# The Factors Associated With Nonuse of Social Media or Video Communications to Connect With Friends and Family During the COVID-19 Pandemic in Older Adults: Web-Based Survey Study

Rachel D Savage<sup>1,2,3</sup>, PhD; Sophia Di Nicolo<sup>4</sup>, HBA; Wei Wu<sup>1,2</sup>, MSc; Joyce Li<sup>1,2</sup>, BSc; Andrea Lawson<sup>1,2</sup>, PhD; Jim Grieve<sup>5</sup>, MEd; Vivek Goel<sup>3,6</sup>, MD, MSc; Paula A Rochon<sup>1,2,3,6,7</sup>, MD, MPH

<sup>1</sup>Women's Age Lab, Women's College Hospital, Toronto, ON, Canada

<sup>2</sup>Women's College Research Institute, Women's College Hospital, Toronto, ON, Canada

<sup>3</sup>ICES, Toronto, ON, Canada

<sup>4</sup>Trinity College, University of Toronto, Toronto, ON, Canada

<sup>5</sup>RTOERO, Toronto, ON, Canada

<sup>6</sup>Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health, University of Toronto, Toronto, ON, Canada <sup>7</sup>Division of Geriatric Medicine, Department of Medicine, University of Toronto, ON, Canada

#### **Corresponding Author:**

Rachel D Savage, PhD Women's Age Lab Women's College Hospital 76 Grenville Street Toronto, ON, M5S 1B2 Canada Phone: 1 416 351 3732 ext 3822 Email: rachel.savage@wchospital.ca

# Abstract

**Background:** Digital technologies have enabled social connection during prolonged periods of physical distancing and travel restrictions throughout the COVID-19 pandemic. These solutions may exclude older adults, who are at higher risk for social isolation, loneliness, and severe outcomes if infected with SARS-CoV-2.

**Objective:** This study investigated factors associated with nonuse of social media or video communications to connect with friends and family among older adults during the pandemic's first wave.

**Methods:** A web-based, cross-sectional survey was administered to members of a national retired educators' organization based in Ontario, Canada, between May 6 and 19, 2020. Respondents (N=4879) were asked about their use of social networking websites or apps to communicate with friends and family, their internet connection and smartphone access, loneliness, and sociodemographic characteristics. Factors associated with nonuse were evaluated using multivariable logistic regression. A thematic analysis was performed on open-ended survey responses that described experiences with technology and virtual connection.

**Results:** Overall, 15.4% (751/4868) of respondents did not use social networking websites or apps. After adjustment, male gender (odds ratio [OR] 1.60, 95% CI 1.33-1.92), advanced age (OR 1.88, 95% CI 1.38-2.55), living alone (OR 1.68, 95% CI 1.39-2.02), poorer health (OR 1.33, 95% CI 1.04-1.71), and lower social support (OR 1.44, 95% CI 1.20-1.71) increased the odds of nonuse. The reliability of internet connection and access to a smartphone also predicted nonuse. Many respondents viewed these technologies as beneficial, especially for maintaining pre–COVID-19 social contacts and routines, despite preferences for in-person connection.

**Conclusions:** Several factors including advanced age, living alone, and low social support increased the odds of nonuse of social media in older adults to communicate with friends and family during COVID-19's first wave. Our findings identified socially vulnerable subgroups who may benefit from intervention (eg, improved access, digital literacy, and telephone outreach) to improve social connection.

(JMIR Aging 2022;5(2):e34793) doi: 10.2196/34793



#### **KEYWORDS**

digital technology; loneliness; older adults; COVID-19; elderly; lonely; mental health; factor; usage; social media; video; communication; connect; family; friend; age; support

## Introduction

Digital technologies have brought people together while maintaining physical distance during the novel COVID-19 pandemic [1], with more older adults reporting use of technology to connect virtually with family and friends than ever before. The 2020 Canadian Internet Use Survey found that almost one-third (29%) of older adults aged  $\geq$ 65 years reported using these services more often since the pandemic, whereas 18% indicated that the pandemic was the first time they communicated with family or friends using video platforms [2]. Although these technologies remain a lifeline to many, there are concerns that technology-based solutions may exclude many older adults, who are at higher risk for social isolation and loneliness and less likely to have the knowledge or capacity to use these technologies [3,4]. Moreover, vaccine rollouts in many regions of North America have relied on complicated websites to book appointments, require internet access and email addresses or mobile phone numbers capable of receiving text messages for registration, and use social media platforms to advertise immunization clinics. This all leads to important access barriers for older adults who are also at greater risk of severe outcomes if infected with SARS-CoV-2 [5].

Prior to the pandemic, research has shown that older adults of advanced age, men, those with lower household income and education, those living alone, those who are Black or Hispanic, or those with a disability are less likely to use the internet and health information technology [6-9]. Digital access (eg, internet access and device affordability), capacity (eg, vision or hearing issues), and an understanding of how to use these technologies are also important [3]. With the dramatically shifting landscape, what is less clear is who is being left behind in this upswell of new users. Since technology has played a vital role during this pandemic and will continue to do so postpandemic, timely data on nonusers are important to appropriately target interventions supports. We conducted а survey and among community-dwelling older Canadians to assess their use of social media or video communications to connect with friends and family and examined factors associated with their nonuse of this technology early in the COVID-19 pandemic.

### Methods

#### Web-Based Survey

We conducted a closed, web-based, and cross-sectional survey with members of a national retired educators' organization (RTOERO) between May 6 and 19, 2020. More than three-quarters of the members (76.5%, 62,000/81,000) had registered an email address with the organization and were eligible to participate. Members were invited by email from RTOERO's chief executive officer and sent reminders at 7 and 10 days. Study materials were provided in English and French. The questionnaire was co-designed and pretested with RTOERO leadership and included 32 questions that examined the impact

```
https://aging.jmir.org/2022/2/e34793
```

RenderX

of COVID-19 on daily life, loneliness, and the use of digital technologies for social connectivity [10].

Social media and video communication use was measured by asking "Do you use any social networking websites (eg, Facebook) or apps (eg, Zoom or FaceTime) to communicate with friends and family?" (yes/no). Respondents were also asked about their internet connection, smartphone access, loneliness, and sociodemographic characteristics including age, gender, ethnicity, language, living arrangement, self-perceived health status and location of residence (rural/urban). The questionnaire was pretested in English with 18 RTOERO board members and staff and French with 1 staff member for usability, technical functionality, clarity, flow, sensitive questions, and timing. The pretest results were not included in the final analysis. In the pretest, it took respondents on average 13 minutes to complete the survey (median: 14 minutes).

Surveys were only analyzed if the respondent clicked "Submit" and responded to more than 1 question. Nonusers of social media were compared to users through Pearson chi-square tests in univariable analyses on sociodemographic factors (age, gender, rurality, health status, and ethnicity), access factors (internet connection and smartphone access), and relational factors (living arrangement, loneliness, communication frequency, and social support). Corresponding adjusted associations were made using multivariable logistic regression including all covariates in the model. Survey questions on gender and ethnicity included "Prefer to self-identify" or "Prefer not to say" response options, which were collapsed into an "Other" category and retained in the regression analysis. Otherwise, respondents with missing (ie, don't know or blank) covariate values were excluded from the model.

We conducted an inductive thematic analysis of free-text responses to 4 survey questions that included an open-ended response option; these questions asked respondents to describe feelings of loneliness, strategies they use to avoid feeling lonely, how RTOERO could support members, and if they had any other comments or suggestions. Responses were reviewed for descriptions of experiences with virtual connection and a set of 14 initial codes were generated by the analyst (SDN) and discussed with the study team. Themes were identified by examining patterns across the codes and were presented, along with illustrative quotations, to both the study team and RTOERO members for input and reflection.

#### **Ethics Approval**

Participation was voluntary, and informed consent was obtained electronically. The study was approved by the Research Ethics Board at Women's College Hospital (#2020-0051-E) and reporting followed the Checklist for Reporting Results of Internet E-Surveys [11].

# Results

The survey completion rate among those who consented to participate was 88.8% (4891/5509). There were 12 respondents excluded who answered  $\leq 1$  question, leaving 4879 respondents in the final analysis. Most respondents were women (71%, 3421/4818), aged 65-79 years (67.4%, 3279/4863), White (91.6%, 4454/4861), and in good self-reported health (89.7%, 4370/4873; Table 1); this age and sex distribution mirrored the broader RTOERO membership (67% women and 14.5% aged <65 years, 64% aged 65-79 years, and 21.5% aged  $\geq$ 80 years; personal communication by JG). Overall, 15.4% (751/4868) of respondents did not use social networking websites or apps to communicate with friends and family. Nonuse was higher in men (21.6%, 301/1394) than women (12.7%, 434/3418; P<.001).

A higher proportion of nonusers were men, aged  $\geq 80$  years, who lived alone and reported fair or poor health (Table 2 and Multimedia Appendix 1 by gender). These sociodemographic

factors remained independently associated with nonuse of social media after adjustment. A moderate or poor internet connection and lack of smartphone access also increased the odds of nonuse, as did lower levels of social support.

Within the open-ended response data, we identified 3 relevant themes: (1) the benefits of technology, (2) maintaining pre–COVID-19 social contacts and routines, and (3) virtual connection not being a substitute for in-person connection (Table 3). References to the use of technology during the pandemic were overwhelmingly positive. Many commented that technology kept them socially connected during lockdown: "*I find I'm doing more emails and video-chats, especially with friends and relatives who live alone. Those communications benefit them and me, I feel*" (woman, age group 55-59 years). Video chat apps like Zoom and WhatsApp were valued by those living alone to alleviate loneliness: "*I am widowed so do have feelings of loneliness at times. If anything, I have had more contact on social media with others now*" (man, age group 75-79 years).

Table 1. Characteristics of older women and men who were survey respondents, May 2020.

Characteristic	All respondents (N=4879), n (%)	Women <sup>a</sup> (n=3421), n (%)	Men <sup>a</sup> (n=1397), n (%)	
Age group (years; all respondents: n=4863; women:	n=3416: men: n=1395)			
<65	1027 (21.1)	846 (24.8)	174 (12.5)	
65-79	3279 (67.4)	2295 (67.2)	945 (67.7)	
≥80	557 (11.5)	275 (8.1)	276 (19.8)	
Living arrangement (all respondents: n=4762; women: n=3356; men: n=1351)				
Lives alone	1415 (29.7)	1138 (33.9)	266 (19.7)	
Does not live alone	3347 (70.3)	2218 (66.1)	1085 (80.3)	
Location of residence (all respondents: n=4752; women: n=3348; men: n=1354)				
Urban	3962 (83.4)	2791 (83.4)	1132 (83.6)	
Rural	751 (15.8)	531 (15.9)	209 (15.4)	
Outside Canada	39 (0.8)	26 (0.8)	13 (1)	
Self-reported health status (all respondents: n=4873	; women: n=3417; men: n=1397)			
Excellent or very good or good	4370 (89.7)	3082 (90.2)	1238 (88.6)	
Fair or poor	492 (10.1)	330 (9.7)	154 (11)	
Don't Know	11 (0.2)	5 (0.2)	5 (0.4)	
Ethnicity (all respondents: n=4861; women: n=3410; men: n=1397)				
White	4454 (91.6)	3153 (92.5)	1264 (90.5)	
Non-White	269 (5.5)	189 (5.5)	76 (5.4)	
Other <sup>b</sup>	138 (2.8)	68 (2)	57 (4.1)	
Social media use (all respondents: n=4868; women: n=3418; men: n=1394)				
Yes	4113 (84.5)	2983 (87.3)	1090 (78.2)	
No	751 (15.4)	434 (12.7)	301 (21.6)	
Don't Know	4 (0.1)	1 (0)	3 (0.2)	

<sup>a</sup>61 respondents did not identify their gender.

<sup>b</sup>Includes respondents who selected either "Prefer to self-identify" or "Prefer not to say."

RenderX

Table 2. Odds ratios for nonuse of social media or video communications in a sample of older Canadians, May 2020 (N=4526).

		-	=	
Characteristic	Social media use		Odds ratio	
	Nonuser, n (%)	User, n (%)	Crude OR <sup>a</sup> (95% CI)	Adjusted OR (95% CI)
Gender (nonuser: n=735; user: n=4073)				
Men	301 (41)	1090 (26.8)	1.90 (1.61-2.23)	1.60 (1.33-1.92)
Women	434 (59)	2983 (73.2)	ref <sup>b</sup>	ref
Age group (years; nonuser: n=749; user: n=4102)				
<65	103 (13.8)	924 (22.5)	ref	ref
65-79	488 (65.2)	2782 (67.8)	1.57 (1.26-1.97)	1.24 (0.98-1.57)
≥80	158 (21.1)	396 (9.7)	3.58 (2.72-4.71)	1.88 (1.38-2.55)
Living alone (nonuser: n=729; user: n=4020)				
Yes	286 (39.2)	1124 (28)	1.55 (0.96-2.49)	1.68 (1.39-2.02)
No	443 (60.8)	2896 (72)	ref	ref
Rural residence (nonuser: n=723; user: n=3976)				
Yes	105 (14.5)	646 (16.2)	0.88 (0.70-1.10)	0.90 (0.71-1.14)
No	618 (85.5)	3330 (83.8)	ref	ref
Self-reported fair or poor health (nonuser: n=748	; user: n=4100)			
Excellent or very good or good	633 (84.6)	3725 (90.9)	ref	ref
Fair or poor	115 (15.4)	375 (9.1)	1.81 (1.44-2.26)	1.33 (1.04-1.71)
Ethnicity (nonuser: n=730; user: n=3981)				
White	41 (5.6)	227 (5.7)	ref	ref
Non-White	689 (94.4)	3754 (94.3)	0.98 (0.70-1.39)	0.85 (0.59-1.22)
Internet connection (nonuser: n=737; user: n=407	8)			
Very good or good	647 (87.8)	3709 (91)	ref	ref
Moderate or poor	90 (12.2)	369 (9)	1.40 (1.09-1.79)	1.39 (1.06-1.82)
Access to a smartphone (nonuser: n=745; user: n=	=4098)			
Yes	436 (58.5)	3460 (84.4)	ref	ref
No	309 (41.5)	638 (15.6)	3.84 (3.25-4.55)	3.08 (2.58-3.69)
Loneliness (nonuser: n=727; user: n=4022)				
Always or often	82 (11.3)	321 (8)	1.37 (1.05-1.78)	1.05 (0.78-1.41)
Some of the time	226 (31.1)	1455 (36.2)	0.83 (0.70-0.99)	0.81 (0.67-0.98)
No	419 (57.6)	2246 (55.8)	ref	ref
Communication frequency (nonuser: n=749; user	: n=4102)			
High (≥3 times in past week)	645 (86.1)	3866 (94.2)	ref	ref
Low (0-2 times in past week)	104 (13.9)	236 (5.8)	2.64 (2.07-3.38)	2.01 (1.54-2.62)
Received offers of assistance (nonuser: n=742; use	er: n=4092)			
Yes	248 (33.4)	1660 (40.6)	ref	ref
No	494 (66.6)	2432 (59.4)	1.36 (1.15-1.60)	1.44 (1.20-1.71)

<sup>b</sup>OR: odds ratio.

XSL•FO RenderX

<sup>a</sup>Ref: reference category.

Table 3.	Themes and illustrative of	quotes based on free-text res	sponses to the web-based survey,	May 2020.
----------	----------------------------	-------------------------------	----------------------------------	-----------

Theme	Description	Illustrative quotes
Technology and virtual connection is beneficial for some older adults to stay connected	Considering the COVID-19 pandemic, some older adults have found using technology to stay connected virtually to be beneficial as they are unable to see people in person. They may be using technology for various activities, including, but not limited to, video calling, emailing, and messaging their friends and family.	<ul> <li>"Zoom, What's App etc have been excellent platforms for keeping families connected across the globe and for maintaining local social activities such as card games, yoga, book clubs etc."</li> <li>"I find I'm doing more emails and video-chats, especially with friends and relatives who live alone. Those communications benefit them and me, I feel."</li> <li>"Zoom app has been very helpful, able to see my mom, family members and girlfriends."</li> </ul>
Technology and virtual connection has allowed for some older adults to maintain connections and help to enable their rou- tine	The internet has allowed for older adults to shift their regular activities to the web to facilitate social interac- tions. Some of those who were previously engaged in various activities with others were able to continue this engagement virtually during the pandemic. In this sense, the move to web-based activities is assisting in maintaining existing relationships and social connec- tions. The theme of routine and regularity was also discussed as older adults indicated activities occurring a certain number of times a week or having scheduled calls with friends and family.	<ul> <li>"My book club, my walking group, my outdoor club and my monthly lunch friends now meet on Zoom."</li> <li>"Virtual Storytelling on-line events 3 times per week; Church groups three time per week; Book club once a week; weekly family gatherings online; daily work with political social justice groups; long walks in nature; great friends; lots of exercise scheduled at the same time daily"</li> <li>"I participate in a virtual exercise class twice a week, virtual bridge club twice a week and Facetime chats twice a week. Family zoom calls periodically. I text a friend that I am coming by and walk past her house and wave and talk through an open window."</li> </ul>
Technology and virtual connection is not a re- placement for social inter- action	Although technology and virtual connection has been positive for some, there is still critiques that it is not the same as or a replacement for in-person interactions. Respondents indicated that although they are using virtual connection or technology to stay connected now, they still long for that in-person interaction and connection.	<ul> <li>"Although I've connected with family and friends by telephone, it isn't the same as face to face"</li> <li>"Virtual book club however human closeness and touching (i.e. hugs) is imperative for high quality living"</li> <li>"I try to reach out via social media to my best friend daily. I phone family members who are not on social media. However, regardless of the advances of social media, nothing will ever replace face-to-face contact or the human touch."</li> </ul>

Women described how technology allowed them to shift their regular activities to the web to maintain pre—COVID-19 routines: "*My book club, my walking group, my outdoor club and my monthly lunch friends now meet on Zoom*" (woman, age group 70-74 years). For others, social networking technology was used to establish new social routines.

Despite this, some respondents acknowledged the limitations of these technologies, still longing for in-person interaction: "*texting and phone calls are great, but the one-on-one contact is missing*" (man, age group 75-79 years) and "*regardless of the advances of social media, nothing will ever replace face-to-face contact or the human touch*" (woman, age group 65-69 years).

### Discussion

#### **Principal Findings and Comparison With Prior Work**

In a survey of 4879 older retirees of the education sector, we found that 1 in 7 were not using social networking websites or apps to communicate with friends and family early in the COVID-19 pandemic. We identified several characteristics associated with an increased likelihood of nonuse including male gender, advanced age, living alone, poorer health, poor internet connection, a lack of smartphone access, and lower social support. Our findings are consistent with studies of technology use in older adults, which similarly show that advanced age, male gender, being unmarried, and poorer

RenderX

self-reported health are important predictors of nonuse and telemedicine unreadiness [3,12].

We found that sentiments toward technology use during the early weeks of the pandemic were mostly positive, with respondents describing how technology facilitated social connections, allowed them to maintain routines, or helped them adjust to a new way of life. Qualitative studies on the experiences of older adults during the pandemic's first wave report similar findings, with technology being described as having a facilitative role in allowing older adults to engage in the things that matter most to them despite ongoing restrictions [13-15].

#### Implications

Loneliness and social isolation are top concerns of older adults during the COVID-19 pandemic [10,16], so developing effective strategies to maintain social connection while adhering to public health recommendations is essential. For many older adults, digital communication has been a source of joy and comfort during the often uncertain times of the pandemic [16]. Efforts are needed to enable access and build digital literacy to support those who wish to use these technologies but are currently unable to. This includes rigorous research on what strategies are effective and for whom and addressing structural barriers to technology use, including universal internet access [4]. Such improvements could have far-reaching impacts beyond enhanced social connection. Now more than ever, digital technologies are being used to deliver lifesaving health care and health promotion

services, including access to COVID-19 testing and vaccines and other essential services including education, groceries, banking, shopping, and government resources and support. Improving the adoption and use of these technologies in older adults and removing structural barriers to access will ensure the benefits of technology are equitably realized. This is especially important as telehealth expands and is incorporated into routine clinical practice [12].

Despite its benefits, technology-based solutions are not a panacea for social connection. In our study and others [17], older adults have acknowledged that even with virtual connection, gaps in social connection and support remain. A recent comparative study using nationally representative longitudinal survey data in the United States and United Kingdom found that virtual contact during the pandemic did not compensate for the lack of in-person contact in terms of supporting older adults' mental well-being in either country [18]. In fact, the authors found that in the United States, older adults with more frequent virtual contact were more likely to feel lonely during the pandemic and have become lonelier in both countries [18]. Although we did not find an association between loneliness and social media use/nonuse, future research is needed to better understand temporal associations and the potential unintended consequences of virtual connection, particularly for subgroups like older women, who have been reported to be more likely to rely on virtual-only contact during the pandemic [18].

These findings underscore that the value of in-person and offline connections cannot be forgotten. Weekly telephone call interventions with volunteers have shown benefit to both older adults living in long-term care [19] and those in the community [20] during the COVID-19 pandemic. Supporting older adults to remain socially connected through more traditional means is an important and more accessible complement to technological solutions; both are needed to ensure solutions to the issue of loneliness do not further exclude older adults who are not on the internt [4,21,22]. Outdoor environments and spaces are a safe option for connecting in-person at a distance, and the use of these spaces have been shown to be an important predictor of social connectedness pre–COVID-19 [23]. Improving equitable access to safe, accessible open spaces within

neighborhoods and enhancing existing ones to better facilitate social interaction would again pay dividends now and in the future.

#### Limitations

Our study has several limitations. Our study is based on a convenience sample of community-dwelling, retired educators who had internet access. Due to this sample, the prevalence of social media use was likely overestimated in our study. Estimates of social media use by older adults during the pandemic for social connection are wide-ranging (eg, 37% to 80% based on surveys using similar methodologies conducted during the first wave in the United States and Canada) [24,25]. The rates of use are expected to be lower in the general population of older adults, who may face access barriers due to lower levels of education, lower income, health challenges, and ethnicity or race. In a racially diverse study of US older adults, 76% reported minimal video-based socializing; access to and discomfort with technology were described as a key barrier to coping, maintaining social connection, and accessing health care during the pandemic [26]. There are other factors that are associated with nonuse of digital technologies that we did not evaluate, including cognitive impairment, frailty, vision or hearing impairments, and non-English/French speaking ability [27,28]. The unique needs and barriers of these population subgroups warrant thorough investigation and consideration when designing interventions, programs, and services.

#### Conclusion

Among a sample of retired educators with internet access, we found that male gender, advanced age, living alone, poorer health, and lower social support increased the odds of nonuse of social media to communicate with friends and family during the first wave of the COVID-19 pandemic. The reliability of internet connection and smartphone access also predicted nonuse. Strategies to improve the uptake of digital technologies for social connection must address structural barriers to accessing technology and build digital literacy among older adults. Complementary approaches, such as telephone outreach, are also needed to improve social connection without further excluding older adults who remain offline.

#### Acknowledgments

The study authors thank RTOERO staff who assisted in the survey and the members who completed the survey. PAR is the RTOERO Chair in Geriatric Medicine at the University of Toronto. RDS, VG, and PAR received funding from the Canadian Institutes of Health Research to investigate the burden and health system impact of loneliness in older adults (PJT162221).

#### **Conflicts of Interest**

None declared.

#### Multimedia Appendix 1

Characteristics of social media users and nonusers, stratified by gender, May 2020. [DOCX File , 18 KB-Multimedia Appendix 1]

#### References



- Galea S, Merchant RM, Lurie N. The mental health consequences of COVID-19 and physical distancing: the need for prevention and early intervention. JAMA Intern Med 2020 Jun 01;180(6):817-818. [doi: <u>10.1001/jamainternmed.2020.1562</u>] [Medline: <u>32275292</u>]
- 2. Bilodeau H, Kehler A, Minnema N. Internet use and COVID-19: how the pandemic increased the amount of time Canadians spend online. Statistics Canada. 2021 Jun 24. URL: <u>https://www150.statcan.gc.ca/n1/pub/45-28-0001/2021001/article/00027-eng.htm</u> [accessed 2022-01-15]
- Lam K, Lu AD, Shi Y, Covinsky KE. Assessing telemedicine unreadiness among older adults in the United States during the COVID-19 pandemic. JAMA Intern Med 2020 Oct 01;180(10):1389-1391 [FREE Full text] [doi: 10.1001/jamainternmed.2020.2671] [Medline: 32744593]
- 4. Dahlberg L. Loneliness during the COVID-19 pandemic. Aging Ment Health 2021 Jul;25(7):1161-1164. [doi: 10.1080/13607863.2021.1875195] [Medline: 33491474]
- 5. Press VG, Huisingh-Scheetz M, Arora VM. Inequities in technology contribute to disparities in COVID-19 vaccine distribution. JAMA Health Forum 2021 Mar 19;2(3):e210264. [doi: <u>10.1001/jamahealthforum.2021.0264</u>]
- 6. Hong YA, Cho J. Has the digital health divide widened? trends of health-related internet use among older adults from 2003 to 2011. J Gerontol B Psychol Sci Soc Sci 2017 Sep 01;72(5):856-863. [doi: 10.1093/geronb/gbw100] [Medline: 27558403]
- Kontos E, Blake KD, Chou WS, Prestin A. Predictors of eHealth usage: insights on the digital divide from the Health Information National Trends Survey 2012. J Med Internet Res 2014 Jul 16;16(7):e172 [FREE Full text] [doi: 10.2196/jmir.3117] [Medline: 25048379]
- Levy H, Janke AT, Langa KM. Health literacy and the digital divide among older Americans. J Gen Intern Med 2015 Mar;30(3):284-289 [FREE Full text] [doi: 10.1007/s11606-014-3069-5] [Medline: 25387437]
- 9. Weaver JB, Mays D, Weaver SS, Hopkins GL, Eroglu D, Bernhardt JM. Health information-seeking behaviors, health indicators, and health risks. Am J Public Health 2010 Aug;100(8):1520-1525. [doi: 10.2105/AJPH.2009.180521] [Medline: 20558794]
- Savage RD, Wu W, Li J, Lawson A, Bronskill SE, Chamberlain SA, et al. Loneliness among older adults in the community during COVID-19: a cross-sectional survey in Canada. BMJ Open 2021 Apr 02;11(4):e044517 [FREE Full text] [doi: 10.1136/bmjopen-2020-044517] [Medline: <u>33811054</u>]
- Eysenbach G. Improving the quality of web surveys: the Checklist for Reporting Results of Internet E-Surveys (CHERRIES). J Med Internet Res 2004 Sep 29;6(3):e34 [FREE Full text] [doi: 10.2196/jmir.6.3.e34] [Medline: 15471760]
- 12. Rivera V, Aldridge MD, Ornstein K, Moody KA, Chun A. RESEARCHRacial and socioeconomic disparities in access to telehealth. J Am Geriatr Soc 2021 Jan 24;69(1):44-45 [FREE Full text] [doi: 10.1111/jgs.16904] [Medline: 33075143]
- Xie B, Shiroma K, De Main AS, Davis NW, Fingerman K, Danesh V. Living through the COVID-19 pandemic: community-dwelling older adults' experiences. J Aging Soc Policy 2021;33(4-5):380-397. [doi: 10.1080/08959420.2021.1962174] [Medline: 34365910]
- Chen AT, Ge S, Cho S, Teng AK, Chu F, Demiris G, et al. Reactions to COVID-19, information and technology use, and social connectedness among older adults with pre-frailty and frailty. Geriatr Nurs 2021 Aug;42(1):188-195 [FREE Full text] [doi: 10.1016/j.gerinurse.2020.08.001] [Medline: 32863038]
- 15. Experience of people approaching later life in lockdown: the impact of COVID-19 on 50-70-year olds. Centre for Ageing Better. 2020 Jul 29. URL: <u>https://ageing-better.org.uk/publications/</u>
- experience-people-approaching-later-life-lockdown-impact-covid-19-50-70-year-olds [accessed 2022-01-15]
  16. Whitehead BR, Torossian E. Older adults' experience of the COVID-19 pandemic: a mixed-methods analysis of stresses and joys. Gerontologist 2021 Jan 21;61(1):36-47 [FREE Full text] [doi: 10.1093/geront/gnaa126] [Medline: 32886764]
- Fuller HR, Huseth-Zosel A. Lessons in resilience: initial coping among older adults during the COVID-19 pandemic. Gerontologist 2021 Jan 21;61(1):114-125 [FREE Full text] [doi: 10.1093/geront/gnaa170] [Medline: 33136144]
- Hu Y, Qian Y. COVID-19, inter-household contact and mental well-being among older adults in the US and the UK. Front Sociol 2021;6:714626 [FREE Full text] [doi: 10.3389/fsoc.2021.714626] [Medline: 34381838]
- van Dyck LI, Wilkins KM, Ouellet J, Ouellet GM, Conroy ML. Combating heightened social isolation of nursing home elders: the Telephone Outreach in the COVID-19 Outbreak program. Am J Geriatr Psychiatry 2020 Sep;28(9):989-992 [FREE Full text] [doi: 10.1016/j.jagp.2020.05.026] [Medline: 32593495]
- Kahlon MK, Aksan N, Aubrey R, Clark N, Cowley-Morillo M, Jacobs EA, et al. Effect of layperson-delivered, empathy-focused program of telephone calls on loneliness, depression, and anxiety among adults during the COVID-19 pandemic: a randomized clinical trial. JAMA Psychiatry 2021 Jun 01;78(6):616-622 [FREE Full text] [doi: 10.1001/jamapsychiatry.2021.0113] [Medline: <u>33620417</u>]
- 21. Seifert A. The digital exclusion of older adults during the COVID-19 pandemic. J Gerontol Soc Work 2020 May 13;63(6-7):674-676. [doi: 10.1080/01634372.2020.1764687] [Medline: 32401181]
- 22. Seifert A, Cotten SR, Xie B. A double burden of exclusion? digital and social exclusion of older adults in times of COVID-19. J Gerontol B Psychol Sci Soc Sci 2021 Feb 17;76(3):e99-e103 [FREE Full text] [doi: 10.1093/geronb/gbaa098] [Medline: 32672332]
- 23. Gibney S, Zhang M, Brennan C. Age-friendly environments and psychosocial wellbeing: a study of older urban residents in Ireland. Aging Ment Health 2020 Dec;24(12):2022-2033. [doi: 10.1080/13607863.2019.1652246] [Medline: 31402677]

RenderX

- Kakulla B. Personal tech and the pandemic: older adults are upgrading for a better online experience. AARP. 2021 Sep. 24. URL: https://www.aarp.org/research/topics/technology/info-2021/ 2021-technology-trends-older-americans.html-CMP=RDRCT-PRI-TECH-040721/?cmp=RDRCT-907b618d-20210416 [accessed 2021-06-28]
- 25. AGE-WELL Network of Centres of Excellence (NCE). COVID-19 has significantly increased the use of many technologies among older Canadians: poll. Cision. 2020 Sep 29. URL: https://www.newswire.ca/news-releases/ covid-19-has-significantly-increased-the-use-of-many-technologies-among-older-canadians-poll-865959030.html [accessed 2021-06-28]
- Kotwal AA, Holt-Lunstad J, Newmark RL, Cenzer I, Smith AK, Covinsky KE, et al. Social isolation and loneliness among 26. San Francisco Bay Area older adults during the COVID-19 shelter-in-place orders. J Am Geriatr Soc 2021 Jan 09;69(1):20-29 [FREE Full text] [doi: 10.1111/jgs.16865] [Medline: 32965024]
- 27. Lee DR, Lo JC, Ramalingam N, Gordon NP. Understanding the uptake of digital technologies for health-related purposes in frail older adults. J Am Geriatr Soc 2021 Jan;69(1):269-272. [doi: 10.1111/jgs.16841] [Medline: 33011975]
- 28. Jacobs M, Ellis C. Telemedicine disparities during COVID-19: provider offering and individual technology availability. J Am Geriatr Soc 2021 Sep;69(9):2432-2434. [doi: 10.1111/jgs.17280] [Medline: 34000077]

#### Abbreviations

**OR:** odds ratio

Edited by J Wang; submitted 08.11.21; peer-reviewed by F Mayoral, B Xie, W Tang; comments to author 27.12.21; revised version received 17.01.22; accepted 25.03.22; published 06.06.22

Please cite as:

Savage RD, Di Nicolo S, Wu W, Li J, Lawson A, Grieve J, Goel V, Rochon PA The Factors Associated With Nonuse of Social Media or Video Communications to Connect With Friends and Family During the COVID-19 Pandemic in Older Adults: Web-Based Survey Study JMIR Aging 2022;5(2):e34793 URL: https://aging.jmir.org/2022/2/e34793 doi: <u>10.2196/34793</u> PMID:

©Rachel D Savage, Sophia Di Nicolo, Wei Wu, Joyce Li, Andrea Lawson, Jim Grieve, Vivek Goel, Paula A Rochon. Originally published in JMIR Aging (https://aging.jmir.org), 06.06.2022. This is an open-access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work, first published in JMIR Aging, is properly cited. The complete bibliographic information, a link to the original publication on https://aging.jmir.org, as well as this copyright and license information must be included.

