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DIGITAL LITERACY AND DIGITAL INFORMATION AND COMMUNICATION TECHNOLOGIES (TDICS) IN THE DAILY LIVES OF OLDER PEOPLE: A SCOPING REVIEW

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ABSTRACT

Introduction: Population aging reinforces the need for strategies aimed at digital inclusion, especially in the use of Digital Information and Communication Technologies (DICTs). These technologies can expand social interaction and reduce isolation among older people, and digital literacy is essential for them to fully enjoy these benefits. **Objective**: The objective of this review is to map the literature on the impacts of DICTs and digital literacy on the daily lives of older people, with a focus on social interaction and isolation. It also seeks to identify barriers and associated facilitators, offering subsidies for the development of more effective interventions and public policies. **Inclusion Criteria**: Studies with older people (≥60 years) that addressed the use of DICTs to promote social interaction or mitigate isolation, published between 2013 and 2024 in English, Spanish, or Portuguese, were included. Non-academic publications and studies that included other age groups or different contexts were excluded. **Method:** The research covered databases such as Scopus, Web of Science and IEEE Xplore (Jan/2013 to Jan/2025). Studies were selected in four stages: initial search, application of filters, reading of titles/abstracts, and complete analysis. Data extracted included methodology, results and barriers/facilitators, analyzed quantitatively. **Results**: We included 44 studies that pointed to the role of DICTs in reducing social isolation and strengthening social interaction in older people. Recurring barriers included technological anxiety and inequality in access, while the main enablers were educational support and accessible design. Specific programs have demonstrated a positive impact on digital inclusion and quality of life. **Conclusion**: DICTs and digital literacy are effective tools to promote social inclusion and reduce isolation among older people. Personalized interventions and inclusive public policies are essential to amplify these benefits, promoting autonomy, well-being, and connectivity in an increasingly digitized social context.

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Keywords: Digital Literacy. Elderly. Social Interaction. Digital Information and Communication Technologies.

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INTRODUCTION

Population aging has had a profound impact on contemporary society, demanding strategies that promote digital inclusion, social engagement, and the autonomy of older people. In this context, digital literacy emerges as an essential component for this population to take advantage of Digital Information and Communication Technologies, which include devices such as computers, mobile technologies, social networks, and the internet. These technologies have the potential to expand opportunities for social interaction, mitigate loneliness and social isolation, and foster inclusion and social connectivity.

In Brazil, the definition of elderly began to cover individuals over 60 years of age, as established by Law No. 10,741. However, with the enactment of Bill No. 3,646, on July 19, 2022, there was a terminological update for the use of the term *elderly person*. This change had as its main objective to combat the dehumanization of aging, highlighting the importance of recognizing, before age classification, the dignity of the human person. In addition, it sought to combat prejudice and strengthen the citizenship of older people in the Brazilian social context (BRASIL, 2022). Thus, from this point on, the term *elderly person* will be used throughout this work.

Despite the advantages provided by DICTs, unequal access and difficulties related to digital literacy remain significant barriers, especially among older people. Digital literacy is understood as the ability to use digital technologies to locate, evaluate, create, and communicate information, requiring both technical and cognitive skills to operate devices and interact in digital environments (Savage et al., 2022; Caridad-Sebastián et al., 2013). The proper use of these technologies can positively transform the quality of life of older people, promoting greater social interaction and access to information. However, challenges such as technological anxiety, lack of familiarity, and lack of support for learning continue to limit the digital inclusion of many older people (Cachioni et al., 2020).

Social interaction, in turn, is a core element of well-being, and DICTs have proven to be indispensable tools for connecting older people to friends, family, and support services (Savage et al., 2022; Bangert et al., 2022). Digital platforms such as WhatsApp, Zoom, and social networks have allowed the mitigation of social isolation, especially in times of physical restrictions, such as during the COVID-19 pandemic (Bangert et al., 2022). However, the absence of adequate digital skills can hinder access to these tools, perpetuating social and digital exclusion.

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On the other hand, social isolation is a condition that profoundly affects physical and mental health, especially in elderly populations (Soundararajan et al., 2023). It is characterized by a lack of sufficient social interaction and can be aggravated by difficulty in accessing or using digital technologies. Studies indicate that DICTs can help reduce social isolation by promoting meaningful connections and access to information and services, but only when digital literacy barriers are overcome.

In this sense, the present scoping review seeks to understand the interactions between digital literacy, social interaction and social isolation in the context of aging. The analysis of this literature will allow the identification of barriers, facilitators and gaps related to the use of DICTs by older people, contributing to more effective interventions and policies that promote social and digital inclusion.

PURPOSE OF THE REVIEW

The objective of this scoping review is to map the extent and nature of the existing literature on the impacts, positive or negative, of DICTs and digital literacy on the daily lives of older people, with a focus on social interaction and social isolation in the context of aging. It seeks to explore how these technologies are used to address social isolation and promote social inclusion, as well as to identify barriers and facilitators that influence their adoption. In addition, it is intended to offer subsidies for interventions and policies that promote digital inclusion and the active participation of this population in contemporary society.

REVIEW QUESTION

The central question of the review, based on the PCC (Population, Concept, Context) model, is:

- How have digital literacy and the use of Digital Information and Communication Technologies (been addressed in the literature in relation to coping with social isolation and promoting social interaction among older people?

KEYWORDS

For metadata and indexing purposes, the following keywords were defined, in alphabetical order: Social inclusion; Social interaction; Social isolation; Digital literacy; Digital technologies.

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METHOD

The scoping study or scoping review *methodology was chosen*, a method widely used to explore the literature on a specific topic. This approach helps in the mapping of studies, in the analysis of the extent, scope and nature of the investigations, in addition to allowing the summarization and dissemination of the data obtained, being particularly useful for identifying existing gaps in research (Arksey & O'Malley, 2005; Munn et al., 2018). Although it adopts structured steps that ensure transparency and replicability, characteristics of a systematic review, this methodology does not aim to assess the quality of the evidence generated (Armstrong et al., 2011). The search was conducted in internationally recognized databases, including *Web of Science, SCOPUS, and IEEE Xplore*, due to their relevance in multidisciplinary studies and ability to provide access to up-to-date scientific literature. The selection of databases considered criteria such as the availability of full-text articles, support for Boolean operators (AND, OR), and reliability as a vehicle for scientific publication.

To report the present study, we used *Preferred Reporting Items for Systematic Review and Meta-Analysis for Scoping Review* (PRISMA-ScR) (Tricco et al., 2018; Page et al., 2021). The following key terms were used, structured by the PCC methodology.

- Population: "older", "senior", "elder".
- Concept: "ICT", "digital literacy", "information and communication technology", "internet", "mobile", "social media", "computer".
- Context: "social interaction", "social isolation", "loneliness", "social inclusion", "social connectedness".

These terms were combined using Boolean operators to increase the scope of the search.

To ensure the relevance and quality of the included studies, clear inclusion and exclusion criteria have been established:

INCLUSION CRITERIA

- Target population: Studies that specifically address older people 60 years of age and older as key participants.
- Concept: Studies that deal with information technology as a means of coping with social isolation and promoting social interaction.
- Publication period: Studies published between January 2013 and January 2025.

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- Languages: Studies published in English, Spanish or Portuguese.

5.2 EXCLUSION CRITERIA

- Type of publication: Letters, editorials, books, book reviews, book chapters, reports, theses, dissertations and *guidelines*.
- Unrelated context: Studies that deal with contexts other than social isolation or social interaction.
- Age group: Studies that do not involve only elderly people as the main audience.
- Languages: Publications in languages other than those mentioned above.

These criteria have been carefully defined to ensure that the review addresses studies directly related to the objective, avoiding the inclusion of materials that divert the focus.

SELECTION PROCEDURES

The selection of publications was conducted in four stages:

1. Initial Search: Construction of a search chain with keywords and conducting searches in the selected databases.
2. Application of Filters: Use of criteria of publication date, language and access to the full text. The recovered articles were stored in a spreadsheet, and duplicates were removed.
3. Initial Review: Two reviewers read titles and abstracts to verify the relevance of the studies to the research question.
4. Full Reading and Final Inclusion: The articles selected in the previous stage were read in full to confirm eligibility and extract the relevant data.

DATA EXTRACTION AND ANALYSIS

Data extraction was performed by a single reviewer, with the following information being collected systematically:

- Title of the article.
- Year of publication.
- Language.
- Study methodology.
- Main results related to digital literacy, social interaction and social isolation.
- Barriers and facilitators identified.

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The data were organized in a Microsoft Excel spreadsheet and analyzed through descriptive statistics. Absolute and relative frequencies were calculated, and the results were presented in charts and graphs to facilitate interpretation.

VALIDATION AND CONSISTENCY

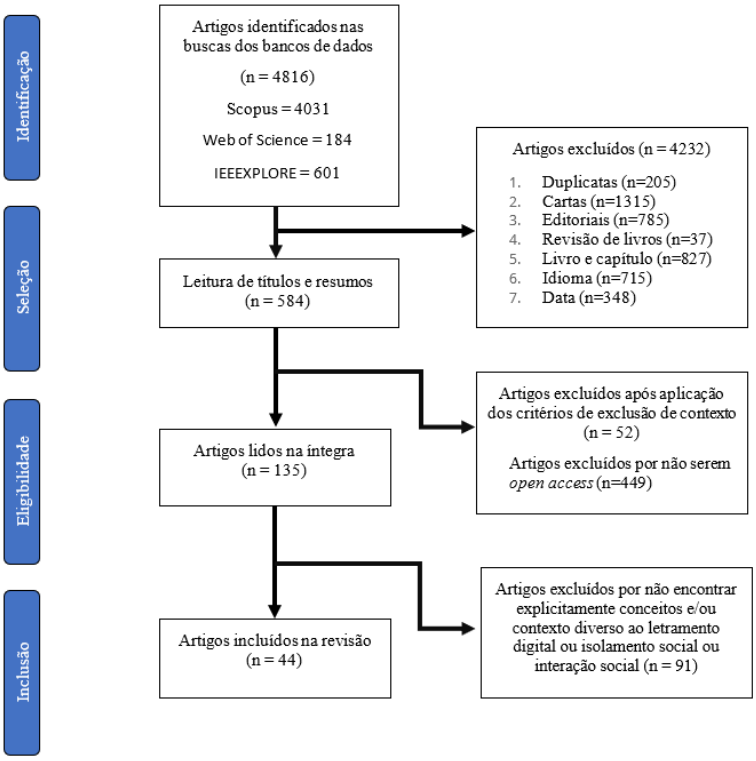
To ensure the consistency and quality of the selection, two independent reviewers analyzed the articles in the initial stages. In case of disagreements, a third reviewer was consulted to resolve the conflicts. The methodology adopted followed the recommended guidelines for scoping reviews.

RESULTS

PRESENTATION OF DATA

The results will be presented in two ways: 1) characterization of the studies found and 2) analysis of issues related to the content of the selected articles, organized into topics according to the thematic analysis. A total of 44 articles were found, as shown in Figure 1.

Figure 1. PRISMA flow diagram



Source: Authorship (2025)

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CHARACTERIZATION OF THE STUDIES

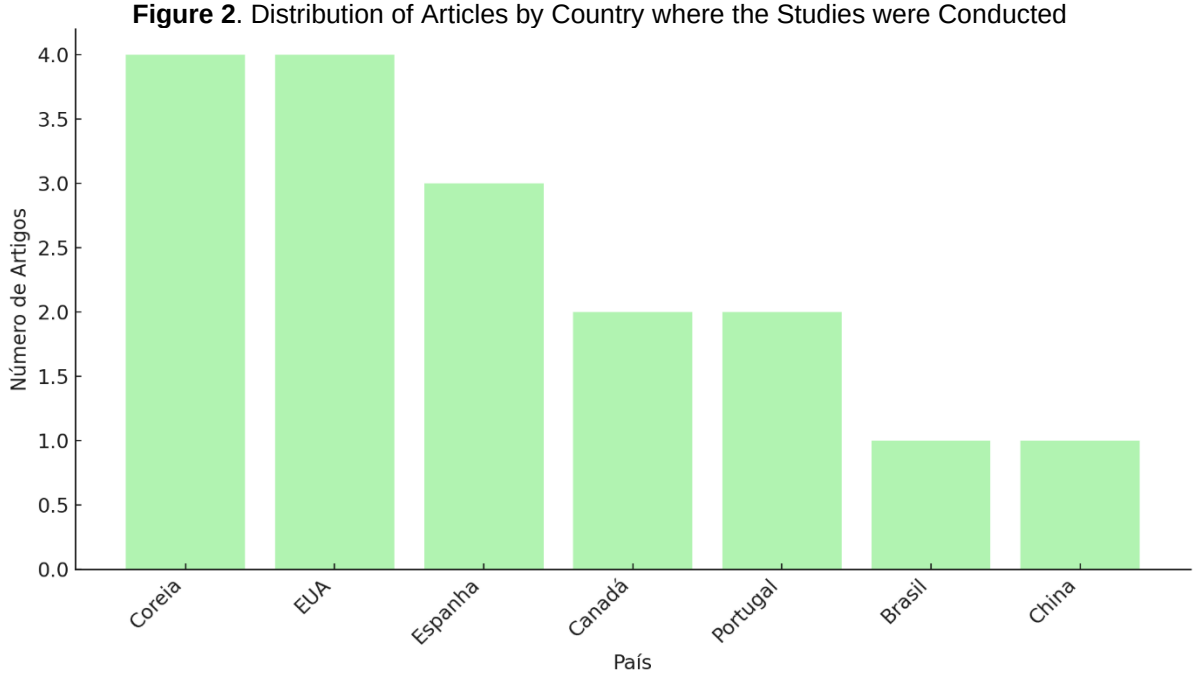
The selected studies totaled 44 articles. However, only 17 explicitly mention where the studies were conducted: Korea (4), United States (4), Spain (3), Canada (2), Portugal (2), Brazil (1), China (1), as illustrated in Figure 2.

The oldest publication dates from 2013 and the most recent from 2024, with the highest concentration of publications in the period from 2020 to 2023, as shown in Figure 3.

Figure 4 presents the main words found in the titles of the articles selected in the present study, highlighting the most recurrent themes.

For a detailed view of the studies analyzed, Chart 1 presents information such as Author/Year, Article Title, Study Methodology, Main Results, as well as the Facilitators and Barriers identified in each research.

Figure 2. Distribution of Articles by Country where the Studies were Conducted



Source: Authorship (2025)

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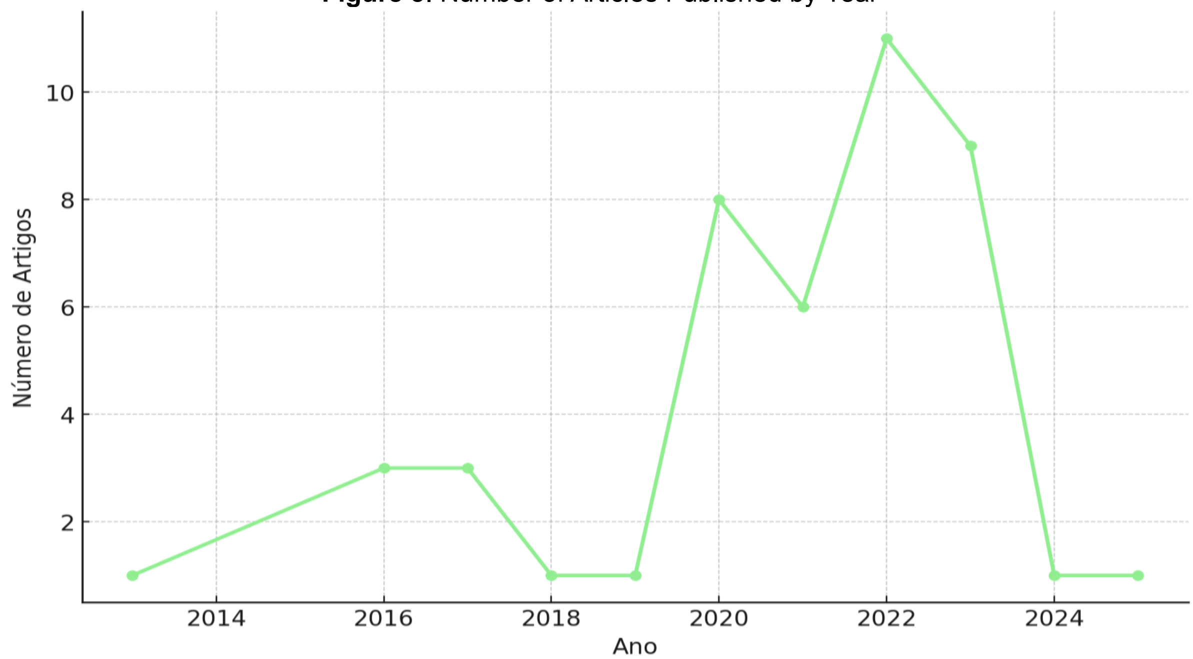
Figure 3. Number of Articles Published by Year



Source: Authorship (2025)

Figure 4. Word Cloud of the Main Themes in the Titles of the Selected Articles

Source: Authorship (2025)

Table 1 – Summary of studies

Author/Year	Article Title	Study Methodology	Main results	Facilitators and Barriers
ROMÁN-GARCÍA, Sara; ALMANSA-MARTÍNEZ, Ana; CRUZ-	Adults and the elderly in the face of ICT: the media competence of digital immigrants	Comparison between adults and older people on media skills in Andalusia, with 714 participants.	Significant differences between age groups in digital and media skills, with older people	Facilitator: Growing access to the internet. Barrier: Differences in income and age affect the level of skills.

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DÍAZ, María-del-Rocío, 2016			showing greater vulnerability.	
ARCURI, Thomas A.; et al., 2020	Internet use by older people and digital health literacy	Interviews based on conceptual model of technology acceptance with 200 participants.	Internet usage rate of 53%; greater digital literacy associated with less stress with technology.	Facilitator: Social support and devices. Barrier: Stress in the use of technology and lack of devices.
INTERNATIONAL TELECOMMUNICATION UNION, 2021	Aging in a digital world – from vulnerable to valuable	Review of demographic trends and use of technologies for digital inclusion of older people.	ICTs are essential to promote social inclusion and reduce vulnerabilities of older people.	Facilitator: Elderly-friendly design. Barrier: Resistance to the use of new technologies.
OCHOA, Leticia Laura; Best Time to See BEDREGAL-ALPACA 2021 in Norka - Dates	Digital Literacy for Older People: Experience and Lessons Learned	Experience report on face-to-face and virtual digital literacy course for older people.	Participants report increased technological skills and interest in continuous learning.	Facilitator: Personalized approach. Barrier: Initial difficulty in dealing with technology.
CIPOLLETTA, Sabrina; GRIS, Francesca, 2021	Perspectives experienced by older people on social isolation during the first wave of the COVID-19 pandemic in Italy	Semi-structured interviews with 30 elderly participants in Italy during the 2020 lockdown.	Technologies have helped reduce loneliness, but digital limitations and information overload have increased anxiety.	Facilitator: Social support via technology. Barrier: Low digital literacy and information overload.
JANG, Sun Hee; NAM 2022 - Dates Joo Je	The relationship between digital literacy, loneliness, quality of life, and health-promoting behaviors among older adults in the COVID-19 era	This is a descriptive-correlational study with 159 elderly people in Korea.	Greater digital literacy positively correlated with quality of life and healthy behaviors.	Facilitator: Digital literacy educational programs. Barrier: Limited access to technology.
GADBOIS, Emily A.; et al., 2022	Talking Tech Results: A Pilot Technology Training Intervention to Reduce Loneliness and Social Isolation Among Home-Confined Older Adults	Pilot intervention with 21 older people with personalized technological training.	It increased technological literacy and reduced social isolation.	Facilitator: Personalized training and devices provided. Barrier: Initial difficulty in using technology.
DUQUE, Marília; OTAEGUI,	Digital Dependence as a Burden: The	16-month ethnography with workshops for	Workshops help reduce digital dependence and	Facilitator: Peer learning. Barrier: Prejudices about

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Alfonso., 2023	Impact of Active Aging on Technology Adoption in Brazil and Chile	older people in Brazil and Chile.	promote social inclusion.	age and motor limitations.
SEATON, Cherisse L.; et al., 2023	Gluu Essentials Digital Skills Training for Middle-Aged and Older Adults That Really Fix Learning	Pre-post evaluation of digital training program for older people in Canada.	Digital proficiency and frequency of online activities have increased.	Facilitator: Ongoing support and simple resources. Barrier: Cost of internet access.
BETTS, Lucy R.; HILL, Rowena; GARDNER , Sarah E., 2019	Not enough knowledge out there: examining older people's perceptions of the use of digital technologies and digital inclusion classes	Focus groups with 17 older people to explore perceptions of digital inclusion.	Older people want personalized learning and hands-on sessions.	Facilitator: Personalized support. Barrier: Perception of lack of available knowledge.
CARVALH O, Carlos Vaz de; et al., 2018	Access to digital information for older people	Analysis of the results of European initiatives for digital literacy of older people.	Technology promotes social inclusion and autonomy.	Facilitator: Accessible device design. Barrier: Complex interfaces for older people.
D'AMBROS IO, Mariangela; BORIATI 2023 - Dates	Digital Literacy, technological education and lifelong learning for older people	Qualitative study on digital literacy initiatives in Europe.	Reduction of social isolation and increase in the active participation of older people.	Facilitator: Continuous learning. Barrier: Digital divide between generations.
TSAI, Hsin-Yi Sandy; SHILLAIR, Ruth; COTTEN, Shelia R., 2017	Social support and 'experimentation': the digital literacy of older people with tablets	Interviews with 21 elderly people who use tablets.	Socialization makes it easier to learn technology.	Facilitator: Social support. Barrier: Lack of initial confidence.
NGIAM, Nerice Heng Wen; et al., 2022	Building Digital Literacy in Older Adults of Low Socioeconomic Status in Singapore (Wire Up Project): Non-Randomized Controlled Trial	Non-randomized controlled study with low-income elderly people.	Significant increase in digital literacy, but no impact on loneliness or well-being.	Facilitator: Personalized training. Barrier: Lack of available digital social networks.
SHEAHAN, Jacob; et al, 2023	Co-creating ICT risk strategies with older Australians: a workshop model	Collaborative workshops to create ICT risk reduction strategies with Australian older people.	Identification of perceived risks and strategies adapted to the digital needs of older people.	Facilitator: Collaborative involvement. Barrier: Prejudice about technological limitations of the elderly.
GALLISTL, Vera; et al, 2020	Configuring the elderly non-user: between	Critical analysis of Austrian policies and practices	The interventions reach only a small percentage of	Enabler: Lifelong learning policies. Barrier: Structural

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	research, policy and practice of the digital divide	related to the digital divide.	digitally excluded older people.	and social access limitations.
TIRADO-MORUETA, Ramón; et al, 2021	The digital inclusion of older people in Spain: technological support services as a predictive factor	Binary logistic regression analysis with 560 adults over 54 years of age in Spain.	Institutional support promotes access and autonomy in the use of the internet by older people.	Facilitator: Institutional technological support. Barrier: Digital inequality based on social contexts.
LEE, H.; LIM, J.-A.; NAM, H.-K, 2022	Effect of a digital literacy program on the digital social behavior of older adults: a quasi-experimental study	Quasi-experimental study with 107 rural elderly people in Korea.	Increased smartphone use, reduced depression, and increased happiness.	Facilitator: Personalized digital education. Barrier: Low access to technology in rural areas.
KONG, Haiyan; Best Time to See LIU in Huifang 2023	The relationship between ICT use and perceived life satisfaction among older people in Korea: the mediating effect of social capital	Structural equation modeling with data from 1190 elderly people in Korea.	Use of ICT improves life satisfaction mediated by social capital.	Enabler: Social capital strengthened by the use of ICT. Barrier: Generational digital divide.
KIM, Sunyoung; YAO, Willow; DU 2022 in Xiaotong - Dates	Exploring Older Adult Adoption and Tablet Computer Use During COVID-19: Longitudinal Qualitative Study	Longitudinal interviews with 8 older people over 16 weeks in the US.	Tablets used for entertainment and social connection; low digital literacy compensated by traditional methods.	Facilitator: Familiarity with traditional methods. Barrier: Low understanding of digital functioning.
SHAPIRA, Stav; YESHUA-KATZ, Daphna; GOREN, Ganit; et al, 2021	Evaluation of a Short-Term Digital Group Intervention to Alleviate Mental Distress and Promote Well-Being Among Older Individuals Who Inhabit the Community During the COVID-19 Outbreak: A Study Protocol	Guided digital intervention with 7 sessions for older people in Israel.	Stress reduction and increased digital skills.	Facilitator: Small groups and ongoing support. Barrier: Limited access to digital platforms.
LU, Xinran; YAO, Yao; JIN 2022 in Yinzi - Dates	Digital exclusion and functional dependence in the elderly: findings from five longitudinal cohort studies	This was a longitudinal multicohort study in 23 countries with 108,621 participants.	Digital exclusion correlated with greater functional dependence.	Facilitator: Structured digital inclusion. Barrier: Socioeconomic barriers.
ZAPLETAL, Amber; WELLS,	On the triola exclusion of older people during	Exploratory interviews with 12	Digital literacy and virtual connection have	Facilitator: Digital community support. Barrier: Initial lack

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Tabytha; RUSSELL, Elizabeth; SKINNER, Mark W, 2023	COVID-19: technology, digital literacy and social isolation	older people in Canada.	reduced social exclusion.	of knowledge about technology.
CARVALHO, Eliana; et al, 2016	The insertion of older people in the digital age: physiogerontological contributions	This is a qualitative study with 30 elderly people participating in a computer course in Indaiatuba/SP.	Digital inclusion improves social interaction and self-esteem of older people.	Facilitator: Social support in the course. Barrier: Motor and cognitive difficulties.
LIU, Siqi; et al., 2023	Impact of Digital Health Literacy on Health-Related Quality of Life in Community-Dwelling Chinese Older Adults: The Mediating Effect of Health-Promoting Lifestyle	Cross-sectional study with 572 elderly people in China.	Digital literacy is positively associated with quality of life mediated by a healthy lifestyle.	Facilitator: Promotion of healthy lifestyles. Barrier: Low initial digital literacy.
PAULISTA INSTITUTE OF GERIATRICS AND GERONTOLOGY, 2017	Digital Inclusion for the Elderly: Integrating Generations in the Discovery of New Horizons	Digital inclusion program with courses adapted for the elderly in São Paulo.	Improved digital autonomy and social interaction.	Facilitator: Courses adapted to the limitations of the elderly. Barrier: Initial resistance to technology.
KIM YK IN HAN SH 2022	Internet Use and Cognitive Functioning in Side Life: Focus on Asymmetric Effects and Contextual Factors	Longitudinal study with 18,592 elderly people in the USA.	Internet use improves cognition and slows cognitive decline.	Facilitator: Regular access to the internet. Barrier: Low frequency of use.
CARIDAD SEBASTIÁN, Mercedes; MORALES GARCÍA, Ana María; GARCÍA LÓPEZ, Fátima, 2013	Digital literacy in Spain as a means of social inclusion	Analysis of ICT policy indicators in autonomous communities in Spain.	ICT policies increase digital and social inclusion.	Facilitator: Public policies. Barrier: Socioeconomic inequality.
LUND, Brady D.; WANG, Ting., 2022	Information literacy and well-being among rural older adults during a pandemic	Research with 206 rural older people in the US during the COVID-19 pandemic.	Information literacy skills associated with psychological well-being.	Facilitator: Social and educational support. Barrier: Lack of access to technologies.

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GIL, Henrique; PATRÍCIO, Maria Raquel., 2020	Lifelong learning and e-inclusion in the border region of Portugal	Research with older people on ICT and lifelong learning in Portugal.	ICT promotes social inclusion and active ageing.	Facilitator: Promotion of continuous learning. Barrier: Low initial adherence.
MOORE, Ryan C.; HANCOCK, Jeffrey T., 2020	Elderly, social technologies and the coronavirus pandemic	Study on the impact of social technologies on older people during the pandemic.	Digital technologies can reduce social isolation, but there are barriers to access.	Facilitator: Digital social networks. Barrier: Lack of digital skills.
CACHIONI, Meire; et al, 2020	Older Persons Online: Technology as a Resource for Lifelong Learning	Educational intervention with 155 elderly people for practices with smartphones and tablets.	Significant increase in the frequency of use of digital resources, with improved self-efficacy.	Facilitator: Personalization of support. Barrier: Technological anxiety.
SOUNDARARAJAN, Amrish; et al., 2023	Smartphone ownership, digital literacy, and the mediating role of social connection and loneliness in improving the well-being of older people living in the low-socioeconomic status community in Singapore	Cross-sectional study with 302 elderly people in Singapore on smartphone use and digital literacy.	Increases social connection and reduces loneliness; barriers include low initial digital literacy.	Facilitator: Subsidized digital literacy programs. Barrier: Demographic inequalities.
GUNATHILAKA, L. A. S. M.; WELGAMA, V.; WEERASINGHE, W. A. U. S.; WEERASINGHE, A. R.; WICKRAMASINGHE, I. N., 2020	The use of conversational interfaces in long-term patient care	Thematic analysis and development of a solution with conversational interfaces for older people.	Interfaces promote independence and emotional support, reducing social isolation.	Facilitator: Technological personalization. Barrier: Initial resistance to use.
BANGERT, Ashley S.; et al., 2022	The use of technology by seniors in El Paso during COVID-19	Research with 74 elderly people on the use of technology during the pandemic.	Technology has helped mitigate social isolation and access essential services.	Facilitator: Incentive to digital inclusion. Barrier: Limited access to the internet.
TIRADO-MORUETA, Ramón; et al., 2021	The digital inclusion of older people in Spain	Regression analysis with older people using technological support services in Spain.	Institutional technological support improves digital skills and social inclusion.	Facilitator: Institutional support. Barrier: Lack of digital autonomy.

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TSAI, Hsin-Yi Sandy; SHILLAIR, Ruth; COTTEN, Shelia R., 2017	Social support and experimentation: digital literacy with tablets	Interviews with 21 older people about learning to use tablets.	Social support and hands-on experimentation are essential for digital learning.	Facilitator: Family support. Barrier: Initial difficulty in navigation.
LEE, Othelia Eun-Kyoung; et al., 2022	Use of information and communication technologies to improve digital health literacy	12-week intergenerational program with 50 older people in South Korea.	Improvement in digital literacy and reduction of technophobia and social isolation.	Facilitator: Intergenerational mentoring. Barrier: Low initial confidence.
SAVAGE, Rachel D.; et al., 2022	The Factors Associated with Not Utilizing Social Media or Video Communications to Connect with Friends and Family During the COVID-19 Pandemic in Older Adults: Web-Based Research Study	Survey with 4879 elderly people about the use of social media and technological barriers.	Factors such as advanced age and poor health predict non-use of social media.	Facilitator: Easy access to technology. Barrier: Lack of technical knowledge.
DHAKAL, Usha; KOUMOUTZIS, Athena; VIVODA, Jonathon M, 2023	Better Together: Social Contact and Loneliness Among U.S. Older Adults During COVID-19	Study with data from the National Health and Aging Trends Study in the USA.	Face-to-face contact reduces loneliness more effectively than digital interactions.	Facilitator: Face-to-face connections. Barrier: Over-reliance on technologies.
DINIZ, J. L., & MOREIRA, A. C. A, 2020	Digital inclusion and the use of the Internet by the elderly in Brazil: a cross-sectional study	This was a cross-sectional study with 384 elderly Brazilian users of social networks.	Use of the internet for social interaction and resolution of health doubts. Benefits include interaction, learning, and entertainment.	Facilitator: Social networks and mobile devices. Barreira: Low schooling in some regions.
BORGES, Flavia Girardo Botelho, 2016	A rhizomatic look at the concept of digital literacy	Conceptual analysis and literature review on digital literacy.	Proposal of a rhizomatic model for digital literacy, emphasizing connectivity and multiplicity.	Facilitator: Critical use of digital technologies. Barrier: Lack of access to technologies.
CALHA, António Geraldo Manso, 2025	Use of digital communication in the post-COVID-19 period: a study on older people in Portugal and Spain	Data from the European Social Survey with 574 elderly people in Portugal and 474 in Spain.	Digital communication increases social proximity, but there are concerns about privacy and misinformation.	Facilitator: Digital education. Barrier: Lack of trust in digital technologies and inequality of access.

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LEE, Hocheol, 2024	Impact of digital literacy on life satisfaction (2019–2022) among older people in South Korea	Longitudinal study based on national data with 4,216 elderly people.	Digital literacy improves life satisfaction, especially in digital skills.	Facilitator: Inclusive digital education. Barrier: Low initial digital competence and increasing digital divide.

Source: Authorship (2025)

ANALYSIS OF ISSUES RELATED TO THE CONTENT OF SELE ARTICLES ACTIONS

CONCEPTS OF DIGITAL LITERACY

According to Calha (2025), digital literacy is essential for the integration of older people into the digital society, allowing them to interact with technological tools in an effective and meaningful way. The author highlights that the ability to adapt to the use of digital technologies was crucial in the post-COVID-19 period to ensure social connectivity and access to essential services in Portugal and Spain.

According to Román-García, Almansa-Martínez and Cruz-Díaz (2016), digital literacy involves not only the technical ability to operate digital devices, but also the media competence to interpret and produce information critically and responsibly. This is especially relevant for "digital immigrants", who need to overcome barriers related to a lack of familiarity with DICTs.

Arcuri et al. (2020) point out that digital literacy among older people is directly related to improving eHealth literacy, allowing them to access and understand digitized health information. In addition, the study points out that the increase in digital skills contributes to greater autonomy in health management and the reduction of technological barriers.

According to the International Telecommunication Union (2021), digital literacy is a powerful tool to transform digital aging, converting vulnerability into value. The report emphasizes that by empowering older people with digital skills, it is possible to increase their social inclusion and participation in community activities.

According to Ochoa and Bedregal-Alpaca (2021), digital literacy is defined as an interactive and continuous process, where older people acquire technical skills through practical experiences and educational programs adapted to their needs. The survey highlighted the effectiveness of collaborative initiatives in Peru to promote these competencies.

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Ngiam et al. (2022) point out that digital literacy among low-income older people in Singapore is directly associated with improvements in their self-confidence and ability to navigate digital environments. The implementation of specific training programs, such as "Project Wire Up", has proven effective in reducing the digital divide.

Seaton et al. (2023) highlight that digital literacy can be consolidated through training programs that promote repetitive practice and continuous support. The study emphasizes that hands-on learning is essential for older people to acquire lasting digital skills and be able to use them in everyday activities.

Betts, Hill, and Gardner (2019) define digital literacy as a set of skills necessary for older people to confidently engage in digital environments. The study underscores the importance of inclusive classes, which address perceived barriers and promote digital self-esteem among participants.

Carvalho et al. (2018) state that digital literacy is a bridge to social inclusion and access to information. The research highlights that digital literacy allows older people to use the internet as a tool to improve their quality of life and expand their social interactions.

D'Ambrosio and Boriati (2023) suggest that digital literacy should be promoted as an essential skill for lifelong learning. Programs that combine digital social innovation and technological education are effective in engaging older people and promoting active citizenship.

Tirado-Morueta et al. (2023) identify that digital literacy is conditioned by contextual factors, such as institutional support and literacy programs. The study shows that technological support services are crucial to facilitate internet access and develop digital skills among older people in Spain.

Lee, Lim and Nam (2022) conclude that digital literacy programs have a positive impact on the digital social behavior of older people, promoting greater participation in social networks and virtual communities. In addition, these programs help in overcoming technological anxiety.

Costa, Duqueviz and Pedroza (2015) define digital literacy as a mediating skill of learning for digital natives, but which is also fundamental to facilitate the inclusion of other groups, such as the elderly, in the universe of digital technologies.

SOCIAL INTERACTION IN COPING WITH SOCIAL ISOLATION

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Digital technologies have played a crucial role in overcoming the social isolation of older people, especially in contexts of physical restriction, such as during the COVID-19 pandemic. According to Calha (2025), in Portugal and Spain, digital communication was essential to maintain social interactions and strengthen bonds in the post-pandemic period. Similarly, the International Telecommunication Union report (2021) highlights that digitalization offers older people unique opportunities to build social bonds, promoting their active participation in communities, especially through inclusive virtual spaces.

In Peru, Ochoa and Bedregal-Alpaca (2021) show how collaborative learning initiatives among older people have facilitated the strengthening of social interactions and the reduction of isolation. Relatedly, Ngiam et al. (2022) show that digital literacy training in Singapore enabled low-income older people to connect more frequently with friends and family, using apps and social networks to promote meaningful interactions.

In addition, digital literacy has been an important tool to expand the social inclusion of older people and strengthen their support networks. According to Betts, Hill, and Gardner (2019), digital inclusion classes not only create spaces for joint learning, but also promote a sense of belonging, helping to reduce loneliness. Costa, Duqueviz and Pedroza (2015) agree, arguing that digital technologies expand social inclusion and strengthen interpersonal connections, actively integrating vulnerable groups.

The importance of digital skills is also highlighted by Arcuri et al. (2020), who demonstrate the direct relationship between the mastery of these skills and the expansion of social networks for older people. Carvalho et al. (2018) complement by indicating that access to digital technology allows for greater involvement in community events and the maintenance of meaningful connections with friends and family. Similarly, D'Ambrosio and Boriati (2023) highlight that digital tools facilitate intergenerational interactions, strengthening community integration and promoting enriching exchanges.

Specific digital literacy programs have shown significant results. According to Lee, Lim and Nam (2022), such initiatives directly impact the ability of older people to participate in online networks, building more welcoming and interactive digital communities. Accordingly, Seaton et al. (2023) note that digital learning provides practical tools for social communication and interaction, including instant messaging and video calling.

On the other hand, Román-García, Almansa-Martínez and Cruz-Díaz (2016) highlight that information and communication technologies not only promote access to the digital world, but also help "digital immigrants" to better integrate into their communities.

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Tirado-Morueta et al. (2023) reinforce the need for technological support for digital inclusion, facilitating access to tools that expand social connections and minimize isolation.

Therefore, digital technologies emerge as a powerful solution to improve older people's social interactions, promoting inclusion, learning, and deeper community ties in different cultural and economic contexts.

11 DISCUSSION

The analysis revealed the relevance of these skills for social inclusion, mitigation of isolation and promotion of well-being among older people.

DIGITAL LITERACY AS A TOOL FOR INCLUSION

Digital literacy is widely recognized as an essential skill to enable older people to confidently navigate the digital world, promoting their autonomy and social connectivity. According to Lee (2024), digital literacy not only improves life satisfaction, but also facilitates engagement in activities that promote well-being. In addition, Ochoa and Bedregal-Alpaca (2021) highlight that digital literacy programs adapted to the needs of older people allow for interactive learning that reinforces their skills and expands their participation in society.

REDUCTION OF SOCIAL ISOLATION THROUGH TDICS

A recurring theme in the literature is the ability of DICTs to reduce social isolation among older people. During the COVID-19 pandemic, for example, digital technologies have emerged as crucial tools for maintaining social connections, especially in contexts of physical distancing (Calha, 2025). In addition, Gadbois et al. (2022) reported that technology-based interventions, such as digital trainings, are effective in reducing feelings of loneliness and strengthening emotional support networks.

SOCIAL INTERACTIONS AND CONNECTIVITY

DICTs have also been associated with improved social interactions, as pointed out by Ngiam et al. (2022), who showed that digital training in Singapore has enabled low-income older people to reconnect with their communities and families. This result is corroborated by Betts, Hill, and Gardner (2019), who emphasize the importance of

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inclusive classes to facilitate social integration and reduce perceived barriers to the use of digital technologies.

CHALLENGES AND OPPORTUNITIES

While the benefits of DICTs are widely documented, challenges remain, such as older people's initial resistance to adopting new technologies due to technological anxiety and low level of digital literacy (Arcuri et al., 2020). Still, successful initiatives, such as those reported by Tirado-Morueta et al. (2023), suggest that institutional support and capacity building programs can overcome these barriers and promote effective digital inclusion.

IMPACT ON PUBLIC POLICIES

The findings also highlight the need to incorporate digital literacy strategies into public policies aimed at active aging. According to the International Telecommunication Union (2021), promoting digital inclusion among older people is an effective way to address social inequalities and ensure that this population has equal access to the opportunities offered by digitalization.

CONCLUSION

This study showed that digital literacy and Digital Information and Communication Technologies can play a significant role in improving the quality of life of older people, by favoring their social inclusion and active participation in an increasingly digitized society. More than a technical competence, digital literacy is configured as a means of strengthening social bonds and coping with isolation, expanding the possibilities of autonomy, communication and interaction.

Despite the obstacles faced, such as access barriers, usability limitations, and initial resistance to the use of technologies, it was found that such challenges can be mitigated through adapted training programs, continuous support, and public policies aimed at the digital inclusion of this population. These actions contribute to increasing the confidence of older people in the use of digital tools, reinforcing their social and emotional integration.

Promoting equitable access to DICTs and digital literacy is therefore essential to ensure that older people enjoy the benefits of the digital world. By integrating these initiatives into active aging policies, it becomes possible to foster more inclusive and

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intergenerational environments, in which all age groups can develop and live together in a more equitable and connected way. Building a digital society that is accessible and sensitive to the needs of the elderly population is a fundamental step to reduce inequalities and promote full citizenship.

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