

## Factors Associated With Digital Literacy in the Health of Elderly People: An Integrative Review

Fatores Associados ao Letramento Digital na Saúde de Pessoas Idosas: Uma Revisão Integrativa

Factores Asociados a la Alfabetización Digital en la Salud de las Personas Mayores: Una Revisión Integradora

### RESUMO

**Objetivo:** Verificar na literatura científica os fatores associados ao letramento digital em saúde em pessoas idosas. **Método:** Revisão integrativa realizada entre novembro e dezembro de 2024, nas bases Scopus, Pubmed, Embase, Web of Science e Lilacs. **Resultado:** A amostra contém 7 artigos publicados entre 2018 e 2022. Os fatores associados ao letramento digital em saúde de idosos foram: sexo, renda familiar, escolaridade, estado civil, ocupação, déficit cognitivo, doenças crônicas, consumo de álcool e apoio social. Nível educacional e rede de apoio favorecem o letramento digital, enquanto déficit cognitivo, doenças crônicas e desigualdades socioeconômicas limitam a inclusão digital. Mulheres idosas, pessoas de baixa renda e com menor escolaridade enfrentam maiores dificuldades no uso de tecnologias. **Conclusão:** É fundamental promover estratégias de inclusão digital para idosos, independentemente de suas condições sociais, contribuindo para alcançar o terceiro Objetivo de Desenvolvimento Sustentável da Organização das Nações Unidas, que visa saúde e bem-estar para todos.

**DESCRITORES:** Inclusão digital; Letramento em saúde; Pessoas idosas; Gerontologia; Enfermagem.

### ABSTRACT

**Objective:** To verify in the scientific literature the factors associated with digital health literacy in older adults. **Method:** Integrative review conducted between November and December 2024, in the Scopus, Pubmed, Embase, Web of Science, and Lilacs databases. **Results:** The sample includes 7 articles published between 2018 and 2022. The factors associated with digital health literacy in older adults were: gender, household income, education level, marital status, occupation, cognitive impairment, chronic diseases, alcohol consumption, and social support. Educational level and social support networks promote digital literacy, while cognitive impairment, chronic diseases, and socioeconomic inequalities limit digital inclusion. Elderly women, people with low income, and lower education face greater difficulties in using technology. **Conclusion:** It is essential to promote digital inclusion strategies for older adults, regardless of their social conditions, contributing to achieving the third Sustainable Development Goal of the United Nations, which aims for health and well-being for all. **KEYWORDS:** Digital inclusion; Health literacy; Older adults; Gerontology; Nursing.

### RESUMEN

**Objetivo:** Verificar en la literatura científica los factores asociados al alfabetismo digital en salud en personas mayores. **Método:** Revisión integradora realizada entre noviembre y diciembre de 2024, en las bases de datos Scopus, Pubmed, Embase, Web of Science y Lilacs. **Resultado:** La muestra incluye 7 artículos publicados entre 2018 y 2022. Los factores asociados al alfabetismo digital en salud de personas mayores fueron: sexo, ingreso familiar, nivel educativo, estado civil, ocupación, déficit cognitivo, enfermedades crónicas, consumo de alcohol y apoyo social. El nivel educativo y la red de apoyo favorecen el alfabetismo digital, mientras que el déficit cognitivo, las enfermedades crónicas y las desigualdades socioeconómicas limitan la inclusión digital. Las mujeres mayores, las personas con bajos ingresos y con menor escolaridad enfrentan mayores dificultades en el uso de tecnologías. **Conclusión:** Es fundamental promover estrategias de inclusión digital para las personas mayores, independientemente de sus condiciones sociales, contribuyendo a alcanzar el tercer Objetivo de Desarrollo Sostenible de las Naciones Unidas, que busca salud y bienestar para todos. **PALABRAS CLAVE:** Inclusión digital; Alfabetismo en salud; Personas mayores; Gerontología; Enfermería.

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## INTRODUCTION

People's routines and socialization have changed significantly with the popularization of televisions, computers, cell phones and tablets, all connected to the internet. Information and Communication Technologies (ICTs) provide access to a large amount of information and services. Digital media allow access to news from around the world in real time, the development of work and financial activities, entertainment and access to education and professional training. ICTs have become tools for social inclusion and quality of life.<sup>(1,2)</sup>

However, access to and use of ICTs are affected by several factors, and individuals who are not digitally included face difficulties in social participation related to the loss of autonomy, as they will need the intervention of other people to access the information and services provided in digital media.<sup>(1,3)</sup>

In addition to access, it is also important to consider the capacity for digital health literacy, which enables individuals to search for, produce, read, recognize the quality of, collect, share and use in their routine, the health information and services provided by digital technologies.<sup>(4,5)</sup>

Elderly people are the age group that has had the least contact with

ICTs throughout their lives. For these people, their educational background, employment relationships, entertainment and access to information and communication were formed outside of the digital environment. Therefore, compared to other age groups, elderly people are the ones who use ICTs the least in their daily lives and are more likely to not develop fluency with digital tools and languages.<sup>(1,3)</sup>

It is through ICTs that information on health and well-being is produced, reviewed, shared and received, and, considering the changes in the epidemiological profile characteristic of population aging, with a greater prevalence of chronic non-communicable diseases, this information is essential to guarantee the autonomy and quality of life of elderly people.<sup>(3)</sup>

Digital inclusion of older people not only makes it easier to obtain health information and services, but also contributes to reducing inequalities in care, promoting healthy and active aging.<sup>(1,6)</sup>

This research is aligned with the UN's third Sustainable Development Goal (SDG 3), which seeks to promote health and well-being for all ages.<sup>(7)</sup> We highlight the importance of including the elderly population in access to Information and Communication Technologies (ICTs) as an essential strategy to improve quality

of life, autonomy and access to health care.

Without access to ICTs and the internet, elderly people find themselves excluded from social participation and control and their exercise of citizenship is compromised.<sup>(1)</sup> It is necessary to understand which factors interfere with the digital health literacy of elderly people, in order to think about digital inclusion strategies that are adapted to elderly people.<sup>(6)</sup> Thus, the objective of this study is to verify in the scientific literature the factors associated with digital health literacy in elderly people.

## METHOD

This is an integrative literature review that provides a synthesis of scientific knowledge and the applicability of the results found, which contributes to evidence-based nursing practice. The integrative review was carried out through six steps: 1 – Development of a guiding question; 2 – Literature search; 3 – Data collection; 4 – Critical analysis of the included studies; 5 – Discussion of the results; 6 – Presentation of the results.<sup>(9)</sup>

The guiding question was constructed based on the PICo strategy<sup>(9)</sup> (P – Population: elderly people; I – Phenomenon of interest: associated factors; Co – Context: Digital

# Integrative Review

Ribeiro JAM, Cavalcante PF, Batista RLS, Borba AKOT, Vasconcelos EMR  
Factors Associated With Digital Literacy in the Health of Elderly People: An Integrative Review

health literacy): What are the factors associated with digital health literacy among elderly people described in the scientific literature?

Searches were conducted in the Scopus, National Library of Medicine and National Institutes of Health (Pubmed), Embase, Web of Science and Latin American Literature in Health Sciences (Lilacs) databases, accessed through the CAFE platform, on the Journals portal of the Coordination for the Improvement of Higher Education Personnel (CAPES), in November 2024.

The descriptors used in the search are present in the Health Science Descriptors (DeCS) platform and in the Medical Subject Headings (MeSH), namely: “aged”, “aged, 80 and over”, “digital inclusion”, “health literacy” and “risk factors”, with the Boolean operator AND and OR relating the descriptors to each other, which culminated in the search strategy: ((aged) OR (aged, 80 and over) AND (digital inclusion) AND (health literacy) AND (risk factors)).

The eligibility criteria were: studies that address the use of ICTs in the health context by people aged 50 or over, original articles, with abstracts and full texts available free of charge, that present good methodological rigor and reduced research bias, and that answer the guiding question of this study. No time or language limits were established.

The exclusion criteria were articles that did not answer the research question, review articles, reflection articles, experience reports, books, book chapters, editorial letters, monographs, dissertations and theses. Duplicate articles were included only once.

The studies were exported from the databases to the EndNote reference management software<sup>(10)</sup>, where duplicates were identified and removed. The data was then exported to the Rayyan reference manager ap-

plication.<sup>(11)</sup> The second stage of data collection was performed by two independent evaluators who read the titles and abstracts to select the sample according to the eligibility criteria. Due to disagreement in the selection of studies, a third researcher was included to select the sample. Subsequently, the selected studies were read in full to conclude the final sample. The results of the searches in the databases are presented using a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flowchart (Figure 1).

Data collection was completed in December 2024, using a validated instrument for integrative review studies<sup>(12)</sup>, which was adapted to include aspects relevant to this research, containing: year, country of publication and authors; article title; objective; research design, level of evidence and methodological rigor; factors associated with digital health literacy; and main conclusions of the study.

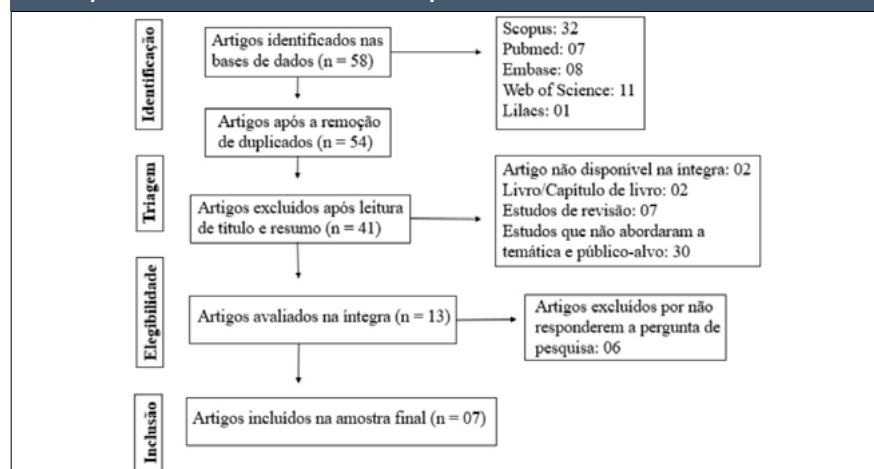
The assessment of the level of evidence was verified using the recommendations of Melnyk and Fin-eout-Overholt<sup>(13)</sup> which categorizes studies according to the design of the methodology, classifying them into seven levels: I - Evidence comes from systematic review or from

clinical guidelines in systematic reviews of randomized clinical trials; II - Evidence derived from at least one well-designed randomized controlled clinical trial; III - Evidence obtained from well-designed clinical trials without randomization; IV - Evidence from well-designed cohort and case-control studies; V - Evidence originating from systematic review of descriptive and qualitative studies; VI - Evidence derived from a single descriptive or qualitative study; VII - Evidence derived from the opinion of authorities and/or report of a committee of experts.<sup>(13)</sup>

## RESULTS

The database search identified 58 studies, of which 4 were removed due to duplication. The titles and abstracts of 54 studies were then read, resulting in the exclusion of 41 studies because they did not meet the eligibility criteria. Thirteen studies remained for full reading, of which 6 were excluded because they did not answer the research question. The final sample consisted of 7 articles (Figure 1).

Figure 1 - Flowchart of studies selected according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Recife, PE, Brazil, 2024.



The final sample included 07 articles, 01 (14.2%) in Brazilian Portuguese<sup>(15)</sup> and 06 (85.8%) published in English.<sup>(16-21)</sup> The publications came from several countries: Switzerland (n = 02; 28.5%)<sup>(20, 21)</sup>, Brazil (n = 01; 14,2%)<sup>(19)</sup>, Ireland (n = 01; 14,2%)<sup>(16)</sup>, United Kingdom (n = 01; 14,2%)<sup>(17)</sup>, Portugal (n = 01; 14,2%)<sup>(18)</sup> and

Poland (n = 01; 14,2%).<sup>(19)</sup> The studies were published between 2018 and 2022, with a higher concentration in 2021 (n = 03; 30%), with three publications.<sup>(18-20)</sup> Regarding the methodological design, descriptive studies with a quantitative approach stood out (n = 03; 42.8%).<sup>(19-21)</sup> Regarding the level of evidence, level VI stud-

ies predominated - evidence derived from a single descriptive or qualitative study (n = 05; 71.4%).<sup>(16, 17, 19-21)</sup> All selected studies have methodological rigor above 6 points in the CASP tool, indicating less bias and adequate methodological quality (Table 1).

**Table 1 – Summary of articles included in the integrative review. Recife, PE, Brazil, 2024.**

Year/ Country of publication/Authors	Title of the article	Objective	Research design/ Level of evidence/ Methodological rigor	Factors associated with digital health literacy	Main conclusions of the study
2018/Brasil/Rodrigo de Rosso Krug; André Junqueira Xavier; Eleonora d’Orsi.	Factors associated with continued internet use, EpiFloripa Elderly longitudinal study <sup>(15)</sup>	To describe internet use and identify sociodemographic and health factors associated with changes in internet use over four years in elderly individuals participating in the EpiFloripa Elderly study.	Longitudinal cohort study with 1,705 people aged 60 or over/Level IV/Methodological rigor 10.	Male, family income above 10 minimum wages, nine or more years of education, single and not presenting cognitive deficit.	Despite the increase in use, the majority of the elderly population is still digitally excluded, especially women with lower income and education.
2018/Irlanda/Grace Fox; Regina Connolly.	Mobile health technology adoption across generations: Narrowing the digital divide <sup>(16)</sup>	Uses the theory of protection motivation and cognitive theory to explore the factors that drive resistance to the use of digital technologies among older adults.	Cross-sectional study with 447 people aged 50 or over/Level VI/ Methodological rigor 09.	Male, nine or more years of education, retired, no chronic diseases, and previous experience in the use of digital technologies.	Despite increased access, the elderly population is currently digitally excluded and requires care from technology and research organizations to ensure inclusive access to digital technologies in terms of privacy and trust.
2020/ Reino Unido/ Mangyeong Lee; Danbee Kang; Junghee Yoon; Sungkeun Shim; Im-Ryung Kim; Dongryul Oh; Soo-Yong Shin; Bradford W. Hesse; Juhee Cho.	The difference in knowledge and attitudes of using mobile health applications between actual user and non-user among adults aged 50 and older <sup>(17)</sup>	To assess knowledge, perceived benefits and barriers to using mobile health applications, depending on experience with mobile health applications among adults aged 50 and over. To identify factors associated with actual use of mobile health applications.	Cross-sectional study with 323 people aged 50 and over/ Level VI/ Methodological rigor 10.	Male gender, nine or more years of education, no chronic diseases, previous experience in using digital technologies.	Despite the increased use of digital technologies among adults aged 50 and over, there are still older people who are unable to use digital technologies properly due to lack of experience and knowledge.
2021/ Portugal/ Anna Quialheiro a; Thamara Hubler Figueiró; Cassiano Ricardo Rech; Larissa Pruner Marques; Karina Mary de Paiva; André Junqueira Xavier; Eleonora d’Orsi.	Can internet use reduce the incidence of cognitive impairment? Analysis of the EpiFloripa Aging Cohort Study (2009–2019) <sup>(18)</sup>	To estimate the effect of internet use on the incidence of cognitive impairment in the elderly.	Longitudinal cohort study with 594 people aged 60 years or older/ Level IV/ Methodological rigor 09..	Do not present cognitive deficit.	Internet use was associated with a decline in the incidence of cognitive impairment among older adults living in urban areas of southern Brazil over a ten-year period.

# Integrative Review

Ribeiro JAM, Cavalcante PF, Batista RLS, Borba AKOT, Vasconcelos EMR  
 Factors Associated With Digital Literacy in the Health of Elderly People: An Integrative Review

2021/ Polônia/ Mariusz Duplaga.	The association between Internet use and health-related outcomes in older adults and the elderly: a cross-sectional study <sup>(19)</sup>	To assess the relationship between Internet use and health-related outcomes in older adults and elderly people in Poland..	Descriptive study with a quantitative approach, with 1000 people aged 50 years and over/ Level VI/ Methodological rigor 10.	Alcohol consumption, sedentary lifestyle, no chronic diseases.	Internet use is not associated with favorable lifestyle patterns or higher self-rated health in Polish older adults and elderly people. People with chronic conditions or disabilities report less frequent Internet use. Older adults and elderly people who use the Internet are less likely to use health services.
2021/ Suíça/Erik Piculell; Lisa Skär; Johan Sanmartin Berglund; Peter Anderberg; Doris Bohman.	Using a Mobile Application for Health Communication to Facilitate a Sense of Coherence: Experiences of Older Persons with Cognitive Impairment <sup>(20)</sup>	To explain how older adults with cognitive impairment experienced technology-based health communication through the use of a mobile application to facilitate a sense of coherence.	Descriptive study, with a quantitative approach, with 16 people aged 55 or over and with cognitive impairment / Level VI / Methodological rigor 09.	Having previous experience in the use of digital technologies, having a support network, not having a chronic disease and not having a cognitive deficit.	The participants' experiences were influenced by their previous use, personal support, cognitive and physical capacity and different sources of information impacted the use.
2022/ Suíça/ Justyna Rójt.	What Determines the Acceptance and Use of eHealth by Older Adults in Poland? <sup>(21)</sup>	To explore the determinants of acceptance and use of eHealth by older adults in Poland.	Descriptive study, with a quantitative approach, with 400 people between 60 and 69 years of age/ Level VI/ Methodological rigor 09.	Female gender, previous experience in using digital technologies, presence of a support network.	The use of digital technologies by older adults in Poland is strongly influenced by performance expectancy, followed by effort expectancy and social influence, while facilitating conditions had no significant impact.

The factors associated with digital health literacy among elderly people, identified in the studies, were: being male, single, individuals with a higher level of education, being retired, having access to financial resources and infrastructure, having a support network (social and family), consuming alcohol and other drugs, not having chronic diseases, not having cognitive impairment and having previous contact with digital technologies throughout life<sup>(15-21)</sup>

Most of the studies reviewed indicated that lack of technological skills and resistance to new technologies are significant barriers that limit digital inclusion for older people.<sup>(15-19)</sup> Furthermore, the analysis highlighted the importance of family support and social interaction as crucial elements in motivating older people's engagement in the use of ICTs.<sup>(20, 21)</sup>

## DISCUSSION

Digital health literacy among older

adults is influenced by a variety of socio-economic, educational, functional, social and family support network factors, as well as access to information and communication technologies. These factors reinforce the importance of targeted interventions that consider the structural inequalities faced by this population.<sup>(3)</sup>

Previous experience with digital technologies throughout life was one of the associated factors among the studies analyzed.<sup>(18, 19, 22, 23)</sup> Individuals with greater familiarity with technology have greater confidence and skills to navigate the digital environment.<sup>(19)</sup> This factor highlights the importance of intergenerational and educational approaches that encourage early use of technologies, preparing people for digital inclusion in old age.<sup>(5, 8)</sup> Nursing professionals can also influence the use of digital technologies by using these tools to assist their patients, encouraging older adults to use such instruments, seeking support from family and community, and creating safe spaces for socializing and learning for

older adults in a digital environment.<sup>(2)</sup>

The presence of chronic diseases<sup>(18-22)</sup> and cognitive deficits<sup>(17, 20, 22)</sup>, appear as barriers to digital health literacy among older adults, as they limit the physical and learning capabilities of these individuals. However, paradoxically, the use of digital technologies can contribute to the management of these health conditions, providing access to information on prevention, treatment and access to health services.<sup>(2)</sup> Personalized strategies to promote the use of digital technologies and encourage the creation of support networks impact the engagement of older adults in the use of ICTs, placing them as protagonists in the process of learning and applying these technologies in their daily lives, even in the face of the natural clinical changes of aging.<sup>(4, 22)</sup>

Gender has been shown to be a significant factor in digital health literacy, with studies indicating that men tend to have greater use and familiarity with ICTs compared to women<sup>(17-19, 23)</sup> In only one study, the sample indicated

greater digital health literacy for elderly women.<sup>(23)</sup> This may be related to historical issues of differential access to education and work, which influence contact with technologies throughout life.<sup>(17)</sup>

Education also appears as a factor in digital literacy. Studies indicate that higher levels of education are associated with a greater ability to understand and use ICTs.<sup>(17-19)</sup> Elderly people with a higher level of education tend to deal better with technological challenges, while those with less education face difficulties both technically and in interpreting digital content.<sup>(2, 17)</sup> Resistance to the use of digital technologies is often motivated by distrust or lack of skills, as evidenced by Fox and Connolly.<sup>(18)</sup> This fear of exposure to fraud or misuse of data is an obstacle that limits digital health literacy among older people.

A presença de rede de apoio, seja familiar ou social, aparece nos estudos de Piculell, et al.<sup>(22)</sup> e Rójs<sup>(23)</sup> como fator associado ao letramento digital em saúde. Estes estudos indicam que indivíduos que contam com suporte de amigos, familiares ou cuidadores têm maior probabilidade de aprender a utilizar TICs, devido ao incentivo e à assistência prática<sup>(8)</sup>.

In contrast, the study by Krug e D'orsi<sup>(17)</sup>, indicates in its sample that individuals who live alone and are single presented better results in the use of digital technologies, suggesting that independence and the need to solve everyday problems autonomously may be factors that drive familiarity with ICTs.

Factors such as family income<sup>(17)</sup> and retirement<sup>(18)</sup>, although rarely cited in studies, are important in the context of digital health literacy, indicating that individuals with greater purchasing power and security have greater access to technological devices and infrastructure. These results reinforce the need to consider the socioeconomic and occupational context when planning digital inclusion strategies.<sup>(5, 8)</sup>

Finally, Duplaga's article<sup>(21)</sup> notes that alcohol and other drug use and sedentary lifestyle are associated with greater

use of digital technologies. This finding highlights the complex relationship between health habits and digital behavior, indicating that, in some cases, ICT use may coexist with less healthy lifestyles.

Elderly women, low-income people and those with less education face greater difficulties in using technologies and also make up the majority of the public served by public health services in Brazil.<sup>(15)</sup> As these individuals have greater contact with nursing professionals, the opportunity arises to use ICTs to improve care and health promotion. The integration of these technologies into nursing practice can favor the creation of environments that encourage the digital inclusion of older adults, contributing to more effective care that promotes autonomy and expands access to health information and services.<sup>(2)</sup>

## CONCLUSION

This study aimed to investigate the factors associated with digital health literacy among older adults, recognizing the importance of Information and Communication Technologies (ICTs) in promoting the health and well-being of this population. The integrative literature review allowed us to identify and analyze the barriers and facilitators that influence the ability of older adults to access and use digital health-related information and services.

The results revealed that digital health literacy among older adults is influenced by factors such as gender, education, family income, marital status, occupation, cognitive impairment, presence of chronic diseases, support network, and previous experience with ICTs. These results demonstrate the complexity of the barriers and facilitators of the use of digital health technologies in this population, highlighting the need for inclusive strategies that take into account structural inequalities and individual contexts.

Given the small sample size and the scarcity of studies on the subject, we

observed that digital inclusion of older adults is still an emerging issue in the scientific literature and that the factors associated with the appropriate use of digital technologies by older adults remain little explored, requiring more research and academic production on the subject to support the development of effective digital inclusion strategies for older adults.

Digital health literacy is essential to enable older adults to differentiate reliable information from content without scientific basis, promoting safer health decisions. Considering the natural changes of aging and the higher incidence of chronic diseases in this population, digital tools offer practical access to health information and services. However, individuals without access to ICTs and without digital health literacy face significant barriers to accessing and understanding this information.

In this context, nursing plays a strategic role, and can participate in activities that encourage the use of digital tools by older adults and in the creation of safe and inclusive spaces for the development of digital skills. These interventions contribute to achieving the third UN Sustainable Development Goal, which aims to promote health and well-being for all, regardless of age or social status.

For nursing practice in Brazil, the research contributes by highlighting the challenges faced by older adults in accessing and using ICTs in health. The information obtained can support the development of interventions that promote autonomy and quality of life, in addition to supporting public policies aimed at digital inclusion. The role of nursing as a transformative agent is essential in promoting healthy aging, creating socially supportive environments that encourage learning and adaptation to new technologies.

# Integrative Review

Ribeiro JAM, Cavalcante PF, Batista RLS, Borba AKOT, Vasconcelos EMR  
Factors Associated With Digital Literacy in the Health of Elderly People: An Integrative Review

## REFERENCES

1. Oliveira WC, Hessel AMDG, Pesce L. Envelhecimento e inclusão digital: autonomia e empoderamento à luz da pedagogia crítica freireana [Internet]. *Rev Práxis (Novo Hamburgo)*. 2020;17(3):86–101. Available from: <https://doi.org/10.25112/rpr.v3i0.2150>
2. Diniz JL, et al. Digital inclusion and Internet use among older adults in Brazil: a cross-sectional study. *Rev Bras Enferm*. 2020;73:e20200241. Available from: <https://doi.org/10.1590/0034-7167-2020-0241>
3. Pereira C, Neves R. Os idosos e as TIC – competências de comunicação e qualidade de vida. *Rev Kairós Gerontol*. 2011;14(1):5-26. doi: 10.23925/2176-901X.2011v14i1p5-26. Disponível em: <https://revistas.pucsp.br/index.php/kairos/article/view/7099>. Acesso em: 12 nov. 2024.
4. Maciel BNO, Moreira R. Alfabetização e letramento digital para idosos. *Anais Seminário Formação Docente: Intersecção entre Universidade e Escola*. 2021;4(4):1-7. Disponível em: <https://anaisonline.uems.br/index.php/seminarioformacaodocente/article/view/7447>. Acesso em: 02 nov. 2024.
5. Gil H. Nativos digitais, migrantes digitais e adultos mais idosos: Pontes para a infoinclusão. *Educ Psicol Interfaces*. 2019;3(2):163-183. Disponível em: <https://doi.org/10.37444/issn-2594-5343.v3i2.152>. Acesso em: 01 nov. 2024.
6. Ogassavara D, Ferreira-Costa J, Silva DF da, Silva-Ferreira T da, Montiel JM. A importância da educação na inclusão e letramento digital em pessoas idosas. *Perspect Diálogo: Rev Educ Soc*. 2023;10(25):351-361.
7. Organização Pan-Americana da Saúde. O papel das tecnologias digitais no envelhecimento e na saúde. Washington, DC: OPAS; 2023. Disponível em: <https://doi.org/10.37774/9789275726907>.
8. Souza MT, Silva MD, Carvalho R. Revisão integrativa: o que é e como fazer [Internet]. Einstein (São Paulo). 2010;8(1):102-106. Disponível em: <https://www.scielo.br/j/eins/a/ZQTBkVJZqcWrTT34cXLjtBx/?lang=pt#>. Acesso em: 18 out. 2024.
9. Aromataris E, Munn Z, editores. Joanna Briggs Institute manual for evidence synthesis [Internet]. JBI; 2020. Disponível em: <https://jbi-global-wiki.refined.site/space/MANUAL>. Acesso em: 18 out. 2024.
10. Bramer WM, Milic J, Mast F. Reviewing retrieved references for inclusion in systematic reviews using EndNote. *J Med Libr Assoc*. 2017;105(1):84-87. doi: <https://doi.org/10.5195/jmla.2017.111>.
11. Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan—a web and mobile app for systematic reviews. *Syst Rev*. 2016; 5(1): 210. DOI: <https://doi.org/10.1186/s13643-016-0384-4>
12. Ursi ES, Gavão CM. Prevenção de lesões de pele no perioperatório: revisão integrativa da literatura. *Rev Latino-Am Enfermagem*. 2006;14(1):124-131. doi: <https://doi.org/10.1590/S0104-11692006000100017>.
13. Melnyk BM, Fineout-Overholt E. Evidence-based practice in nursing & healthcare: A guide to best practice. New York: Lippincott Williams & Wilkins; 2011
14. Critical Appraisal Skills Programm. Critical Appraisal Checklists [Internet]. Oxford: CASP; 2020 [acesso em 10 set. 2020]. Disponível em: <https://casp-uk.net/casp-tools-checklists/>. Acesso em: 22 out. 2024.
15. Krug R de R, Xavier AJ, D’Orsi E. Fatores associados à manutenção do uso da internet: estudo longitudinal EpiFloripa Idoso. *Rev Saude Publica*. 2018;52:01-12. Disponível em: <https://doi.org/10.11606/S1518-8787.2018052000151>. Acesso em: 16 dez. 2024.
16. Fox G, Connolly R. Mobile health technology adoption across generations: Narrowing the digital divide. *Inf Syst J*. 2018;28(6):1-25. Disponível em: <https://doi.org/10.1111/isj.12179>. Acesso em: 16 dez. 2024.
17. Lee M, et al. The difference in knowledge and attitudes of using mobile health applications between actual user and non-user among adults aged 50 and older. *PLoS ONE*. 2020;15(10):e0241350. Disponível em: <https://doi.org/10.1371/journal.pone.0241350>. Acesso em: 16 dez. 2024.
18. Quialheiro A, et al. Can internet use reduce the incidence of cognitive impairment? Analysis of the EpiFloripa Aging Cohort Study (2009–2019). *Prev Med*. 2021;154:01-07. Disponível em: <https://doi.org/10.1016/j.ypmed.2021.106904>. Acesso em: 16 dez. 2024.
19. Duplaga M. The association between Internet use and health related outcomes in older adults and the elderly: a cross sectional study. *BMC Med Inform Decis Mak*. 2021;21:01-12. Disponível em: <https://doi.org/10.1186/s12911-021-01500-2>. Acesso em: 16 dez. 2024.
20. Piculell E, Skär L, Sanmartin JB, Anderberg P, Bohman D. Using a mobile application for health communication to facilitate a sense of coherence: experiences of older persons with cognitive impairment. *Int J Environ Res Public Health*. 2021;18(21):01-16. Disponível em: <https://doi.org/10.3390/ijerph182111332>. Acesso em: 16 dez. 2024.
21. Rój J. What determines the acceptance and use of eHealth by older adults in Poland? *Int J Environ Res Public Health*. 2022;19(23):01-16. Disponível em: <https://doi.org/10.3390/ijerph192315643>. Acesso em: 17 dez. 2024.