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Original articles

The knowledge of healthcare professionals about augmentative and alternative communication in the long term care institutions for the elderly

Conhecimento dos profissionais da área da saúde acerca da comunicação suplementar e alternativa em instituições de longa permanência para idosos

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ABSTRACT

Purpose: to analyze the knowledge of professionals that work in the long-term care institutions for the elderly about Augmentative and Alternative Communication.

Methods: across-sectional and contemporary study was conducted. The sample was composed by active healthcare professionals of long-term care institutions for the elderly, accredited by the Conselho Municipal do Idoso in the city of Caxias do Sul - Rio Grande do Sul. A 14 objective and multiple choice questions questionnaire, including personal, academic, practice and knowledge with Augmentative and Alternative Communication was administered**.** The variables were described by absolute and relative frequencies and to cross variables with the professionals knowledge on the Augmentative and Alternative Communication acting in the long term care institutions for the elderly, the qui-square Pearson method or the Fisher method were used (when at least one of the categories had less than 5 participants). In the case of polytomous variables, the residual adjustment test was used to complement these analyses and identify the association between the categories. The significance level adopted was 5% ($p \leq 0,05$).

Results: from the 60 professionals recruited, 40 had knowledge of Augmentative and Alternative Communication and 20 did not. There was a statistical significant association for the formation variables ($p=0,02$), the presence of individuals with difficulties of comprehension in the acting institution ($p=0,01$) and the presence of individuals users of Augmentative and Alternative Communication in their acting institution ($p=0,04$).

Conclusion: the majority of professionals that work in long term care institutions for the elderly have knowledge of Augmentative and Alternative Communication.

Keywords: Speech, Language and Hearing Sciences; Aged; Communication; Self-Help Devices

RESUMO

Objetivo: investigar o conhecimento dos profissionais que trabalham nas instituições de longa permanência para idosos sobre a Comunicação Suplementar e Alternativa.

Método**s:** estudo transversal e contemporâneo. A amostra foi constituída pelos profissionais da saúde atuantes em instituições de longa permanência para idosos registradas no Conselho Municipal do Idoso do município de Caxias do Sul – Rio Grande do Sul. A coleta de dados foi realizada por meio de questionário composto de 14 questões objetivas de múltiplas escolha, contemplando dados civis, formação, conhecimento e prática com a Comunicação Suplementar e Alternativa. As variáveis categóricas foram descritas por frequências absolutas e relativas. Para associar as variáveis com o conhecimento dos profissionais acerca da Comunicação Suplementar e Alternativa atuantes em instituições de longa permanência para idosos foi utilizado o teste qui-quadrado de Pearson ou exato de Fisher (quando ao menos uma das categorias teve menos que 5 participantes). Em caso de variáveis politômicas, o teste dos resíduos ajustados foi utilizado na complementação dessas análises para identificar as associações entre as categorias. O nível de significância adotado foi de 5% ($p \leq 0,05$).

Resultados: do total de 60 profissionais, 40 tem conhecimento sobre a Comunicação Suplementar e Alternativa e 20 não. Observou-se associação estatisticamente significante para as variáveis tempo de formação ($p=0,02$), presença de indivíduos com dificuldade de compreensão na Instituição de atuação ($p=0,01$) e presença de indivíduos usuários da Comunicação Suplementar e Alternativa na Instituição de atuação ($p=0,04$).

Conclusão: os profissionais da área da saúde que atuam em instituições de longa permanência para idosos têm conhecimento sobre a Comunicação Suplementar e Alternativa.

Descritores: Fonoaudiologia; Idoso; Comunicação; Equipamentos de Autoajuda

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INTRODUCTION

Brazil has been undergoing socioeconomic changes. Among them, the reduction of the number of young people and the increase of elderly population which have required, from public policies and professionals, actions aimed at prevention, promotion and rehabilitation in order to optimize the functional capacity of communication and life quality improvement of individuals.

According to the Brazilian Institute of Geography and Statistics[1], the number of elderly over 65 will quadruple by the year 2060, confirming the series of population projections. The population in this age group should increase from 14.9 million in 2013 to 54.4 million in 2060.

With aging, there are natural socio-cultural, physiological, cognitive, emotional changes, impacting at different levels of comprehensive health care. The legislative support subsidizes the rights of the elders and it has the Elderly Statute[2] as a mark.

As the number of elderly is increasing, many of them need hosting for different reasons, whether in senescence or senility process. The best would be their living with the family, but when this is not feasible because of the difficulty with daily and/or specific care or there is the abandonment of family care, it is necessary to find an option to house these individuals. One option would be the long-term care facilities for the elderly (LTCFs).

According to the National Health Surveillance Agency[3], the LTCFs can be governmental or non-governmental, intended for collective housing of people aged over 60 years, with or without family support, under conditions of freedom, dignity and citizenship.

The quality of life and health of older people is essential for carrying out the activities of daily living. There are independent elderly, but part of the population has some degree of dependence, whether partial or total which implies a forecast of specialized care, as there might be healthly fragile older people. Speech, Language and Hearing Science is one of the key areas of assistance in this process.

This demand can be observed in the results of a study[4] that showed that the neurological disorder and stroke is the most prevalent problem in the elderly population. In the speech area, we can mention the auditory and language changes. Aphasia is the language disorder most prevalent. Regarding the speech, dysarthria was the most found involvement.

These or other impairments in communication and expressive and/or understanding language result in social isolation of individuals, causing changes in social life that, when compounded, can cause stress and depression, making them more susceptible to diseases. One of the therapeutic possibilities of Speech, Language and Hearing Science therapy intervention to minimize communicative, cognitive and social losses of the elderly, is the implementation of the Augmentative and Alternative Communication (AAC) in their routines. Even though the scarce scientific literature on this particular aspect and this growing population, it is believed that AAC support leverages psycholinguistic and mental health capabilities, optimizing the present and future quality of life.

In this sense, this article aims at investigating the AAC knowledge of professionals working in long term care facilities for the elderly.

METHODS

This research was developed after approval by the Research and Ethics Committee of Associação Cultural e Cientifica Virvi Ramos, under number 988.779, of March 11th, 2015 and presentation of Certificate for Ethics Assessment number 40136314.9.0000.5523, in addition to meeting the Resolução196/96 and 466/12 of the Health Ministry.

This is a transversal, contemporary study. The collection period was from March to August 2015, with the voluntary participation of professionals in the health field working in the registered LTCFs and registered in the Municipal Council of the Elderly of Caxias do Sul-RS.

According to data obtained from the Council, through telephone and via e-mail contact, there are 20 LTCFs in this municipality, 19 private institutions and a philanthropic one.

A number of 369 professionals from the 20 LTCFs were invited to participate in this survey.

The criteria adopted for inclusion by the professionals were signing the informed consent, being a professional in the health field, working directly with the elderly and having a job or providing services in the form of a liberal professional. The aspects used for exclusion were not answering the questionnaire completely and acting only in the administrative area of health.

For LTCFs, the inclusion criteria were signing an institutional authorization term and to be registered in Caxias do Sul-RS City Council for the Elderly. Exclusion

criteria included: managers who did not return a telephone call and/or e-mail, those who refused to allow the visit of the researcher and / or institutions whose phone number and / or email were outdated at the data search moment, as well as when the address was nonexistent (proved by the researchers visit to the location mentioned in the Municipal Council of the Elderly institution).

The first contact with all LTCFs, was given via telephone and / or email to conduct an initial survey invitation. On average, four contacts were performed to be able to speak directly to the LTCFs manager. According to the interest shown, it was then scheduled a face to face meeting with a formal invitation anda research project presentation, and if so, collected the institutional authorization term signature by the manager. The telephone and email contact of researchers was offered to LTCFs which had had no initial interest.

After this time, there was a new telephone contact with each institution manager, scheduling a new day and time to call the professionals of LTCFs. Then, the formal invitation to LTCFs professionals and presentation of the research project were made. After receiving the confirmation, signatures were collected under informed consent.

The sample was composed of employees and professionals who agreed to answer the questionnaire, after receiving clarification on the research and performing signature on the consent form.

The material used for the study with professionals from the health area was a questionnaire containing 14 objective questions with multiple choice. The issues contemplated civil data, training, knowledge and practice with AAC. The questionnaire was given to each professional, being oriented to respond in the workplace, in a quiet environment and within 10 week days. After that period, the researcher made telephone contact with the LTCFs manager and returned to the institutions for the collection of questionnaires.

In relation to the data collected, the quantitative variables were expressed as average and standard deviation or median and interquartile range, according to its normality. Normality distribution was tested from the Shapiro-Wilk test.

Categorical variables were described by absolute and relative frequencies. To associate the variables with the professional´s knowledge about the AAC in LTCFs the chi-square test or Fisher exact test was used (when at least one of the categories had less than five participants). In case of polytomous variables, the waste testing was used to complement these analyzes to identify associations between categories. The significance level was 5% ($p \leq 0.05$) and analyzes were performed using SPSS version 21.0 program.

RESULTS

According to data collected in LTCFs, currently there are 10 doctors, 39 nurses, 79 nursing technicians, 24 physiotherapists, two Speech, Language and Hearing Science therapists, 159 caregivers, 18 social workers, 18 nutritionists, 11 psychologists, one dentist, one podiatrist, one occupational therapist, 1 massage therapist, one music teacher, 1 recreationist, 1 artisan, 1 teacher of social activities and one volunteer to help caregivers, totaling 369 professionals from 20 LTCFs, being all invited.

Of this total, there was the adherence of 10 LTCFs and 63 professionals, and three of these were excluded because they did not meet the sample inclusion criteria.

Table 1 shows the sample profile with the following variables: gender, age, education, professions and training time which showed that 85% of the sample are female.

Table 1. Sample characterization (n=60)

Variables	Fi	Fr
Genre		
Male	9	15,0
Female	51	85,0
Age		
18 - 28 years	13	21,7
29 - 39 years	19	31,7
40 - 50 years	17	28,3
>50 years old	11	18,3
Formation		
Technical	21	35,0
Superior	30	50,0
Other	9	15,0
Professions		
Doctors	2	3,3
Nurses	12	20,0
Nursingtechnicians	20	33,3
Physiotherapist	5	8,3
Speech, language and hearing science therapist	1	1,7
Caregivers	9	15,0
Social worker	2	3,3
Nutricionist	5	8,3
Psychologist	2	3,3
Occupational Therapist	1	1,7
Massage therapist	1	1,7
Training Time		
< 1year	14	23,3
1 – 5 years	14	23,3
6 - 10 years	10	16,7
11 - 15 years	9	15,0
16 - 20 years	5	8,3
21 - 40 years	7	11,7
>41 years	1	1,7

n: sample
Fi: absolute frequency
Fr: relative frequency

The associations between knowledge about the AAC with polytomousvariables are described in Table 2. The variables studied were age, education, profession and training time. The results indicate that the professionals with more AAC knowledge are 29-39 years old, have higher education and are between 1-5 years of work training. The waste testing adjusted to 5% (p=0,05) significance observed a statistically significant association only for the training time variable (p=0,02).

Table 2. Associations between AAC knowledge of professionals working in long stay institutions for elderly with polytomous variables (n=60)

	Knowledge about AAC		p
	Yes (n=40)	No (n=20)	
Age			
18 - 28 years	9	4	0,446
29 - 39 years	12	7	
40 - 50 years	10	7	
>50 years	9	2	
Formation			
Technical	14	7	0,723
Superior	21	9	
Other	5	4	
Professions			
Doctors	2	0	0,811
Nurses	8	4	
Nursingtechnicians	14	6	
Physiotherapist	3	2	
Speech, language and hearing science therapist	1	0	
Caregivers	5	4	
Social worker	1	1	
Nutricionist	3	2	
Psychologist	2	0	
Occupational Therapist	0	1	
Massage therapist	1	0	
Training Time			
< 1year	7	7	0,02*
1 – 5 years	13	1	
6 - 10 years	6	4	
11 - 15 years	3	6	
16 - 20 years	3	2	
21 - 40 years	7	0	
>41 years	1	0	

*statistically significant association by waste testing adjusted to 5% ($p \leq 0.05$) significance
n: sample
AAC :Augmentative and Alternative Communication
LTCFs: long term care facilities for the elderly

Associations comparing variable knowledge of AAC regarding the variables: gender, training on communication in general, the presence of individuals with limited or absent speech in the institution of operation, the presence of individuals with understanding difficulty in the institution of expertise and presence of AAC users in the institution are presented in Table 3.

Table 3. Comparison of variable associations - AAC knowledge in relation to other variables (n=60)

	Knowledge about AAC		p
	Yes **(n=40)**	**No (n=20)**	
Gender			
Masculino	5	4	0,464
Feminino	35	16	
Training on communication in general			
Yes	29	10	0,09
No	11	10	
Presence of individuals with limited or absent speech in the institution			
Yes	35	16	0,342
No	5	4	
Presence of individuals with understanding difficulty in the institution			
Yes	37	13	0,01**
No	3	7	
Presence of AAC users in the institution			
Yes	23	6	0,04**
No	17	14	

**statistically significant association by Pearson chi-square test or Fisher's exact test (when at least one of the categories had less than 5 participants). The adopted significance level was 5% (p≤0,05).
n: sample
AAC: C Augmentative and Alternative Communication

This table contains the sample corresponding to 60 professionals, of which 40 have knowledge of the AAC and 20 not. This data originated from issues 11 to 14 of the questionnaire (Appendix A), which followed answering only the professionals who had some AAC knowledge. From 40 professionals, above 37,5% have classes in their formation that include AAC. Regarding time with AAC, it was found that 35% have known AAC up to 2 years, 32,5% about 5 years, 15% up to 10 years and 17,5% for more than 10 years. All professionals (n=40) attribute a significant value to the AAC. Still, there is a statistically significant association with the Pearson chi-square test or Fisher's exact test (when at least one of the categories had fewer than five participants), with significance level of 5% (p≤0,05) for variables: presence of individuals with understandingdifficulty in the institution of operation (p=0,01) , the presence of AAC individual users at the institution and presence of AAC individual users at the institution (p=0,04).

DISCUSSION

This study aimed to investigate the AAC knowledge of professionals working in long term care facilities for the elderly. In this research sample, females predominated among males, 31,7% are between 29-39 years old, 50% have higher education and are trained up to five years (Table 1).

About professions and AAC knowledge (Table 2), it was observed that most people of the sample professionals know the AAC (66,7%). Caregivers, as well as the top-level professionals (doctors, nurses, physiotherapist, Speech, Language and Hearing Science therapist, social worker, nutritionist and psychologist) and mid-level professionals (nursing technicians and massage therapist), participants know the AAC. The professional in the field of occupational therapy (n=1) reported not knowing the AAC.

There was a statistically significant association for the waste testing set at 5% (p=0,05) significance for the formation of time variable (p = 0.02) with the dependent variable with AAC knowledge. It was observed that the longer the formation the more knowledge the professional possessed.

Regarding time with AAC, it was found that 35% have known AAC up to two years, 32,5% about five years , 15% up to 10 years and 17,5% for more than 10 years. These data indicate the need for a greater disclosure to the area consolidation.

From the sample of 40 professionals who have AAC knowledge only 37,5% have AAC courses in their formation. The findings corroborate the study[5] which showed that there are deficits in the formation of Speech, Language and Hearing Science therapists in intervention with AAC and neurologically impaired patients. It also reveals that it is extremely important to include AAC classes in the curricula of health courses.

Another estudo[6] researched on the perception of health professionals regarding the care of institutionalized elderly and concludes that it is very important multidisciplinary work for a more specific care of the institutionalized elderly. The nursing professionals need to broaden their gaze on the care of the elderly, aimed at an increasingly consistent service with reality. These results differ from this research because it is observed (Table 2) that among the professions of higher education, nurses (66,7%) are those with greater knowledge of the AAC and among the technical professions are the nursing technicians (70%). However, it is noteworthy that these professionals accounted more in the research.

A literature[7] review article reveals that Speech, Language and Hearing Science therapy, physical therapy, occupational therapy, psychology and education are the areas that most investigate AAC, however, it is noteworthy that the research and clinical practice (application of knowledge) are distinct areas. In the same study the areathat most researches and publishes articles is Speech, Language and Hearing Science.

Researchers[8] assessed elderly in long-stay institutions on living and health conditions and highlight the need for a change in the direction of care provided to the elderly. They also highlight the importance of improving the skills of caregivers and work in a multidisciplinary team to promote the quality of life of the elderly in these institutions. When comparing the results as regards the improvement of professionals, the survey participants reported having training on communication in general (65%) (Table 3). In this research, the nine participating caregivers, 55,6% had knowledge of the AAC, and this is a positive fact.

Table 3 shows that the variable AAC knowledge and the presence of individuals with restricted or absent speech in the institution represented 85% of research participants.The presence of individuals with understandingdifficulty inthe institution, 83.3% (p=0,01), was statistically significant for the dependent variable AAC knowledge. Study[9] carried out in order to trace the clinical and functional profile of elderly people in an LTCF had as a result that most of the elderly (93,3%) participants had cognitive impairment, according to the assessment of the Mini Mental State Examination. However, they reported being dependent for basic activities of daily living. These data corroborate this research, which shows that there is, according to data collected from participants, the presence of individuals with cognitive impairment due to age or even diseases, resulting sometimes a difficulty in understanding and even in communication, where one can make use of AAC.

The Brazilian Institute of Geography and Statistics IBGE[10] reported that the population life expectancy in 2010 was 73,5 years. This same research institute[1] states that life expectancy will also increase from 75 years to 81 years in the year 2060. Taking only mental health, there was an increase in cases of depression and dementia (with great emphasis on geriatrics and gerontology) which certainly imposes huge challenges[11]. This justifies the importance of AAC implementation in the mental health area, in accordance with the opinion of all professionals (n=40) who know AAC and who assign a relevant value to its use.

The data in Table 3 shows that professionals report that the presence of AAC individual users at the institution of operation was statistically significant (p=0.04) for the dependent variable AAC knowledge. Despite the numerous benefits that the AAC brings, as well as other forms of assistive technology, in Brazil it is still little known and disclosed. There seems to be some ignorance and insecurity regarding its introduction and use by family members and health and education professionals. It is common to find individuals with restricted or no oral language, who would be fully benefited in significant communicative, understanding and cognitive aspects, and quality of life. Supporting this statement, data from a study[12] show that even performing a successful introduction of AAC with Picture Communication Symbols (PCS) in two institutionalized adults with non progressive chronic encephalopathy from childhood, the institution did not react welcoming and wondering the new condition for a bigger autonomy and social user interaction. The conclusion of this research shows that for the AAC to become effective, it is necessary political and ideological conditions. It is estimated that the growing number of cases of dementia over the next decades will be higher in low and middle income countries, among which Brazil is included[11]. Therefore, AAC studies and

practices should be promoted soon for the Brazilian public health.

CONCLUSION

The health care professionals who work in LTCFs have AAC knowledge. Working with individuals with limited understanding and the presence of AAC users in LTCFs led to appropriation of knowledge by professionals who work with that and also by having relationship with a longer professional experience.

From this perspective, results lead to a need in the initial and continued formation in AAC, thus, encouraging that health professionals expand its indication and/or improvement.

The integration of the multidisciplinary team in LTCFs and the search for solutions in health communication that accompany the growth and needs of the elderly population, both in the theme updating, as well as in other areas is fundamental to improve the quality of life of the elderly.

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