educ especial [Internet]. 2010 [acesso em 2020 jun 28]; 16(1): 151-2. Disponível em: https://doi.org/10.1590/S1413-65382010000100012.

8. American OTAA. Estrutura da prática da Terapia Ocupacional: domínio & processo. Rev Ter Ocup [Internet]. 2015 [acesso em 2020 jun 28]; 26(esp): 1-49. Disponível em: https://www.revistas.usp.br/rto/article/view/97496.

9. Marra TA, Pereira LSM, Faria CDCM, Pereira DS, Martins MAA, Tirado MGA. Avaliação das atividades de vida diária de idosos com diferentes níveis de demência. Braz j phys ther [Internet]. 2007 [acesso em 2020 jun 30]; 11(4): 267-73. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-35552007000400005&lng=en.

10. Franco EC, Carleto NG, Lamônica DAC, Caldana ML. Intervenção nas afasias com o uso da comunicação suplementar e/ou alternativa. Rev CEFAC [Internet]. 2015 [acesso em 2020 jun 15]]; 17(3): 956-64. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1516-18462015000300956&lng=en.

11. Assef CA, Oliveira JP, Garros DSC. Alternative communication resources used by the elderly population and their relationship with the activities of daily living: a systematic review. PROSPERO 2020 CRD42020184414. Disponível em: https://www.crd.york.ac.uk/prospero/display_record.php?.

12. Camargo BV, Justo AM. IRAMUTEQ: um software gratuito para análise de dados textuais. Temas psicol [Internet]. 2013 [acesso em 2020 may 22]; 21(2): 513-8. Disponível em:http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1413-389X2013000200016&lng=pt.

13. LIMA RR. Intervenção fonoaudiológica grupal e seu impacto na qualidade de vida de pessoas com afasia. TEDE [Online]. 2019 [acesso em 2020 july 18]; 1-93. Disponível em: https://tede.utp.br/jspui/handle/tede/1761.

14. Bandeira FM, Faria FP, Araujo EB. Avaliação da qualidade intra-hospitalar de pacientes impossibilitados de falar que usam comunicação alternativa e ampliada. Educ Contin Saúde Einstein [Internet]. 2011 [acesso em 2020 jun 10]; 9(4): 477-82. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1679-45082011000400477&lng=en.

15. Taibo MLG, Amado PP, Dominguez NC, Iglesias PV, Real TG. Conversations about self-identity in Alzheimer disease: Augmentative and alternative Communication memory books as an aid. AELFA-IF [Internet] 2014 [acesso em 2020 july 02]; 34(2): 60-7. Disponível em: https://www.sciencedirect.com/science/article/abs/pii/S0214460313000582.

16. Lourenco RA, Veras RP. Mini-Exame do Estado Mental: características psicométricas em idosos ambulatoriais. Ann rev public health [Internet]. 2006 [acesso em 2020 aug 19]; 40(4): 712-19. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-89102006000500023&lng=en.

17. Barbosa FT, Lira AB, Oliveira NOB, Santos LL, Santos IO, Barbosa LT. Tutorial para execução de revisões sistemáticas e metanálises com estudos de intervenção em anestesia. Rev Bras Anestesiol. [Internet]. 2019 [acesso em 2020 jun 19]; 69(3): 299-306. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-70942019000300299&lng=en.

18. Barros R, Moura MEB. Fatores de risco para quedas em idosos no domicílio. REMHU [Internet]. 2006 [acesso em: 2020 aug 19]; 9(2): 206-15. Disponível em: https://dialnet.unirioja.es/servlet/articulo?codigo=6771900.