

How can teaching about microsoft/cybersecurity benefit seniors

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With the advancements of technology, it is increasingly important that people learn about cybersecurity. Cybersecurity is the practice of keeping computers and electronic data safe. Although technology seems relatively new, cybersecurity was implemented around the 1980s-1990s era of the internet. Specifically, it first emerged in 1987 with the introduction of anti-virus software like Anti4us and FlushotPlus. Ever since then, we have been improving our methods of protecting computers and electronic data from cyber attacks.

When you think of seniors and technology, you think of them not knowing how to fix a tv or getting scammed by a phishing email. This is because they might not know how these work or have never had to use such technology before until now. Nowadays, we can do almost everything online such as shopping, online banking, and even voting. To the younger generation, this is something that we have been living with and we are used to, however this is a foreign concept to senior citizens. An elderly person usually falls victim to phishing emails and other forms of cyber attacks because they lack cyber awareness and the knowledge of cybersecurity. Nonetheless, we can teach them about cybersecurity protocols and how to use microsoft software.

There are some benefits for elderly people and using the internet, for example it can help with increased contact of friends and family. On the other hand, there are some disadvantages of seniors and internet use such as decreasing social interaction, causing them to be increasingly lonely. In a study done by Swiss and Polish researchers, it was shown that depending on psychological, biological, cultural and social underpinnings of their PIU in older adults, it can determine how the internet positively or negatively affects them. The chart below depicts these

results and displays that Swiss seniors mostly use social media and that Polish seniors use the internet for information more. Putting this into account, we can determine that their awareness of online dangers can be attributed to what they use the internet for. Social media refers to online platforms that allow for virtual communities to interact, create content, and share information with each other. People may ask what social media has to do with cybersecurity and the answer is that it has everything to do with it. Due to the fact that seniors tend to overshare on the internet, it is easier for them to get their sensitive information stolen by hackers.

Variables (dichotomic)	Swiss sample %	Polish sample %	χ^2	Statistics <i>p</i>-value
Social media (yes/no)	59/41	48/52	2.60	0.11
Information (yes/no)	36/64	68/32	22.14	<0.001
Videos (yes/no)	17/83	9/91	2.86	0.09
Gaming (yes/no)	11/89	7/93	1.05	0.31
Email (yes/no)	11/89	14/86	0.20	0.65
Professional (yes/no)	3/97	6/94	0.46	0.50
Buying (yes/no)	2/98	13/87	6.77	<0.01
Variables (continuous)	M (SD)	M (SD)	<i>t</i>	<i>p</i>-value
CIUS total score	10.5 (8.8)	8.0 (8.6)	2.01	<0.05
S-UPPS-P Negative urgency	8.7 (2.6)	9.6 (2.9)	−2.44	<0.05
S-UPPS-P Positive urgency	10.0 (2.2)	9.9 (2.6)	0.43	0.67
S-UPPS-P Lack of premeditation	7.7 (2.5)	7.0 (2.0)	2.00	<0.05
S-UPPS-P Lack of perseverance	7.1 (2.8)	6.6 (2.4)	1.31	0.19
S-UPPS-P Sensation seeking	9.3 (2.3)	8.0 (2.7)	3.74	<0.001
SDHS	13.3 (3.2)	12.6 (3.2)	1.44	0.15
<i>CIUS, Compulsive Internet Use Scale; S-UPPS, Short UPPS Impulsivity Behavior scale; SDHS, Short Happiness and Depression Scale.</i>				

Figure 1: "Group Comparisons on the type of online activities, CIUS, S-UPPS-P, SDHS scores" - Internet Use and Problematic Use in Seniors: A Comparative Study in Switzerland and Poland, Frontiers in Psychiatry

There are many sources that can be used to teach seniors about cyber security, like for instance the Cybersecurity Awareness Program Older American Resources made by the CISA. It provides information for how they can stay cyber safe with resources from the FBI, National CyberSecurity Alliance, Internet Crime Complaint Center, and even gives access to a Smartphone Security Checker. They would benefit from these resources because it informs them of cyber crimes that are commonly associated with their age group and how to report it if they happen to them. It can enhance their knowledge since it allows for older adults to go through on their own to start implementing better cybersecurity into their lives.

Being cyber aware can be a very beneficial thing for seniors. As stated in the third paragraph, since seniors are now using social media, they are becoming perfect targets more than any other age group. The issue with seniors and internet use is not their lack of knowledge necessarily, but rather their difficulty of integrating to information security of the internet. Even though there are not many studies done on the cyberworld and how it impacts seniors, there are multiple studies on the digital disconnect of the elderly and how it impacts them. One study maintains focus on the physical and psychological issues of internet use, while the second one focuses on group and social aspects of digital disconnect in seniors. The results of the studies concluded that the older people get, their physical functioning will start to decline, making it harder for them to use technology. Though the data was skewed because of some of the participants leaving the study, it has provided experience and references for the issues of elderly adaptation to the internet.

This is reflected through the significant financial loss from U.S. seniors that are tied to cyber crimes. As seen in the graph below, the majority of monetary loss comes from investment and tech support.

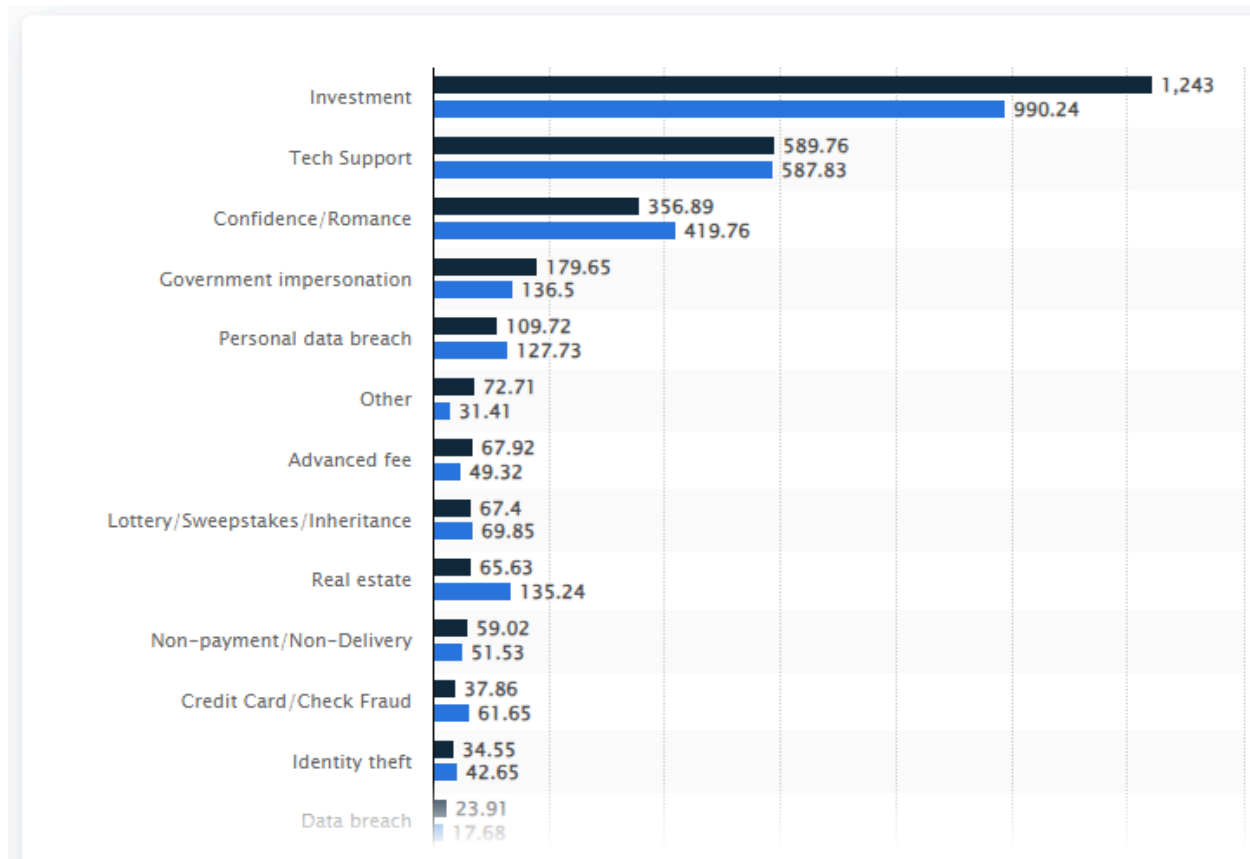


Figure 2: “Monetary losses of cyber crimes victims individuals over 60 years in the United States in 2023, by type of crime (in millions of U.S. Dollars)” - statista.com

The investment section comes from online investment fraud and other financial schemes. These financial schemes can negatively impact their mental, physical, and social health. In “Investor Advisory: Seniors’ Guide to Staying Safe Online”, it goes over the ways that older adults can manage their online services without being overwhelmed. According to the author(s), the benefits of streamlining their online presence is to have a clearer picture of digital footprint, staying up-to-date of services they are using, having the ability to recognize scams, eliminating unnecessary subscriptions, newsletters, and accounts, and having family members assist them

with online activities. They could start to manage online activities by listing online financial service apps, checking connected devices and browsers, writing down all of the websites that they have used within the past year, checking their emails, and confirming that their email address was not compromised. Other steps they can take to ensure better investment in cybersecurity is to not use the same password for every site, use two-factor authentication, store passwords and update them regularly, and sign into financial service websites directly. In summary, all of these steps provided can help seniors protect themselves from cybercriminals, who want to steal their financial information in the future.

The tech support schemes are the second most monetary loss with U.S. seniors, according to the chart listed. These types of scams involve attackers tricking people into paying for unnecessary technical support services. The purpose of this scheme is to steal personal and financial information or to install some type of malware into their devices. An example of this is “Phantom Hacker” schemes that are targeted towards tricking senior citizens into getting their financial and personal information. The article talks about the damages that tech support scams have done to the population of people over 60 years old. In August of 2023, it was reported that the damages went up 40% as compared to 2022. 50% of the people affected were seniors, accounting for the total financial damage of 66%. These scammers are able to take advantage of people over 60 years old because of their “nice and trusting” nature towards them, in order to financially exploit them. They pull this off by pretending to be computer technicians for well known companies, such as Apple or Microsoft or antivirus provider companies such as Norton or McAfee. Scammers convince elderly people to transfer their money into a “safe” place by claiming that there is a virus or threat and suggesting that their financial accounts are at risk from

these “issues”. Ways that they can prevent this while practicing cybersecurity is to never click on unsolicited emails, texts, and/or calls, always question the legitimacy of links to financial providers and tech support services, and keep devices up-to-date with the latest updates.

Seniors can also use Microsoft as a beneficiary tool to help with cyber awareness.

The features and tools of Microsoft can be used to provide seniors with better understanding of how computers work. From the “Hands-On Microsoft Windows 2019 Server” book, it goes into detail about the inner workings of Microsoft Windows 2019 Server and the modules associated with learning about it. Modules 1 and 2 can help seniors provide basic understanding of how it works. In module 1, it summarizes the different ways in which the Windows 2019 server can be used, its purpose and functions, outlines key features, and discusses considerations in installing Windows 2019 Server onto their computers. In contrast, module 2 discusses the configuration of Windows 2019 Server. Module 1 can help seniors to learn about the basics of what Windows Server 2019 can provide them as far as using software. Nonetheless, module 2 can help by teaching them how to monitor the Windows Servers.

In conclusion, seniors will benefit from being taught how to use microsoft and cybersecurity techniques because it can help them navigate the digital world without too many risks.

Cybersecurity techniques such as updating their devices, putting up antivirus/firewalls, not clicking on random links, and using two-factor authentication can improve their experiences with the internet. This can be supported by the research done that shows evidence of seniors that don’t implement these methods, have a more difficult time using the internet and are susceptible to cyberattacks. However, teaching them how to use Microsoft will help them gain knowledge of

how software works. By using Microsoft as a tool for cybersecurity and other cyber techniques to protect themselves, it can prevent digital disconnect and less cyber attacks.

References:

Rochat, Lucien, et al. "Internet Use and Problematic Use in Seniors: A Comparative Study in Switzerland and Poland." *Frontiers in Psychiatry*, vol. 12, pp. 609190–609190, June, 2021, [Study of Internet Use and Problematic Use in Seniors](#)

Jiao, Ruotong. "Is There a Barrier between Seniors and Smartphone Use in The Internet Age? A Study of Digital Disconnection among Older Adults." *SHS Web of Conferences*, vol. 155, p. 3010, Jan 12, 2023, [Is there a Barrier between Seniors and Smartphone Use?](#)

CISA Cybersecurity Awareness Program Older American Resources, *Cybersecurity Best Practices*, Nov 29, 2021, [Cybersecurity Awareness Program Older American Resources](#)

Gore, Karoline , "Phantom Hacker" scams targeting seniors on the rise, LevelBlue, Mar 16, 2024, ["Phantom Hacker" scams targeting seniors on the rise](#)

Jason Eckert - Hands-On Microsoft Windows Server 2019 (MindTap Course List)-Cengage Learning (2020) PDF, Modules 1-2.

Petrosyan, Ani, "Financial Losses of U.S. seniors through cybercrime 2022-2023", [Financial Losses of Seniors in U.S. through cybercrime](#)