

TECNOLOGIAS EDUCATIVAS GERONTOGERIÁTRICAS NAS DIFERENTES TEMÁTICAS DE SAÚDE: UMA REVISÃO INTEGRATIVA

GERONTOGERIATRIC EDUCATIONAL TECHNOLOGIES IN DIFFERENT HEALTH THEMATICS: AN INTEGRATING REVIEW

TECNOLOGÍAS EDUCATIVAS GERONTO-GERIÁTRICAS EN LAS DIFERENTES TEMÁTICAS DE SALUD: UNA REVISIÓN INTEGRATIVA

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RESUMO

Objetivo: Analisar as tecnologias educativas em saúde desenvolvidas para a população idosa brasileira nas diferentes temáticas. **Método:** Revisão integrativa de literatura realizada nas bases de dados *Lilacs, BdEnf, MEDLINE, Web of Science e Scopus*, com os descritores: tecnologia educacional e saúde do idoso. A revisão foi norteada pela seguinte questão: “Quais tecnologias educativas em saúde têm sido utilizadas para a população idosa brasileira, nas diferentes temáticas?” **Resultados:** Foram selecionados sete artigos, e emergiram três categorias temáticas: 1) Tecnologias educacionais utilizadas na educação em saúde com idosos brasileiros; 2) Temáticas utilizadas nas tecnologias educacionais na educação em saúde com idosos brasileiros; 3) Impactos das tecnologias educacionais na educação em saúde com idosos brasileiros. **Conclusão:** Observou-se que a temática é minimamente abordada, demonstrado pelo baixo número de artigos encontrados. É importante que as tecnologias educativas sejam amplamente discutidas, visto que esse instrumento facilita a interação entre profissionais e usuários dos serviços de saúde. **Descritores:** Saúde do idoso; Tecnologia educacional; Educação em saúde.

ABSTRACT

Objective: To analyze the health education technologies developed for the Brazilian elderly population in the different themes. **Method:** An integrative literature review carried out in *Lilacs, BdEnf, MEDLINE, Web of Science and Scopus* databases, with the descriptors: educational technology and elderly health. The review was guided by the following question: “What educational health technologies have been used for the Brazilian elderly population in the different themes?” **Results:** We selected seven articles, and three thematic categories emerged: 1) Educational technologies used in education in health with Brazilian elderly; 2) Themes used in educational technologies in health education with Brazilian elderly; 3) Impacts of educational technologies on health education with Brazilian elderly. **Conclusion:** We observed that this theme is slightly addressed due to the low number of articles found. It is important that educational technologies be widely discussed, since this instrument facilitates the interaction between professionals and health services users. **Descriptors:** Elderly health; Educational technology; Health education.

RESUMEN

Objetivo: Analizar las tecnologías educativas en salud desarrolladas para la población anciana brasileña en las diferentes temáticas. **Método:** Revisión integrativa de literatura realizada en las bases de datos *Lilacs, BdEnf, MEDLINE, Web of Science y Scopus*, con los descriptores: tecnología educativa y salud del anciano. La revisión fue orientada por la siguiente pregunta: “¿Qué tecnologías educativas en salud se han utilizado para la población anciana brasileña en las diferentes temáticas?” **Resultados:** Seleccionamos siete artículos, y surgieron tres categorías temáticas: 1) Tecnologías educativas utilizadas en la educación en salud con ancianos brasileños; 2) Temáticas utilizadas en las tecnologías educativas en la educación en salud con ancianos brasileños; 3) Impactos de las tecnologías educativas en la educación en salud con ancianos brasileños. **Conclusión:** Se observó que la temática es mínimamente abordada, por el bajo número de artículos encontrados. Es importante que las tecnologías educativas sean ampliamente discutidas, ya que este instrumento facilita la interacción entre profesionales y usuarios de los servicios de salud. **Descriptor:** Salud del anciano; Tecnología educacional; Educación en salud.

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INTRODUCTION

The increase in longevity is a worldwide event¹ that has been occurring both in developed and in developing countries like Brazil. Between 2001 and 2011, the number of elderly people rose from 15.5 million to 23.5 million. The stratum elderly of 80 years old or over came to 1.7% of the population in 2011, corresponding to more than 3 million elderly and the expectation is that this age group is still growing in the coming years, it is estimated that, in 2025, the United States has become the sixth largest elderly population in the world².

In the area of health, this rapid demographic transition brings great challenges, because it is responsible for the emergence of new demands in the area, resulting in a greater and more prolonged use of health services¹. To take care of the elderly, the actions of health services include education practices in this area, whose use of technology has been a reality³.

Technology is a complex term that encompasses the technical and scientific knowledge, whose classification depends on its content, nature or application, characterizing it as a process that involves numerous knowledge, skills, techniques, equipment, and subject, among other tool, with the aim of raising the efficiency in different sectors. In health, implies as a set of actions that have aimed to improve the care and treatment. It comprises a process that involves actions and attitudes based on scientific knowledge, technical, personal, cultural, political and socioeconomic, favoring the integral care through the health practices⁴, of which the educational part.

In this context, the nurse presents itself as an important educator in health and the care that the process of aging brings with it. For this purpose, the educational technology emerges as a facilitator for the teaching-learning process, providing skills development and mediating the construction of knowledge for the care⁵.

It is noteworthy that the educative practices have undeniable importance for health promotion, used as a vehicle transformer of practices and collective and individual behaviors and the development of autonomy and quality of life of humans⁶. It is considered one of the main devices for the viability of health promotion, helping in the development of individual responsibility and the prevention of diseases⁷.

That said, the technological and educational methods for health education, with

the aim of promoting improvement in the quality of life of the elderly population is a path that needs to be unveiled for classrooms to healthcare professionals, especially nurses, knowing the educational technologies that already exist for the elderly and signal paths of increment and overrun.

Given this scenario, the objective of this study was to analyze the educational technologies in health developed for the Brazilian elderly population in different thematic areas of health.

METHODS

The research method used was the integrative review of literature, which was guided in six steps for its elaboration: definition of the research question, establishment of inclusion and exclusion criteria with the search in the literature, the definition of the information to be extracted from the studies, assessment of studies included, interpretation of results and synthesis of data⁸.

The question that guided this study was: "What educational technologies in health have been used for the Brazilian elderly population in different themes?"

The search was performed in the period from June to July 2017, from the databases of Latin American and Caribbean Literature in Health Sciences (Lilacs), the Nursing Database (BDENF), Online System for Search and Analysis of Medical Literature (MEDLINE, Web of Science and Scopus).

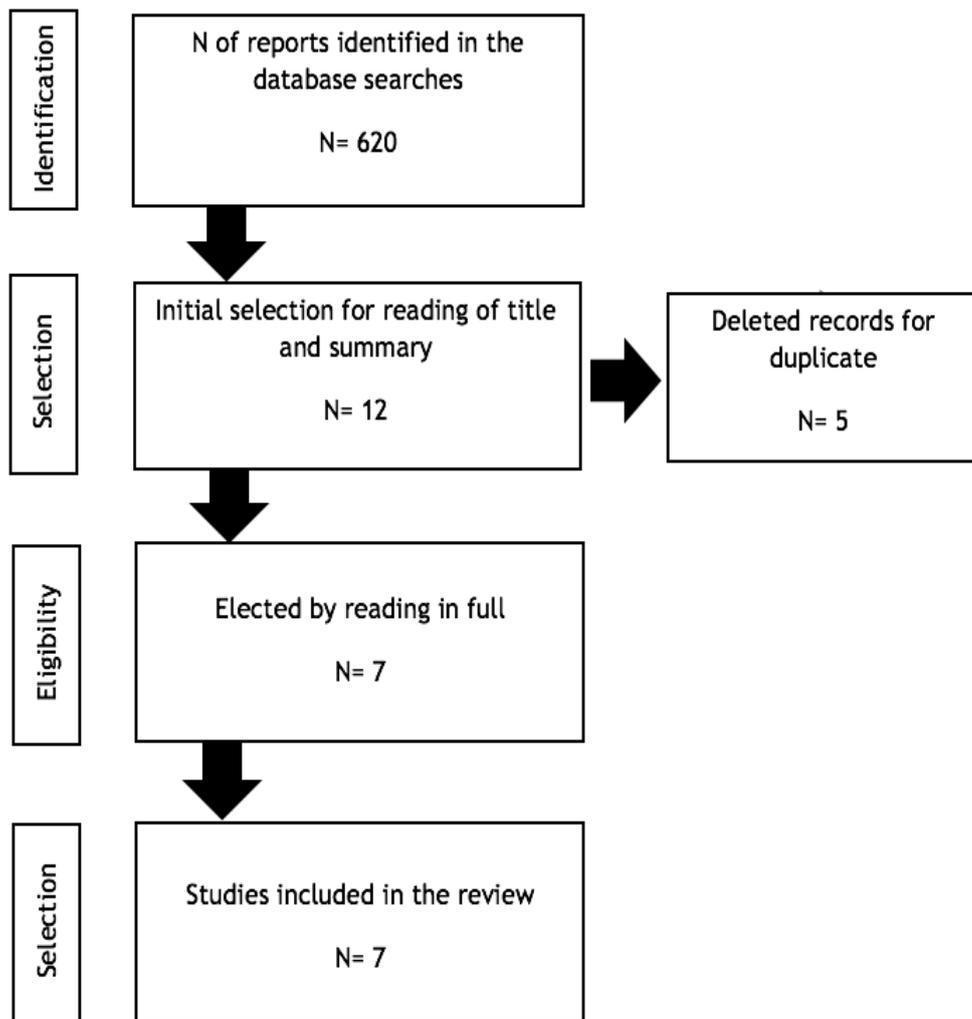
The criteria for inclusion of studies were: complete scientific articles, conducted in Brazil, available in Portuguese, English or Spanish, published until the period of data collection- mid year of 2017 - aimed at people at 60 or older, of both genders, independent of the theme in health. The articles were excluded if not primary, such as the opinion and the revisions and those who, after reading in its entirety, not responded to the objective of this review. It is important to emphasize that there was no temporal cutout for, in fact, lift the existing publications on the topic.

For the realization of the search there were used combinations with the following Descriptors in Health Sciences (DeCS) and Medical Subject Headings (Mesh): Educational Technology (Educational Technology); Health of the Elderly (Health of the Elderly) combined by the Boolean operator "AND".

There were found six hundred and twenty studies, being: five in the base Bdenf, six in Lilacs, four hundred and eighteen in Medline, thirty and three in the Web of Science and twenty in Scopus. They were selected for analysis, after reading the title and summary, twelve studies. These studies, five were discarded because of

duplicity. The selection process of the studies is simplified by chart recommended by the Transparent Reporting of Systematic Reviews and Meta-Analyses (PRISM, 2009) of the year 2009 (Figure 1) which shows the four steps for organization of studies: identification, selection, eligibility and inclusion.

Figure 1 - Articles selection flowchart. Maringá (PR), Brazil, 2017.



Source: the authors.

The selected studies were organized in a table, containing the profile of publications: title, authors, year, and type of study, objective and technology found. The findings were systematized in thematic categories and analyzed in a descriptive and interpretative manner.

RESULTS AND DISCUSSION

The characteristics of the publications that compose the study are presented (Figure 2) including: name of the article, database found, authors, year of publication, type of study, objectives, main results and level of evidence in the study.

Figure 2 - Characteristics of seven Brazilian scientific publications about educational health technologies developed for the Brazilian elderly population in different health topics. Maringá (PR), Brazil, July 2017.

Title of study/database	Author/year of publication	Type of study	Goals	Type of technology found	Level of evidence
Educational technology as a strategy of empowerment of people with chronic diseases. BDEF/LILACS	Berardinelli LMM, Guedes NAC, Ramos JP, Silva NGM 2014	Descriptive study of qualitative approach.	Develop group work in order to meet the daily life and health/illness/care of people with chronic illnesses; and whether the Group has enhanced the empowerment and that educational technology is recommended educational practices for these people.	Various educational technologies such as group dynamics, lectures, conversations and leaflets aimed at the empowerment.	5
Educational Gerontechnology aimed at the elderly estomizado in light of the complexity. BDEF/ MEDLINE/ LILACS	Barros EJJ, Santos SSC, Gomes GC, Erdmann AL 2012	Descriptive study of qualitative approach.	Present educational primer as a gerontechnological product useful for the elderly care ostomized in light of the complexity.	A primer that presented itself as a gerontechnology to facilitate the understanding of the elderly person and family about their ostomized rights, concepts and types of stomata, care and importance of family and of the support group for care.	5
Innovative educational technology for empowerment along the elderly with diabetes mellitus. LILACS/ SCOPUS	Hammerschmidt KSA, Lenardt MH 2010	Case studies.	Reflect on the empowerment as innovative educational technology for the care of themselves along the elderly with diabetes mellitus.	The empowerment as an innovative educational technology, which allows dialogic learning and the development of critical consciousness in which the elderly with diabetes find sense to a healthy way of life/standalone/custom	5
Group here and now: a lightweight technology of socio-educational action of nursing. BDEF	Lúcia Hisako Takase Gonçalves, Jordelina Schier 2005	Convergent-healthcare research.	Development of a socio-educational action, tap into nursing in elderly person and family, the perception and understanding of self-care.	Social and educational action group, considered a technology take care, with a focus on health education applied for nursing, developed together with geriatric patients hospitalized and their family companions.	4
Story: care technology in permanent education for active aging. MEDLINE	Nadia Pinheiro da Costa, Sandra Helena Isse Polaro, Eloá Aparecida Caliarí Vahl, Lucia Hisako Takase Gonçalves 2016	Convergent Healthcare Research.	Assess the relevance and effectiveness of technology "storytelling" as nurses' educational strategy in the cultivation of active aging by elderly users of a Basic Health Unit in the municipality of Belem, State of Para.	A nurses' educational technology of "storytelling" as innovative strategy apply to health services, in connection with the training of behaviors that lead to the cultivation of the active and healthy aging.	4

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Title of study/database	Author/year of publication	Type of study	Goals	Type of technology found	Level of evidence
Validation of informative primer on elderly demented, by nurses and nursing students: cross-sectional observational study. BDEF/ SCOPUS	Alessandra Conceição Leite Funchal Camacho, Louise Theresa de Araújo Abreu, Bruna Silva Leite, Ana Carolina de Oliveira Mata, Drielle dos Santos Louredo, Rafael Pires Silva 2014	Quantitative research, observational cross type.	Validate the informative as educational technology (ET) care about the elderly with dementia by nurses and nursing students.	A primer focused on care for people with dementia, preventing complications, development of skills of their users and promotes autonomy and motivation of the nursing to invent new educational technologies.	5
Cultivation of good living of elderly people and nurses-nursing educational technology. BDEF	Thais Monteiro Goes, Sandra Helena Isse Polaro, Lucia Hisako Takase Gonçalves 2016	Convergent-healthcare research.	Perform diagnostic evaluation of conditions of life and health of the elderly living in family and community, users of a Basic Health Unit – BHU and test the development of nurses' educational technology.	A nurses' educational technology, as a lightweight technology acts in the care relationship.	4

Source: the authors

As for the characteristics of the articles, all presented in Portuguese. The date of the studies concentrated between 2005 and 2016, highlighting that the topic is recent and little widespread.

When analyzing the contents of the selected studies emerged three thematic categories that have been a focus of the interpretations of the revision: 1) Educational technologies in health used with elderly Brazilians; 2) Themes used in educational technologies in health education with elderly Brazilians; 3) Effects of educational technologies in health education with elderly Brazilians.

1) Health educational technologies used with elderly Brazilians

Among the educational technologies to educate the country's elderly population, the presence of dynamic groups⁹⁻¹⁰, wheels of conversations¹¹, lectures, workshops and individual activities, characterized as light technologies¹⁰.

The light technologies used as educational resources, condense in themselves relations of interactions of subjectivity between worker and user, in order to facilitate learning.

Are generators of health when facing the care, seeking to reinvent your knowing and doing. In the case of the elderly, allows the reception, formation of bonds and strengthening their perception and understanding of self-care, being essential to the maintenance of autonomy and

independence to live with quality, according to his own will⁹.

The dynamics in groups and cycles of conversations are light technologies that involve the process of teaching-learning process and that they occur so shared, providing that the elderly socialize their feelings, anxieties, and personal accounts and, thus, to share with the group, enriching affairs, in order to potentialize conditions of healthy life and autonomy. With the presence of skilled professionals for active listening, the group benefits with knowledge of pleasant and satisfactory way¹⁰.

Lectures; however, that it is opposed to these more horizontal strategies of education in health were also found, and also located on light technologies, indicate the maintenance of hegemonic educational practices that make not privileged and disregard the existing knowledge, not favoring social inclusion¹².

The printed materials, such as brochures and leaflets, were also used as an educational technology for the elderly. It is usual due to the low cost of manufacture and the scope that the material can achieve, contemplating a larger number of elderly people, in addition to the portability of information^{5,13}.

The booklet presents itself as a gerontotechnology able to facilitate the understanding of the elderly on different themes of health¹⁴, being important tool both in the education of the elderly individual, as well as your family or other support group for care^{5,13}. On the

other hand, it may be impractical tool for elderly with low schooling, by the incomprehension of the content of the material, because, even if the general illiteracy come diminishing, there is still a significant number of elderly people who present some degree of difficulty for reading¹⁵, being a negative point of such technologies are printed.

There were not found digital tools as educational technologies for elderly patients in the studies reviewed. However, these technologies can collaborate with the quality of life for this population, since these are inserted in the social context¹⁶.

2) Themes used in educational technologies in health education with elderly Brazilians

The main educational themes with elderly Brazilians were on chronic non-communicable diseases like fibromyalgia, lupus, systemic arterial hypertension (SAH), Diabetes mellitus (DM), Parkinson's disease, congenital, fibromyalgia associated with SAH and DM, and care of the elderly stomized^{5,10,17}.

It is observed that non-transmissible chronic diseases are a focus of health education for the elderly, supposedly related to the epidemiological profile of this population. However, signals a reductionism to the disease in detriment to the person, i.e., that the age is synonymous of disease¹⁸, prioritizing in educational practices, the senile elderly and not the senescent.

Although the educational technologies listed in this study are centered on the disease, their benefits cannot be disregarded, since it ensures, for the elderly, the necessary changes in the senility with focus on independence, in preserving cognitive, autonomy¹⁹, improvement in self-esteem and self-care²⁰⁻²¹.

3) Impact of educational technologies in health education with elderly Brazilians

One of the repercussions evidenced was the empowerment of the elderly, favoring the autonomy for the management of its senile condition^{5,22}, mainly by learning mediated by technology, which makes the explanations clear and accessible^{9,19,23}.

Another repercussion was the emancipation of knowledge¹⁰ related to issues of gender, sexuality and self-care, which strengthened the active aging^{5,22}, resulting in a positive impact on the quality of life for the

management of functional capacity and intellectual field²⁴.

Finally, the satisfaction of the elderly to participate in educational activities has been verified^{10,11}, with emphasis, for moments of socialization¹⁰ cultural and leisure¹¹, that mediated these approaches.

The socialization in aging is desirable to avoid social isolation and collaborate with the cognitive development, and it is essential to keep them as well¹⁸. Also the leisure edifying, this cultural activities, favors the preservation cognitive²⁵. Both activities are described as preferences of the elderly, who are satisfied²⁴.

FINAL NOTES

It was found that the main educational technologies used for the elderly are classified as mild, the example of the groups, wheels of conversation, dynamic, lectures, brochures and flyers. Chronic non-communicable diseases were the most discussed topic, followed by issues that involve the active aging. The main repercussions involved the empowerment, the emancipation of knowledge and satisfaction on the participation of educational moments.

It was evidenced, as a limitation in this study, the low in the production of information involving the aging, senescence and the dialogical approach of health education in surroundings of educational technologies, beyond the small number of publications on the theme that hindered the synthesis of knowledge.

It is important that the gerontologic educational technologies are widely discussed in the scenario of health, both among professionals and among the elderly population, and that new technologies are developed in favor of the assistance to individuals, as a way of innovation, capable of producing change in the process of aging, especially with a focus on empowerment, autonomy and quality of life in this age range.

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