

SUNspot – Wireless Activities by Adults with Disabilities

Volume 2016, Number 03 – December 2016

John T. Morris, PhD and W. Mark Sweatman, PhD

We created “SUNspot” to share some of the latest findings from ongoing data collection for our Survey of User Needs (SUN), our cornerstone survey on use and usability of wireless technology by people with disabilities. We launched the first version of the SUN in 2001. The latest version (Version 5) was conducted in the second half of 2015 and first half of 2016.

Introduction

This SUNspot addresses the following question related to use of wireless activities by adults with disabilities:

- Do people with disabilities use common wireless features and functions at rates similar to the general population?

Data on ownership of mainstream consumer wireless devices (SUNspot 2016-01) can help shed light on degree to which people with disabilities are able to take advantage of the considerable capabilities offered by contemporary mobile wireless technology. The examination of wireless activities in this SUNspot adds critical detail on wireless use patterns by people with disabilities. Here we compare SUN data from 2012-2013 and 2015-2016 with results from surveys conducted by the Pew Research Center in 2013 and 2015 for the general population.

Background to the SUN

Originally launched in 2002 and now in its 5th version, the SUN has been updated over the years to keep current with the rapid pace of technological change. This unique, nationwide survey on wireless technology use by people across disabilities has come to be an important reference for the wireless industry, government regulators, people with disabilities, disability advocates, and other researchers. Over 7,500 people with all types of disabilities have completed at least one of the previous versions of the SUN since 2002. Sample size for SUN 5 is 1,168. Participants were recruited using convenience sampling via email, the web, personal outreach, telephone, and in-person interviews. The mean age of all respondents who reported a disability was 59.29 years and 52.23 for the 2012-2013 and 2015-2016 surveys, respectively.

Whites accounted for 81 percent and 84 percent of the earlier and later samples, respectively. Females represented 58% of respondents in both surveys. Regarding income, 61 and 56 percent of the earlier and later samples reported annual household income below \$50,000.

Of over 1150 SUN respondents, 970 reported having one of the following difficulties:

- Difficulty concentrating, remembering or making decisions
- Frequent worry, nervousness, or anxiety
- Difficulty seeing
- Difficulty hearing
- Difficulty speaking so people can understand you
- Difficulty using your arms
- Difficulty using your hands and fingers
- Difficulty walking or climbing stairs

Wireless activities by people with disabilities

People with disabilities engaged in core cellphone activities at rates similar to the general population in 2012-2013 (Table 3) and in 2015-2016 (Table 4), although with some variation for specific activities. Table 3 shows activities for owners of *all types of mobile phones* (basic cellphones and smartphones), while Table 4 shows activities for *smartphones only*. This difference in reporting between the two periods was made necessary by the way the Pew Research Center reported data. Because of these differences Pew data for the two time periods cannot be compared with confidence, nor can the SUN data for the two time periods. Instead, comparisons are best made between the SUN and the Pew surveys for each time period.

Table 1. Wireless activities for *cellphone* users with disabilities (SUN 2012-2013) and in the general population (Pew Research Center, April-May 2013).

	SUN 2012-2013*	Pew 2013**
Texting	71%	81%
Internet	60%	60%
Email	61%	52%
Mobile apps	48%	50%
Social media	48%	N/A
Maps/GPS	45%	49%
Voice calling	64%	N/A
Video calling	25%	21%

*Wireless RERC, Survey of User Needs, 2012-2013.

**Pew Research Center, Cell Phone Activities 2013.

Table 2. Wireless activities for *smartphone* users with disabilities (SUN 2015-2016) and in the general population (Pew Research Center, 2015).

	SUN 2015-2016*	Pew 2015**
Texting	88%	97%
Internet	81%	89%
Email	85%	88%
Mobile apps	70%	N/A
Social media	66%	75%
Maps/GPS	74%	41%
Voice calling	67%	N/A
Video calling	39%	N/A

*Wireless RERC, Survey of User Needs, 2015-2016.

**Pew Research Center, U.S. Smartphone Use in 2015 (data were collected in October 2014).

Core activities for both groups include: text messaging, accessing the Internet, sending and receiving email, using mobile apps, social networking, getting directions/navigation, and listening to music. Notably, three functions have become almost universally used by smartphone users in the general population – and widely used by the smartphone users with disabilities – in the recent period: text messaging, accessing the Internet and emailing. The 2013 Pew data also include video calling/chats, as do the SUN data for both 2012-2013 and 2015-2016. In 2013, both the Pew and SUN samples of cellphone users reported similar rates of video calling/chats.

These results do not suggest that barriers to accessibility and use of mobile smart technology have been largely overcome. Instead, they suggest that these technologies constitute critical tools for all individuals, perhaps especially for people with disabilities. Additional analysis of wireless activities by disability type is required to understand more fully the opportunities and barriers to wireless use.

Data source: Survey of User Needs (SUN), Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC). We share survey data with manufacturers and carriers, as well as with policymakers, for the purpose of improving usability of wireless technology. SUN data are regularly used in guiding industry and government initiatives. The data presented here are based on a non-random sample. The survey is promoted as broadly as possible through convenience sampling techniques, with special effort toward reaching under-represented groups.

Acknowledgement

The Rehabilitation Engineering Research Center for Wireless Technologies is funded by the National Institute on Disability, Independent Living and Rehabilitation Research of the U.S. Department of Health and Human Services, grant # 90RE5007-01-00. The opinions contained here are those of the grantee and do not reflect those of the U.S. Department of Health and Human Services.