

## Use of the cellular and internet of elderly persons participating in the program of sport and health in the municipality of Dois Irmãos, Brazil

Anna Regina Grings Barcelos; Asterio Luis Mombach; Yasmin Daniele Garcia; Márcio Slaviero; Raquel Maria Rossi Wosiack; Dra. Geraldine Alves dos Santos

### Abstract

The communicative, informative, leisure, entertainment and utilitarian variables are sources of cultural and social opportunities in improving the quality of life in the context of successful aging. The purpose of the study was to analyze the sociodemographic characteristics and adoption of communication and information technologies through the use of cell phones and access to the Internet linked to the daily life of elderly people who participate in the Sport and Health in the Best Age Program in the municipality of Dois Irmãos, RS . The method presents a quantitative and descriptive cross-sectional design. The study sample consisted of 35 elderly people of both sexes, who regularly attend the activities of gymnastics and volleyball adapted for the elderly, promoted by the Program. The results concerning the use of the Internet in the group investigated reveal a considerable percentage of elderly people who do not have access to the Internet through the cellular apparatus and use the tool to connect and receive calls and eventually send text messages. However, the experiences identified by the study participants revealed the involvement of 57.6% of the age group with the use of the Internet in the mobile device as a source of opportunities to improve the level of family and social interaction conditions, optimize free time and promote cognitive stimulation. We conclude that these experiences provide better cognitive performance. The elderly have the possibility to stimulate memory, build and improve knowledge and promote life habits that contribute to successful aging.

**Keyword:** Elderly; Gerontechnology; Successful Aging. gerontecnology

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## **Use of the cellular and internet of elderly persons participating in the program of sport and health in the municipality of Dois Irmãos, Brazil**

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**Keywords:** Elderly; Gerontechnology; Successful Aging. gerontecology

## 1. Introduction

The promotion of successful aging depends on the individual and the environment to select the behavioral domains of which the person has the best level of functioning, and to optimize this functioning through strategies that compensate for the losses of aging. Individuals and the environment use optimization and compensation throughout their lives. However, in old age a new dynamic is acquired due to the loss of biological, mental and social reserves that tend to occur during this period [1].

Active aging is a process of optimizing health, participation and safety opportunities to improve the quality of life of the elderly. Currently, it is one of the main references in policies aimed at the elderly. It often appears as a framework to support the need for older people to adopt digital technologies in their daily lives [2].

For Castells [3] the communication system is able to unite the population in a global way in the digital universe, mainly for its ability to unite words, sounds and images from all cultures and suit the desire of any individual. This interactivity provides the creation of new forms and channels of communication, shaping life and, at the same time, being remodeled by it. Thus, social changes are rapid and intense as the processes of technological and economic transformation.

The use of the internet by the elderly has increased because there are several ways of approaching and communicating with relatives and friends. So as to meet new people and establish new personal ties. All this involvement with the internet is seen as beneficial by the elderly. Therefore, increased use of the Internet is motivated by social interactions and the stimulation of cognitive aspects, as it is a great ally to stimulate memory, creativity and intelligence. Besides these gains, we also observe relevant changes in behavior such as optimization of self-care and decrease of leisure and sedentarism [4].

Throughout the years, there have been significant changes in society, especially in relation to technologies and life expectancy. The elderly are increasingly using technologies, including social networks. For this type of public, social networks are becoming a place not only as a form of hobby, but as a source of new knowledge, communication and interactions. In the current context, it is necessary to study issues related to the use of Information and Communication Technologies by the elderly, in order to understand the impact of the use of these tools on the life of this public. For there is a need to also seek

solutions that enable the aging of individuals in a healthy way, without losing the connection with the society that surrounds them [5].

Considering the communicative, informational, leisure and entertainment and utilitarian variables in the context of active aging, the objective of this study was to analyze the sociodemographic characteristics and adoption of communication and information technologies through the use of cell phones and Internet access in the daily life of elderly people who participate in the Program of Sport and Health at the Best Age in the municipality of Dois Irmãos, Brazil.

## 2. Method

The methodological outline of the study consists of a quantitative approach, of the type of cross-sectional descriptive study. The study sample consisted of 35 elderly people of both sexes who regularly attend the gymnastics and volleyball activities adapted for the elderly, promoted by the Program of Sport and Health Program at the Best Age in the municipality of Dois Irmãos, Brazil.

The participation of the elderly in the program is free and occurs frequently twice a week. The activities are developed in a club of the city, constituted of a ample sporting space, with appropriate accessibility. Around 50 people from different age groups participate, with a predominance of the elderly. For the data collection, a questionnaire was developed containing closed questions related to the variables age, sex, marital status, education, time of participation in the program, with whom lives, has cell phone and internet access. To identify the data about the experiences of the elderly with the use of cell phones and Internet, the categories of opportunities were used to optimize life habits and contribute to active aging. These data are the result of the study of Llorente-Barroso, Viñarás, Sánchez [6], constituted in communicative, informative, leisure and entertainment and utilitarian opportunities. For the analysis and presentation of the results, the descriptive statistics was used through the distributions of absolute (n) and relative (%) frequencies.

## 3. Results

As shown in table 1, 35 elderly people participated in the study, being 25 women and 10 men. In the researched area there was a greater demand for women. This occurrence may be associated with the feminization of aging, characterized by different factors, such as greater longevity, greater health care, and the increase in the number of elderly women who are part of the economically active population [7].

Table 1. Socio-demographic characteristics, use of cellular and internet (n = 35)

Variabel	Categories	N	%
Sex	Females	25	71,4
	Male	10	28,6
Age Groups	60 to 69 years olds	25	71,4
	70 to79 years old	9	25,7
	80 years and over	1	2,8

<b>Marital status</b>	Married	26	74,3
	Widowed	8	22,9
	Divorced	1	2,8
<b>Education</b>	Analphabet	0	0
	Elementary School Incomplete	27	77,1
	Elementary School Completed	4	11,4
	High School Incomplete	1	2,8
	Elementary School Incomplete	1	2,8
	High School	1	2,8
<b>Group membership time</b>	First	3	8,5
	1 year	4	11,4
	2 years	0	0
	More than 2 years	27	77,1
<b>Cellular phone</b>	Yes	33	94,3
	No	2	5,7
<b>Internet access</b>	Yes	19	57,6
	No	14	42,4

Regarding the marital situation, 74.3% of the sample are married and 22.9% are widowers. In the distribution by age group, 71.4% are in the age range of 60 to 69 years. Similar percentages are found in the study by Borges et al. [8], corresponding to 63.13%. This result may be associated to the type of activity, considering the dynamics of the activities carried out, involving volleyball adapted for the elderly. As well as the participation time, with 77.1% inserted in the program for more than two years, characterizing the greater involvement of young adults and who started their activities before 60 years. IBGE [9] corroborates the increase in life expectancy, a phenomenon characterized by an increase in the percentage of people aged 60 and over in the period 2005 and 2015. In this period, the elderly went from 9.8% to 14.3% of the population Brazilian. This growth occurred in all age groups.

The results of the study demonstrate a high percentage of elderly with incomplete elementary school, represented by 77.1%. Similar results were found in a study by Pilger, Menon and Mathias [10], with 54% less than five years of study. In Brazil, the schooling of the Brazilian elderly is still considered low, that is, 30.7% had less than one year of instruction in the IBGE Census [9]. According to a study by Aires, Paskulin and Morais [11], the high illiteracy rate is associated, among other factors, with the difficulty of access to school, especially outside large urban centers.

In relation to the cell phone, 94.3% of the sample have and 57.6% have access to the internet. Internet access is mostly via Wi-Fi, 3G/4G and some with access to the residence of children residing nearby. The two elderly in the group that do not have cell phones justify this situation due to lack of interest, vision problem and high cost as motivational obstacles, characterizing the ignorance of this type of technology, as well as economic restrictions.

The use of the Internet is not mentioned by 42.4% of the elderly people in the sample who use the cell phone to make calls and sometimes send text messages. Matas Terrón and Franco Caballero [12] consider negative attitudes derived from fear, anxiety, lack of motivation and interest as a barrier. Barrantes and Cozzubo [13] report a strong constancy that is the lack of familiarity with online resources and treat as a barrier the usability of cell phones with the characteristics of age (vision, mobility, manual dexterity, cognitive problems, loss of fluid intelligence). They also emphasize the importance of attitudinal aspects, such as the absence of perceived benefits, associated costs, fears of technology danger and point to the need for training and support.

Considering that new technologies and especially information and communication technologies become a resource for the elderly to improve their living conditions, Table 2 shows the Internet usage opportunities of the sample studied.

Table 2. Opportunities for Internet use (n = 19)

Categories		N	%
<b>Communication</b>	Connecting and Receiving Calls	19	100
	Send text messages	10	52,6
	WhatsApp	19	100
	Facebook	12	63.2
	Instagram	6	31.6
	Query and send e-mail	6	31,6
	Other	2	10.5
<b>Information</b>	Google	13	68.4
	Youtube	6	31.6
	News Site	10	52.6
<b>Research Topics</b>	News and Current Events	11	57.9
	Health	11	57.9
	Revenue	10	52,6
	Travel	6	31.6
	Fashion	3	15.8
	Religious Messages and Reflection	4	21.0

<b>Leisure and Entertainment</b>	Messages	13	68.4
	Movies and Series	2	10.5
	Listening to music	11	57,9
	Games	5	26.3
	Take fotos	17	89,5
<b>Utilities</b>	Home Banking	2	10,5
	Bill payment	1	5.3
	Shopping	3	15.8

In the study we have a sample of 19 elderly people who use the internet via cell phone. Within this sample 100% use the WhatsApp virtual communication tool, 63.2% Facebook and 31.6% access and communicate through Instagram and consult and send e-mail. For the elderly, family and social interactions are essential, and currently a significant part of these interactions happens virtually, creating new social and affective relationships with inclusion in the digital environment. In addition, the interaction with digital technological resources allows the development of imagination, memorization and communication strategies, favoring the development of skills different from those normally used [14].

In the study by Llorente-Barroso, Viñarás and Sánchez [6] several members of the groups consider that the Smartphone facilitates the communications; favoring the immediacy of the connection with electronic or social networks. In addition, the proliferation of mobile devices promoted, among this group, the opportunity to communicate through social networks like WhatsApp and Facebook. On the other hand, Facebook is perceived as a means of interaction with friends and family, less immediate than WhatsApp, but more enjoyable for many of the participants, since it allows sharing experiences. Being inserted into the social network also allows a closer bond with people in the family group or friends who live in other cities or countries. Communication opportunities facilitate family and social interaction that integrates the elderly into relationships that improve their quality of life and away from isolation. Effects that favor your motivation, self-esteem and satisfaction. In addition, the use of such opportunities generates admiration among their peers.

Results relative to reporting opportunities show that 68.4% of the study's elderly use Google, followed by 52.6% local newspaper site and 31.6% YouTube. It is observed that from the use of the internet emerges the dynamic possibility, comfortable and easily accessible. The Internet allows finding relevant information of particular interest to the elderly. The most recurring research topics were news, health and cooking. The elderly show interest in the news that occurs in the municipality, through access to the site of the local newspaper.

Similar data were found in the study by Llorente-Barroso, Viñarás, Sánchez [6], with topics related to news about where they live, health issues such as diseases, doctors, hospitals and healthy diets. As well

as topics of culture, curiosities and general interest.

Leisure and entertainment opportunities are also explored by 89.5% of seniors with photo records, 68.4% watching videos and reflection messages, followed by 57.9% listening to music. Games were also cited, but less often, as well as watching movies and series. Considering that the advancement of technology is rapid and continuous, a process of adaptation of the elderly is necessary to the constant news. The technology points a remarkable challenge to the elderly population with opportunities for fun and leisure [15].

Finally, the utilitarian opportunities have contributed to the daily habits of the people in general, thanks to the possibilities that allow to carry out administrative transactions involving banking activities, payments of tickets, purchases, among others. The elderly of this study show a certain insecurity in using these tools, since only 10.5% consult the bank statement and 15.8% make purchases. This fact can be associated with the condition of schooling, considering that the elderly that use this tool have High School and Higher Education.

Each individual realizes his or her maturity due to the social or cultural stereotypes of the reality in which he lives. The elderly are an active part of society, have greater availability of free time to carry out different activities and thus continue to develop in different social and cultural aspects. Societies must commit themselves to valorizing, recovering and preserving their traditions and culture, and one of the sources to foster this challenge is to give active participation to their elders, facilitating coexistence and adaptation to technological changes, promoting inclusion in the virtual world [6].

In the context of the opportunities identified in this study, we highlight as contributing factors to communicate more frequently with family and friends and occupy free time. Considering that, the social network is a structure composed of people who are connected by different personal ties like friendship, kinship and / or work. They are important to the people who use them because they allow them to meet new people and find friends and / or family members they have not encountered for a long time (or who for various reasons can not see often), as well as other social services [16].

#### **4. Conclusion**

The results related to internet use in the group investigated reveal a considerable percentage of elderly people who do not have access to the internet through the cell phone and use the tool to connect and receive calls and eventually send text messages. However, the experiences identified by the study participants revealed the involvement of 57.6% of the age group with the use of the Internet in the mobile device as a source of opportunities to improve the level of family and social interaction conditions, optimize free time and promote cognitive stimulation. With regard to cognitive gains, the elderly have found a strong ally to stimulate memory, build and enhance knowledge and in a broader context to improve living habits that contribute to successful aging.

#### **5. References**

[1] Neri, A. L. (2011). *Qualidade de vida na velhice: Enfoque Multidisciplinar*. Campinas: Alínea.



- [2] Marinho, V.T. et al. (2016). Percepção de idosos acerca do envelhecimento ativo. *Rev enferm UFPE*, 10(5):1571-8. Retrieved from: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/viewFile/11151/12663>. Doi10.5205/reuol.9003-78704-1-SM.1005201601
- [3] Castells, M. (2012). *A sociedade em rede*. São Paulo: Paz e Terra.
- [4] Felizmino, T. O., and Barbosa, R. B. (2018). Idosos e dependência de internet: uma revisão bibliográfica. *Revista Psicologia, Diversidade e Saúde*, 7(1):139-146. Retrieved from: <https://www5.bahiana.edu.br/index.php/psicologia/article/view/1669>. doi: 10.17267/2317-3394rpds.v7i1.1669.
- [5] Santos, R., and Almêda, K. A. (2017). O Envelhecimento Humano e a Inclusão Digital: análise do uso das ferramentas tecnológicas pelos idosos. *Ciência da Informação em Revista*, 4(2): 59-68. Retrieved from: <http://www.seer.ufal.br/index.php/cir/article/view/3146/2667>.
- [6] Llorente-Barroso, C., Viñarás, M., and Sánchez, M. (2015). Internet and the Elderly: Enhancing Active Ageing. *Comunicar*, 45: 29-36. Retrieved from: [file:///E:/envelhecimento%20bem%20sucedido/10.3916\\_C45-2015-03.pdf](file:///E:/envelhecimento%20bem%20sucedido/10.3916_C45-2015-03.pdf). <https://doi.org/10.3916/C45-2015-03>
- [7] Mazo, G. Z., Lopes, M. A., and Benedetti, T. B. (2009) *Atividade Física e o Idoso: Concepção Gerontológica*. Porto Alegre: Sulina.
- [8] Borges, A. M. et al. (2014). Autopercepção de saúde em idosos residentes em um município do interior do Rio Grande do Sul. *Rev. Bras. Geriatr. Gerontol.*, 17(1): 79-86. Retrieved from: <http://www.scielo.br/pdf/rbgg/v17n1/1809-9823-rbgg-17-01-00079.pdf>.
- [9] IBGE. (2016). *Síntese de indicadores sociais: uma análise das condições de vida da população brasileira*. Rio de Janeiro: IBGE. Retrieved from: <http://biblioteca.ibge.gov.br/visualizacao/livros/liv98965.pdf>.
- [10] Pilger, C., Menon, M. H., and Mathias, T. A. F. C. (2011). Características sociodemográficas e de saúde de idosos: contribuições para os serviços de saúde. *Rev Latinoam Enferm*, 19(5): 1-9. Retrieved from: [http://www.scielo.br/pdf/rlae/v19n5/pt\\_22.pdf](http://www.scielo.br/pdf/rlae/v19n5/pt_22.pdf).
- [11] Aires, M., Paskulin, L.M.G., and Morais, E.P. (2010). Capacidade funcional de idosos mais velhos: estudo comparativo em três regiões do Rio Grande do Sul. *Rev Latinoam Enferm*, 18(1):11-7. Retrieved from: [http://www.scielo.br/pdf/rlae/v18n1/pt\\_03.pdf](http://www.scielo.br/pdf/rlae/v18n1/pt_03.pdf).
- [12] Matas Terrón, A., and Franco Caballero, P. (2015). *Aprendizaje y nuevas tecnologías en adultos mayores. Una revisión del estado de la cuestión*. Málaga: Universidad de Málaga. Retrieved from: <http://www.riuma.uma.es/xmlui/handle/10630/9343>.
- [13] Barrantes, R., and Cozzubo, A. (2015). *Edad para aprender; edad para enseñar: el rol del aprendizaje intergeneracional intrahogar en el uso de la internet por parte de los adultos mayores en Latinoamérica* Lima, Departamento de Economía. Retrieved from: <http://files.pucp.edu.pe/departamento/economia/DDD411.pdf>.
- [14] Machado, L. R. et al. (2016). Mapeamento de competências digitais: a inclusão social dos idosos. *ETD - Educação Temática Digital*, 18(4): 903-921. Retrieved from:

<https://periodicos.sbu.unicamp.br/ojs/index.php/etd/article/view/8644207>.

[doi.org/10.20396/etd.v18i4.8644207](https://doi.org/10.20396/etd.v18i4.8644207).

[15] Casado, R., Lezcano, F., and Rodríguez, M.J. (2015). Active Ageing and Access to Technology: An Evolving Empirical Study. *Comunicar*, 45, 37-46. Retrieved from: <https://doi.org/10.3916/C45-2015-04>.

[16] Casamayou, A., and Gonzalez, M.J.M. (2017). Personas mayores y tecnologías digitales: desafíos de un binomio. *Psicol. Conoc. Soc.*, 7(2):152-172. Retrieved from: <http://dx.doi.org/10.26864/pcs.v7.n2.9>.