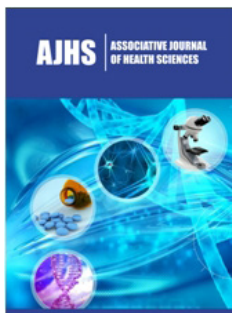




# Mini Systematic Review of the Effectiveness of Information Communication Technology to Reduce Social Isolation of Older Adults

ISSN: 2690-9707



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**Submission:**  July 24, 2024  
**Published:**  August 14, 2024

Volume 3 - Issue 3

**How to cite this article:** Heath Harllee\*. Mini Systematic Review of the Effectiveness of Information Communication Technology to Reduce Social Isolation of Older Adults. *Associative J Health Sci.* 3(3). AJHS. 000562. 2024.  
DOI: [10.31031/AJHS.2024.03.000562](https://doi.org/10.31031/AJHS.2024.03.000562)

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## Abstract

Through the quality of modern medicine and improved access to health information, life expectancy has risen dramatically. Improvements in healthcare delivery are leading to a significant growth in the size of the older adult population, aged 55 and over, which is currently the fastest-growing population sector internationally. According to data from World Population Prospects, the 2019 Revision, by 2050, one in every six people in the world will be over the age of 55, or 16%. Many studies reference the age range of 65 or above when discussing older adults. Information communication technology (ICT), which includes cellular phones, smartphones, tablets, and the internet, is on the rise in the older adult community, and among older adults aged 55 and older. The use of technology by older adults can increase successful aging and reduce social isolation. Social isolation has become a serious health risk among a growing population as 25% of all adults 55 years of age and older report feeling socially isolated. Serious disease and illness have been linked to a greater extent to socially isolated older adults, including higher rates of dementia, obesity, strokes, and heart disease as also detailed in the 2020 report by the National Academies of Sciences, Engineering, and Medicine. This study demonstrates that ICT has the potential to reduce the harmful effects of social isolation by providing a variety of ways for adults aged 55 and older to stay connected.

**Keywords:** ICT; Smartphones; Tablets; Internet; Social isolation; Older adults; Seniors

## Introduction

Globally, social isolation has provoked a myriad of health issues for the aging population. Social isolation has been defined as a disconnection from groups, communities, and personal contact with societal members [1]. As the population of older adults grows, so does the number of individuals that face social isolation. Social isolation is in direct conflict with quality of life or active aging, which directly affects both the health and quality of life of older adults. A reduction in communication and physical activity can lead to multiple illnesses and shorter lifespans [2]. With simple technologies and an associated increase in the level of social engagement and interaction, a significant reduction in social isolation is achievable, with an associated improvement in emotional and physical health. Trends related to technology use by older adults are changing, with approximately 77% of Americans 65 and older owning a cellular or smartphone [3] in 2013, there has been a dramatic shift in the willingness of older adults to use technology, just seven years prior the numbers were as low as 59% for that same age group [3].

The use of information communication technology (ICT), which, in the context of this study includes cellular phones, smartphones, and tablets that foster internet access, is on the rise in the older adult community. The use of technology by older adults can foster successful aging in place [4,5] and an increase in independence. Even though the debate on the digital divide has continued over the last 20-30 years, the academic literature reveals [4]

that the number of older adults accessing ICT is higher than ever. Historically, older adults have been lagging when transitioning to the use of technology compared to their younger counterparts. However, that trend is changing. In 2014, approximately 77% of Americans 55 and older owned a cellular or smartphone [6]. Just seven years prior the numbers were as low as 59% for that same age group [6]. That has created an opportunity to reduce social isolation. According to a 2017 Pew Research Center survey, older adults aged 65 to 69 are twice as likely as those aged 80 and older to go online [7].

## Methodology

### Study design

This study is a systematic literature review that explores how ICT can serve as a tool to reduce social isolation for older adults. The use of technological tools available to older adults like cellular or smartphones, tablets, or computers that foster internet access will be examined. Research on acceptance of technology in older adults will help to answer the following research questions:

- A. What is found in the literature concerning the capabilities of ICT in reducing social isolation for older adults?
- B. What is found in the literature about the willingness of participants aged 55 to 75 to use ICT to reduce social isolation?
- C. What does the literature uncover concerning the relationship between ICT and social isolation?

A search of peer-reviewed literature identified 2 systematic reviews, [8,9]. Both reviews concentrated on gaps in the literature concerning social isolation and various electronic communications without regard to viable solutions or recommendations for structured research that linked ICT and social isolation.

The objective of this systematic review is to uncover the potential of cell or smartphones, tablets, and computers that foster internet access to reduce social isolation in older adults. This systematic review will also explore gaps in the literature and provide a more up-to-date review of ICT and the willingness of older adults between the ages of 55 years of age to 75 years of age to use modern technology to reduce isolation and expand/maintain social networks. Relevant studies and articles written in the last decade were reviewed, beginning with 2010 through current academic literature.

### Study result

The literature review uncovered 574 articles through the given search parameters of social isolation, smartphones, tablets, and computers that foster internet access. Upon removal of articles that fell outside the inclusion criteria or articles within the last decade occurring outside the United States a total of 211 articles remained. Upon review of the 211 articles 23 articles fit the inclusion criteria of older adults aged 55-75, within the United States, and included various forms of information communication technology such as smartphones, tablets, and computers.

This review demonstrated that a gap either exists in the literature or that assumptions from prior research are made concerning today's older adults' willingness to accept and use technology such as smartphones, tablets, and computers to reduce social isolation. (Age 55 - 75) have not been updated. As previously stated, research has shown a connection between social isolation and a negative effect on the health and well-being of older adults [8-10].

Technology, such as smartphones, tablets, and computers can reinforce social networks and reduce social isolation in older adults. This review also highlights the need for additional research that examines the ability of other forms of technology to reduce social isolation among individuals aged 55 to 75 years of age.

## Conclusion

More research is needed on the use of technology such as smartphones, tablets, and computers that foster internet access by older adults aged 55 to 75 to facilitate internet use reduce social isolation and increase social networks. Findings uncovered a willingness of older adults to use technology and increase social networking [11]. The 23 studies that were relevant to this study show an increase in the willingness of older adults to use a form of technology to increase social networks and quality of life that has not been recorded in prior age cohorts. Evidence has been found that ICT can increase social connectedness and reduce social isolation [12]. If indeed older adults are willing to use technology to reduce social isolation and increase their social networks, then studies are needed and how to deliver not only the technology but the training to go with it [13,14].

Through a thorough combing of the literature review, it has been uncovered a willingness of older adults to use various forms of technology to improve their social network and improve their overall standing. Prior reporting showed an unwillingness of older adults to use technology, however, more recent studies that included the technology and not just questions and surveys over technology show something entirely different. A more hands-on approach is needed in order to uncover the true nature or willingness of older adults to use technology in order to reduce social isolation. In particular, this paper argues for the need for further exploration of various forms of information communication technology to reduce social isolation.

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