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Older Adults' Online Information Seeking and Subjective Well-Being: The Moderating Role of Internet Skills

MATTHIAS HOFER
ESZTER HARGITTAI
MORITZ BÜCHI
ALEXANDER SEIFERT
University of Zurich, Switzerland

As increasing numbers of older adults incorporate the Internet into their lives, it is important to go beyond studying whether being an Internet user makes a difference for this population by examining how specific uses and skills relate to subjective well-being. This study examines the association between online information seeking and life satisfaction as one defining component of subjective well-being among 643 Swiss Internet users aged 60 and over. We find a positive relationship between online information seeking and older adults' life satisfaction. Inspired by digital inequality research, we then explore whether this relationship is moderated by Internet skills. Results suggest that with increasing Internet skills, the association between online information seeking and life satisfaction gets stronger. We discuss the findings in light of both research on well-being and on digital inequality.

Keywords: online information seeking, Internet use, life satisfaction, well-being, older adults, Internet skills, digital inequality

Older adults aged 60 and over are the fastest growing demographic segment worldwide and comprise an increasing number of Internet users, yet surprisingly little research has looked at their Internet uses beyond exploring differences between users and nonusers (Anderson & Perrin, 2017). As more and more older adults go online, the core digital divide between users and nonusers will shrink. However, the question of digital inequality shifts the focus from whether or not someone uses the Internet to how and with what effect. Accordingly, this study analyzes how older adults' online information seeking is related to their life satisfaction and how this relationship may depend on individuals' Internet skills. It thereby contributes to research on both well-being and digital inequality among older adults.

Matthias Hofer: m.hofer@ikmz.uzh.ch
Eszter Hargittai: e.hargittai@ikmz.uzh.ch
Moritz Büchi: m.buechi@ikmz.uzh.ch
Alexander Seifert: alexander.seifert@zfg.uzh.ch
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Currently, the European population has the largest percentage of adults over 60 years old (United Nations, 2018). Older adults often experience social, health-related, and cognitive losses (e.g., Hofer, 2016, forthcoming; World Health Organization, 2015). These losses can go along with a decrease in older adults' well-being (Delle Fave et al., 2018). This is problematic, as numerous studies have found that subjective well-being has a protective role in health maintenance and longevity (e.g., Diener, Oishi, & Tay, 2018; Steptoe, Deaton, & Stone, 2015). However, surprisingly, studies show that subjective well-being appears to remain relatively stable throughout the life span (Springer, Pudrovska, & Hauser, 2011). Some studies even report an improvement of well-being in older age, suggesting a U-shaped relationship between age and well-being (Blanchflower & Oswald, 2004, 2008; Lockenhoff & Carstensen, 2004). In this article, we examine how a particular type of Internet use is relevant to a person's life satisfaction as a core component of a person's well-being. Specifically, we examine how online information seeking may be especially well suited to the stabilization or improvement of life satisfaction. Drawing on digital inequality scholarship, we further examine how Internet skills may moderate this relationship. Our study contributes to both research on media-use-related well-being and research on digital inequality.

Well-Being Through Internet Use

Well-being can take different forms. Essentially, scholars differentiate among three forms of well-being (e.g., Hofer, 2016). First, subjective or hedonic well-being consists of the presence of positive and the absence of negative affect (or depression) and satisfaction with one's life. A second form of well-being is referred to as eudaimonic well-being. It is conceptualized as purpose in life, relatedness, autonomy, competence, and meaning in life (e.g., Ryan & Deci, 2001; Ryff, 1989; Waterman, 1993). Finally, social well-being considers the individual within a larger societal context (Keyes, 1998). In this study, we focus on subjective well-being because it can be regarded as the most generic form of well-being (Diener, 1984).

In addition, subjective well-being (and life satisfaction as one of its core dimensions) is considered as one, if not the most important outcome of the process of successful aging (Freund & Riediger, 2003). This process can be defined as "the maximization of gains and the minimization of losses" (Freund & Riediger, 2003, p. 612). Gains and losses can take different forms, such as health or cognitive ability. In this study, we consider successful aging as the minimization of losses and the maximization of gains in terms of well-being.

People rely on resources to manage gains and losses (Freund, 2008). Use of the Internet can be regarded as a valuable resource in this process—especially for older adults who might be confronted with losses in health, mobility, and social embeddedness (Hofer, 2016). Indeed, research indicates that older adults comprise a large number of current and potential Internet users (Pew Research Center, 2019; Seifert, Doh, & Wahl, 2017). For instance, a representative survey across Switzerland and 16 European Union countries administered in 2015 showed that only 49% of people age 50 years and older used the Internet (König, Seifert, & Doh, 2018). Thus, it is worth asking whether online information seeking can help stabilize or even improve older adults' well-being and thereby serve as a valuable resource in the process of successful aging, or whether this type of Internet use may have negative implications for a person's well-being.

The three facets of a person's well-being (subjective, eudaimonic, and social) have been examined in connection with Internet use. For instance, Cotton, Ford, Ford, and Hale (2014) examined the effect of ICT use on depression or the lack of subjective well-being, finding a positive contribution of ICT use on subjective well-being (see also Cotton, Ford, Ford, & Hale, 2012). Based on data from the U.S. Health and Retirement Study, Heo, Chun, Lee, Lee, and Kim (2015) found Internet use (using a Likert-type single-item measure for Internet use) to be positively associated with various indicators of well-being such as life satisfaction, social support, or eudaimonic well-being with its different dimensions. Using data of older adults from the English Longitudinal Study, Quintana, Cervantes, Sáez, and Isasi (2018) found Internet and e-mail use to be positively related to the eudaimonic component of well-being (see also Sims, Reed, & Carr, 2016).

Not all findings, however, show a positive association between Internet use and well-being. Quintana and colleagues (2018), for instance, found no association between Internet or e-mail use and subjective well-being. Other studies found mixed results (Forsman & Nordmyr, 2017; van der Wardt, Bandelow, & Hogervorst, 2013). Meta-analyses of the field offer helpful summaries of what this area has uncovered so far (Forsman & Nordmyr, 2017; Huang, 2010). Huang (2010) found a small, but negative, correlation between Internet use and subjective well-being, although the included studies were not necessarily conducted with older adults. Forsman and Nordmyr (2017) synthesized both qualitative and quantitative studies with samples of older adults finding that Internet use generally has positive effects on older adults' well-being (indicators: depression, quality of life, loneliness, and life satisfaction). In sum, research on the association between Internet use and well-being has produced diverging results.

Differentiating Between Different Uses

Scholars have long pointed out (e.g., Hargittai, 2002; Zhao 2006) that research on the Internet's effects on different outcomes, such as well-being, should consider a more nuanced view of Internet use rather than just looking at whether people use the technology or not. In their review of the literature, Hunsaker and Hargittai (2018) noted that the lack of such efforts is likely due to limited measures in most data sets about how older people use the Internet once they have gotten connected.

A type of use that is likely to contribute to older adults' well-being is online information seeking (e.g., Hargittai & Hinnant, 2008) whereby users look for different types of content online. In particular, such activities may have beneficial implications not just for other online engagement but for off-line life as well (cf. Rodgers, Wang, Rettie, & Alpert, 2007; Zhou, Fong, & Tan, 2014). Online information seeking may facilitate problem solving and may therefore contribute to an older person's life satisfaction. For example, easier access to health information could give older adults a sense of control over their health rather than having to depend on others (e.g., caregivers or relatives; e.g., Prestin, Vieux, & Chou, 2015). Access to information about cultural events (e.g., concerts) could make users feel more connected to goings-on in their surroundings and expand their social options, which then could positively affect life satisfaction. Numerous studies have shown that people use the Internet as a tool for finding information that is useful in everyday life, such as searching for medical or psychological advice or cultural events (e.g., Hofer & Aubert, 2013; Sum, Mathews, Pourghasem, & Hughes, 2008; Vergeer & Pelzer, 2009).

In their framework for the effects of Internet use on well-being, Castellacci and Tveito (2018) introduce four channels about the impact of Internet use on well-being, one of which is "access to information." In a systematic review, the authors find evidence that the Internet enables individuals to get access to information in a systematic and efficient manner, which can then increase well-being. Sum and colleagues (2008) also show that if the Internet is used to search for information that is useful in one's life (i.e., online information seeking), the effect on well-being is positive. In a similar vein, Zhou and colleagues (2014) argue that online information seeking is strongly related to goal-relevant activities. That is, such use of the Internet seems to be associated with goal achievement. Based on the above literature on online information seeking and well-being, as well as on the concept of successful aging, we hypothesize the following:

H1: Online information seeking is positively associated with life satisfaction.

Digital Inequality and Internet Skills

So far, we have established that a particular type of Internet use, online information seeking, can serve as a valuable resource in the process of successful aging. However, resources need to be used pragmatically to maximize gains (Freund, 2008). Therefore, we argue that for such activities to be related to older adults' life satisfaction positively, a person has to be able to use the Internet efficiently and effectively—that is, Internet skills are necessary for reaping the benefits of online information seeking (Hargittai, 2002; Litt, 2013; van Deursen & Helsper, 2015). Research shows that, in general, older adults who use the Internet tend to look at the technology in positive ways (e.g., Seifert & Schelling, 2016, 2018). However, almost three-quarters of older adults show a lack of confidence in their ability to use the Internet to complete tasks online (Anderson & Perrin, 2017; Hunsaker & Hargittai, 2018). Lack of confidence could lead to nonuse or less use of the Internet and may prevent older adults from reaping the benefits of daily online activities (Seifert & Schelling, 2018). Therefore, the level of skills for using the Internet in a personally useful way has important implications for the Internet's potential effects on older adults' life satisfaction.

Sum and colleagues (2008) concluded that the Internet seems to have a positive effect if users "are aware of how they use it" (p. 202). That is, to maximize gains and minimize losses from online information seeking, people have to be able to use the technology in a competent way (Hargittai, 2002). This is especially true for older adults who did not grow up with digital technologies (Freese, Rivas, & Hargittai, 2006; Hunsaker & Hargittai, 2018; Seifert & Schelling, 2016). This points to the concept of Internet skills as it links to digital inequality—that is, that inequalities in user skills exist among those who are connected (Hargittai, 2010; Hargittai & Hinnant, 2008; van Deursen & Helsper, 2015).

Although considerable research on older adults and Internet use is focused on the digital divide (i.e., the differences between who does and does not use the Internet; Hunsaker & Hargittai, 2018), digital inequality scholarship has noted that important differences remain even among those older adults who are online (e.g., Czaja, Sharit, Hernandez, Nair, & Loewenstein, 2010; Hargittai & Dobransky, 2017; Hargittai, Piper, & Morris, 2018; Hong & Cho, 2016). First, even among older users, research has found socioeconomic differences in who uses the Internet for information-seeking purposes with those of lower education and lower income less likely to engage in such activities (Hargittai & Dobransky, 2017; Hong & Cho, 2016). Second, and even more important for the present study, research has noted that Internet skills (i.e.,

effective and efficient use of the technology) vary within this older age group, with the oldest-old individuals less skilled than the youngest-old individuals (Czaja et al., 2010; Hargittai et al., 2018).

Of particular interest are Internet uses from which people may benefit, thus the focus on online information seeking in studies (e.g., Hargittai & Dobransky, 2017; Hong & Cho, 2016). And although being online is a necessary condition for reaping the potential benefits of such uses, it is not sufficient. There has to be a certain level of knowledge about how to use the technology in an effective and successful way (Hargittai, 2002). Van Deursen and Helsper (2015), for instance, stress the role of Internet skills for obtaining benefits from Internet use. They state that insufficient "skills have been found to play a role in limiting success or efficiency in the undertaking of specific online tasks" (p. 32). Aside from promoting personally beneficial uses, skills have also been found to play a key role in online behavior geared toward preventing harms. For example, Büchi, Festic, Just, and Latzer (forthcoming) found that older adults do much less to protect their online privacy than younger users, with the primary obstacle being a lack of skills rather than a lack of concerns.

In sum, previous evidence points to the fact that (1) there is a considerable amount of variance in Internet skills among older adults; and (2) whether people can benefit from online information seeking depends on how skilled they are at using the Internet. This points to a moderating role of Internet skills for the association between online information seeking and subjective well-being. Based on the above discussion of Internet skills within a digital inequality framework, we hypothesize the following:

H2: Internet skills moderate the association between online information seeking and life satisfaction, such that among people with higher Internet skills the association between online information seeking and life satisfaction is stronger than among people with lower Internet skills.

Method

To examine our hypotheses, we conducted a survey of older adults aged 60 and over. The survey took place in March 2018. It was conducted in the German-speaking part of Switzerland.

Participants

We analyze data from 643 older adults collected through a professional online access panel. All participants are residents of the German-speaking part of Switzerland (M_{age} = 67.50 years, SD_{age} = 5.50 years; n_{women} = 385) who were compensated with a small amount of money for participating.

Measures

Main Variables

We measured life satisfaction as a component of subjective well-being using a 7-point Likert scale, ranging from 1 (*do not agree at all*) to 7 (*completely agree*) with five items (e.g., "I am satisfied with my life.")

from the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). We then averaged the items after a confirmatory factor analysis (CFA; see Results section; M = 5.04, SD = 1.39, α = .91).

We measured online information seeking with four items covering different life domains. Specifically, we asked respondents how often they used the Internet to (1) search for information with a search engine, (2) search for advice, (3) search for medical information, and (4) search for cultural and leisure-related information. Participants could indicate the frequency of use on an 8-point scale, ranging from 1 (*never*) to 8 (very *often*) (M = 5.01, SD = 1.48, α = .73). After a CFA (see Results section), we averaged the responses to the four items.

To assess Internet skills, we used an established scale (Hargittai & Hsieh, 2012). Participants were asked to rate their level of understanding of six Internet-related terms (e.g., advanced search, phishing). They could indicate their understanding on a 5-point Likert scale ranging from 1 (no *understanding*) to 5 (*full understanding*). We averaged the six measures after a CFA (M = 2.82, SD = 1.19, α = .91; see Results section).

Control Variables

Household income was assessed on 11 categories ranging from 1 = 0–999 Swiss Francs per month to 11 = more than 10,000 Swiss Francs per month.

Highest education was assessed with 12 categories from the Swiss Federal Statistical Office. The variable was then recoded into three categories representing 0 = high school or lower, 1 = some college, 2 = bachelor's degree or higher, where 0 is the base category in the models (cf. Hargittai et al., 2018; see Table 1).

Marital status was measured on six categories (see Table 1). We dichotomized this variable (0 = single, 1 = nonsingle).

Because some participants in our sample were below the retirement age, we also asked participants whether they were part of the workforce, and 34.9% were still working—either full time or part time.

Perceived health—an important factor concerning a person's well-being (e.g., Okun, Stock, Haring, & Witter, 1984)—was measured with one item: "How would you describe your current health?" Participants could answer on a 5-point Likert scale ranging from 1 (*very poor*) to 5 (*excellent*) (M = 3.77, SD = 0.85). Age in years (M = 67.50, SD = 5.50) and sex (40.1% male, 59.9% female) were also recorded.

Finally, we assessed the frequency with which participants used the Internet. Participants could answer on a 7-point scale ranging from 0 (*never*) to 7 (*several times a day*) (M = 6.74, SD = 0.86).

Analytical Strategy

We first present a CFA of the three relevant study measures (subjective well-being, online information seeking, and Internet skills), then bivariate statistics, and finally a moderated regression model followed by a discussion of our findings.

Results

Descriptive Statistics and Measurement Model

Descriptive statistics are displayed in Table 1.

Table 1. Descriptive Statistics of Study Variables.

	% of Sample	*M*	*SD*
1. Age in years		67.5	5.5
2. Sex (0 = male)			
Male	59.9		
Female	40.1		
3. Marital status			
Single	11.5		
Married	54.1		
Civil union	2.3		
Separated	1.7		
Divorced	24.0		
Widowed	6.4		
4. Highest education			
High school or lower	58.0		
Some college	29.4		
Bachelor or higher	12.6		
5. Household income			
1 CHF 0–999	1.1		
CHF 1,000–1,999	5.0		
CHF 2,000–2,999	8.6		
CHF 3,000–3,999	14.8		
CHF 4,000–4,999	15.2		
CHF 5,000–5,999	11.5		
CHF 6,000–6,999	12.6		
CHF 7,000–7,999	8.7		
CHF 8,000–8,999	6.8		
CHF 9,000–9,999	4.0		
more than CHF 10,000	10.4		
6. Being in the workforce	34.9		

Yes			
No	65.1		
7. Perceived health		3.8	0.9
8. Frequency of Internet use		6.7	0.9
9. Internet skills		2.8	1.2
10. Online information seeking		4.5	1.7

Zero-order correlations of all study variables can be found in Table 2. Before analyzing the data to examine our hypotheses, we submitted the three scales (online information seeking, life satisfaction, and Internet skills) to CFA using the Lavaan package in *R* with robust maximum likelihood estimation (Rosseel, 2012). The three-factor model showed a good fit. $\chi^2 = 288.56$, $df = 87$, RMSEA = .06, SRMR = .05, CFI = .96. All factor loadings were significant at the .001 level and ranged from .52 to .91.

Table 2. Zero-Order Correlations Among Study Variables.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Age		−.052	.014	.018	−.088*	−.413**	.004	.001	−.114**	.033	.074
2. Sex (0 = male)			−.259**	−.209**	−.265**	−.043	−.052	−.098*	−.224**	−.016	−.058
3. Marital status				.092*	.387**	−.021	−.003	.003	.053	.048	.135**
4. Highest education					.274**	.097*	.038	.072	.158**	.007	.103**
5. Household income						.215**	.106**	.097*	.209**	.121**	.137**
6. Being in the workforce							.133**	.092*	.188**	.025	.015
7. Perceived health								−.013	.109**	.107**	.397**
8. Frequency of Internet use									.286**	.244**	−.003
9. Internet skills										.344**	.037
10. Online information seeking											.134**
11. Subjective well-being											

*$p < .05$. **$p < .01$.

Moderated Regression

We conducted a stepwise OLS regression. Life satisfaction was entered as the dependent variable. In the first step, we entered gender, age, household income, marital status, education, being in the workforce, frequency of Internet use, and perceived health as control variables. Internet skills and online information seeking were entered as the main explanatory variables in this step. As can be seen in Table 3, both income and marital status showed a significant positive relationship with subjective well-being.

Table 3. Moderated Regression Analysis of Subjective Well-Being.

		b	*SE*	β	*t*	*p*
Step 1	Intercept	1.57	0.74		2.13	.034
	Age	0.01	0.01	.06	1.48	.140
	Sex (0 = male)	0.02	0.11	.01	0.21	.836
	Household income	0.13	0.06	.08	2.02	.044
	Marital status (0 = single)	0.31	0.11	.11	2.85	.005
	Highest education	0.02	0.02	.04	1.05	.295
	Being in the workforce (0 = no)	−0.06	0.12	−.02	−0.47	.638
	Perceived health	0.64	0.06	.39	10.75	.000
	Frequency of Internet use	−0.03	0.06	−.02	−0.42	.676
	Internet skills	−0.06	0.05	−.05	−1.25	.212
	Online information seeking	0.10	0.04	.10	2.65	.008
				R^2_{adj} = .20		
Step 2	Intercept	1.52	0.73		2.07	.039
	Age	0.01	0.01	.05	1.40	.163
	Sex	0.02	0.11	.01	0.15	.879
	Household income	0.14	0.06	.08	2.22	.027
	Marital status	0.30	0.11	.11	2.72	.007
	Highest education	0.02	0.02	.04	1.08	.281
	Being in the workforce (0 = no)	−0.07	0.12	−.03	−0.63	.532
	Perceived health	0.64	0.06	.39	10.79	.000
	Frequency of Internet use	−0.02	0.06	−.01	−0.26	.794
	Internet skills	−0.07	0.05	−.06	−1.38	.169
	Online information seeking	0.11	0.04	.12	3.10	.002
	Internet skills × Online information seeking	0.06	0.02	.09	2.42	.016
				R^2_{adj} = .21		

Married people or people in a civil union showed higher levels of life satisfaction, and so did people with a higher income. Health was strongly positively related to well-being. Frequency of Internet use was not related to life satisfaction. Finally, online information seeking was significantly related to well-being in our model: The higher the value of online information seeking, the higher the value of life satisfaction. Internet skills were not related to life satisfaction. Accordingly, our first hypothesis (H1) is supported by our data.

In the second step of the regression analysis, we entered the interaction term between online information seeking and Internet skills and found a significant relationship with life satisfaction. This interaction is plotted in Figure 1. As can be seen, the higher the level of Internet skills (*x*-axis), the more positive the association between online information seeking with life satisfaction (*y*-axis). If the level of Internet skills is low (i.e., around 1 scale point or more below the mean), the association between online information seeking and life satisfaction disappears. Thus, our second hypothesis (H2) is supported as well.

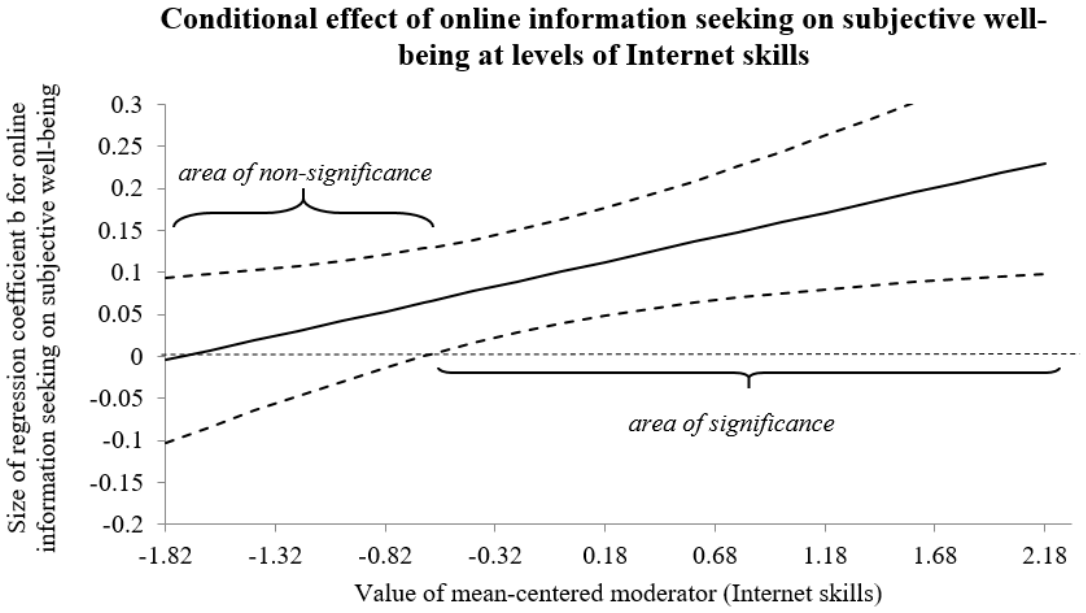

Figure 1. Moderator effect of Internet skills on the association between subjective well-being and online information seeking.

Discussion

Like previous studies (Hargittai & Dobransky, 2017; Hargittai, et al., 2018), our findings support the idea that older adults are not one homogenous group of Internet users who should be lumped into a "60 and over" or other "and over" categories, as is often the case in studies about Internet use (see Hunsaker & Hargittai, 2018, for a review of what ages studies and data sets use for cutoffs). Rather, considerable variation exists in both Internet uses and skills in our sample of Internet users aged 60 and older.

In this article, we look at how a particular type of Internet use—online information seeking—relates to subjective well-being. Following prior literature (Hargittai & Hinnant, 2008; Huang, 2010; Rodgers et al., 2007; Zhou et al., 2014), we conceptualized online information seeking as the type of use that entails getting information that is useful for an individual's everyday life. On a more abstract level, we regard this

type of Internet use as a resource in the process of successful aging (i.e., the minimization of losses and the maximization of gains; Hofer, 2016). Our results provide further evidence about a positive association between well-being (i.e., life satisfaction) and using the Internet in a specific way (van Deursen & Helsper, 2018), and that this association is related to user background as well as Internet skills. In other words, if the resource of using the Internet to search for information is used prudently and skillfully, the maximization of gains in well-being is more likely than if this resource is not used skillfully.

This study focused on a specific demographic group, older people, who have been shown to run the risk of being excluded from the digital world because of their unfamiliarity with using new technologies (Seifert, Hofer, & Rössel, 2018; van Deursen & Helsper, 2015). Our findings suggest that for older adults who know how to use the technology, use can be beneficial for well-being through the process of online information seeking. Accordingly, policies and programs that focus on getting older adults online must include as part of their initiative an educational component (Czaja et al., 2006). Given the rapid pace of technology development, it seems worthwhile not only to educate older adults in how to use specific applications that are currently useful for their lives but also to motivate them to acquire more general Internet skills and to promote positive attitudes toward using the Internet (Lifshitz, Nimrod, & Bachner, 2018; Nimrod, 2014; Seifert & Schelling, 2018). For instance, both scholars and providers of Web services should take a closer look at how different designs and content can be tailored in a way that encourages trust and facilitates use among older users (Cotten, Yost, Berkowsky, Winstead, & Anderson, 2016; Czaja, Boot, Charness, Rogers, 2019; Darvishy, Hutter, & Seifert, 2017; Pfeil, Zaphiris, & Wilson, 2009).

Sharing and learning new Internet skills can enhance a certain sense of competence and autonomy (Nimrod, 2014). Online communities such as SeniorNet or projects like Third Age Online are useful platforms where older Internet users can improve their Internet skills and share their knowledge and experiences with other users (Hofer, 2016). For instance, the German national project Senioren-Technik-Botschafter (Senior Technology Experts) includes this notion of sharing knowledge (Doh, Schmidt, Herbolsheimer, Jokisch, & Wahl, 2015). In that project, 300 technically experienced older adults were educated as so-called knowledge mediators. These knowledge mediators taught 1,500 older adults unfamiliar with this digital technology in their neighborhood how to use the Internet in a meaningful way. In a community center intervention in the United States, Seo, Erba, Altschwager, and Geana (2019) found that low-income African American older adults benefited from workshops teaching them about the Internet. Ultimately, both sharing and learning can have positive effects on both social and psychological aspects of older Internet users' well-being (Hofer, 2016; Nimrod, 2014).

Limitations

The first limitation pertains to our sample. We used a sample obtained from an online access panel of older adults from one particular country (Switzerland). Although the sample is somewhat comparable with data from a representative study in Switzerland (Seifert & Schelling, 2018), it is not representative. However, we believe that having a sample of older Swiss Internet users might even strengthen our argument, because adoption of digital technology is relatively high among older adults in this country compared with other nations. Compared within the 60+ population in Europe, Internet use of Swiss older adults (60+) is 72%, whereas the average for EU states is around 49% (König et al., 2018).

Another limitation stems from the nature of our data. We used data from a cross-sectional survey. Therefore, we can only talk about associations, not about causality. That is, we cannot make a clear statement about whether life satisfaction is a predictor or an outcome of online information seeking. However, we believe that our study provides an important insight into the moderating role of Internet skills on the association between Internet use and well-being among older adults that prior research has not examined.

In terms of Internet use, we focused on one particular type: online information seeking (Hargittai & Hinnant, 2008). Although we believe that online information seeking is especially important for life satisfaction as a component of subjective well-being (DiMaggio & Hargittai, 2002; Hargittai & Hinnant, 2008; Huang, 2010), one could certainly think of other types of use, such as social or recreational use, as also having benefits. For instance, social uses have been shown to affect well-being positively (e.g., Rosas, 2011), but because the majority of existing literature on older adults and well-being focuses on that type of usage, we decided to examine a less explored domain.

When it comes to well-being, our focus was on one specific form—namely, life satisfaction. As mentioned above, in the literature, one can find other forms of well-being: eudaimonic (Ryan & Deci, 2001; Ryff, 1989; Waterman, 1993) and social well-being (Keyes, 1998). Future studies could also take these forms of well-being into account to have a more comprehensive picture of the association between older adults' Internet use and well-being.

Conclusion

The aim of this study was to examine whether, among a group of older adults, online information seeking varied in its association with subjective well-being as a function of Internet skills. We first hypothesized online information seeking to be positively associated with older adults' subjective well-being. The findings show support for this hypothesis. Even after controlling for variables that have traditionally been shown to influence a person's well-being (i.e., marital status, perceived health, being in the workforce, frequency of Internet use, and age; e.g., Blanchflower & Oswald, 2004, 2008), the noted associations were robust.

Our second hypothesis suggested that the association between online information seeking and subjective well-being would be moderated by Internet skills in such a way that higher Internet skills would imply a stronger positive association. We also found support for this hypothesis: The association between life satisfaction and online information seeking was stronger among older adults with higher Internet skills than among those with lower Internet skills, suggesting distinct benefits for each group from using the Internet for information seeking. This finding contributes to digital inequality scholarship by showing that those with higher Internet skills are more likely to reap the benefits of their online behavior. Although prior work has considered this relationship, we added an important aspect that has not been examined yet: the moderating effect of Internet skills.

As more and more research examines the implications of Internet uses, it is important to pay increasing attention to the specific factors that may explain why Internet uses may or may not relate to various life outcomes, such as well-being. Our study does exactly this by considering how varying levels of Internet

skills interact with online information seeking in relation to the important outcome of subjective well-being. Future work should similarly think through the factors that may influence why certain types of Internet uses enhance or detract from people's well-being. For instance, a lack of skills using the Internet could in part be compensated by certain design features tailored especially for older adults who seek assistance with it, making it easier for them to navigate the Web and find useful information (e.g., Cotten et al., 2016; Czaja et al., 2019). Given our finding that being able to use the medium better is connected to reaping its benefits, efforts should be made both at the level of making the system more user friendly and at the level of improving people's skills so that the positive outcomes of use can be distributed more equally across the older adult population.

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