

# Technology Use Among Older Adults: In Real Life

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Ten thousand Americans will celebrate their 75th birthday today.

Tomorrow, an additional 10,000 adults will celebrate this milestone.

The same is true the day after that, and for thousands of days after that.

This global age wave impacts every facet of society: the work force, healthcare, housing, and consumer spending, to name just a few. What makes this especially interesting is that the demographic revolution coincides with an equally, transformative force...the digital revolution.

The digitization of everything is transforming our world through profound changes in service delivery, access, information, artificial intelligence, and security. The confluence of the demographic and digital revolutions is a topic resonating from the Swiss board rooms of the World Economic Forum through the ladies knitting guild of Spillville, Iowa.

## What do we know about how older adults use technology and how likely are they to use it in the coming decades?

Our current understanding is based upon phone-survey research of adults aged 65 and older. The research is based upon a random, nationally representative sample of older adults. But is it? Unfortunately it is not. Our best research efforts are inadvertently, but significantly hampered by sampling bias and “best light” bias.

Sampling bias has occurred because the people who are successfully reached on the phone are systematically different than those who cannot be reached.

This results in the exclusion of older adults living with:

- cognitive impairment
- hearing impairment
- vision impairment
- frailty

As a result of sampling bias, those who are more healthy and more tech savvy have been oversampled. That is, those aged 65-74 constitute a disproportionate portion of the sample.

In addition to sample bias, there is a second bias that has impacted findings in research on technology use among older adults—“best light bias”. *Best light* bias occurs because humans want to be seen in the best light possible. This means that self-reports of behaviors that are seen as desirable are over-reported, and behaviors that are seen as undesirable are under-reported. In looking at technology use among older adults, researchers ask participants whether they use the internet, wifi, computers, smartphones, tablets, and social media. Societal norms cast technology usage in a favorable light rewarding those who are tech savvy and discounting those who are not.

In order to examine the extent of the impact sampling bias and best light bias, we conducted a study of technology use among older adults using a methodology designed to overcome the shortcomings of standard research. The sample consisted of 56 adults from six states. Participants ranged in age from 75-98. Mirroring the community, the group included respondents with no limitations, as well as those who were hard of hearing, frail, and living with cognitive impairment.

The interviews were conducted in the homes or facilities of the respondents. The research team asked the respondents to demonstrate their devices and how they used them rather than rely upon their verbal responses. Instead of each survey taking 10 minutes to complete via a telephone call, each survey took over an hour to complete. The extra time and effort was worth the investment of time. Table 1 compares the “In Real Life” finding with those of traditional research on the same subject matter.

**Table 1**  
*Technology Use Among Older Adults: The Impact of Study Methodology*

Questions Asked: <b>Do you use ____?</b>	<b>Traditional Studies</b> Adults age 65+ Income > \$75K n=193	<b>When Studied In Real Life</b> Adults age 75+ Income > \$75K n=56
Smartphone	81%	53%
Wifi (Internet access)	87%	58%
Tablet or Computer	62%	46%
Email	55%	51%
Photo Sharing	—	18%
Video Calling	—	5%
Digital Music	—	7%

The results reveal a marked difference in each category. For example, in a phone survey, 81% of participants reported using a smartphone as compared to 53% in the *In Real Life Study*. In the *In Real Life Study*, a number of respondents said they had a smartphone and when asked to hold their device, the phone was a flip phone or a cordless landline. Similarly, in contrast to the phone survey finding that 87% of adults used wifi, only 58% of respondents from the *In Real Life Study* showed the ability to access wifi. Again, our in person learnings revealed misunderstandings over what was meant by wifi as well as situations in which wifi was not in use because it was not connected or did not have needed password.

### **Calvin: Frustrated & Frantic**

“I’m totally comfortable with technology and emailing” said Calvin an affable, 81 year-old widower. Calvin welcomed the research team into his home and proudly displayed his smartphone and computer. Unable to bring up email on his phone, Calvin worked for over 20 minutes to bring up email on the computer. The smile of accomplishment quickly faded once he saw his emails - in fact, he grew frantic. He did not see an email from his bank that had been there a few days ago. “I’ve been hacked, my account was there but now it is GONE”, he said wringing his arthritic hands. He couldn’t find his bank email and believed his account was gone, including his money. Devastated, he asked the research team who he ought to notify. Scrolling down through over 200 spam emails, we found the bank email and assured him all was well. Before our eyes, we saw the confusion, frustration, panic that technology brought into the life of Calvin—a gentleman who deserved better.

Rather than assuming that owning a phone, tablet, or computer meant the ability to access it’s features, we asked about the ability of the respondents to send and receive email, make video calls, access digital music, and share photographs. The vast majority of respondents in the *In Real Life Study* were unable to access photo sharing, video calling, and digital music and only half were able to access email. Table 2 summarizes how older adults in the study

are impacted by challenges in accessing all the features of various technologies.

## Table 2

*Technology Use Among Older Adults: In Real Life*

Here's what we found, among adults age 75+:

**95% miss out on video calls**

**93% can't access digital music**

**82% won't see family photos**

**86% are frustrated with technology**

**Nearly 50% don't have Internet, email, a computer, or a smartphone**

The *In Real Life Study* reveals a reality far different than portrayed by conventional research. Rather than a portrait of access and inclusion, a deeper examination of technology use among older adults reveals a sobering view of remaining barriers and exclusion. Over 95% of the *In Real Life Study* sample were unable to participate in a video call with family or friends. This is especially discouraging given the unique ability of video calls to connect humans. The ability to connect with others via video calls is particularly essential for those living with mobility and transportation limitations, cognitive impairment, and hearing impairment—that is, for adults 75 years old and better.

### **Gloria: Seeing Them Brings Us Back Together Again**

When asked about sharing photos on her phone or tablet, 91 year-old Gloria, responded enthusiastically, “I sure do! I look at them all the time”. The researcher responded, “May I see the photos”? Gloria pulled out a plastic file-folder containing four photographs (one of her husbands, and one of each of her three children. Each photo was well-loved, faded, and tattered. When asked if she had any other pictures she could share from her devices, Gloria assured me she had some. After 10 minutes of trying to access her photos, the researcher suggested they try again later. Gloria

stroked the tattered photos and wistfully mused, “Of our family of five, only two of us are still living – seeing them brings us back together.”

Across the globe, leaders are asking “ who will care for tens of millions of adults ages 85 and older?” The conversations invariably look to the promise of technology. An accurate understanding of technology use among older adults is critical for forecasting the role of technology in addressing global aging. The fastest growing segment of the older population is the oldest old—those ages 85 and older. This group is of particular societal concern because people ages 85 and older are more likely to live with physical challenges than “young” elderly, ages 65 to 74. Moreover, the baby boomers had fewer kids, married less often, and were more likely to live alone. To address these challenges, we must have a deep understanding of technology adoption and the remaining barriers to accessibility. The results of the methodology used in the *In Real Life Study* provides a more accurate, albeit sobering, view of technology access among older adults.

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Chief Gerontologist and Principal Investigator, Kerry Burnight, PhD

[www.DrKerryBurnight.com](http://www.DrKerryBurnight.com)

Dr. Kerry Burnight is one of the nation’s leading Gerontologists. She served as a Professor of Geriatric Medicine at the University of California, Irvine for 19 years. Her published research focuses on the medical forensic aspects of elder abuse and the impact of social isolation. She is the founder of Ageless Alliance, a national social justice movement and nonprofit that bring together people of all ages for the dignity, autonomy, and safety of older adults. Kerry Burnight serves as the Chief Gerontologist at GrandPad where she oversees research and employs a team of GrandAdvisors (ages 85–105) that guide every step of development and implementation.

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