Should Older Adults be Encouraged to Get Online? The Intersection of Internet Use and Social

Inclusion

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Abstract

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Social Inclusion

Does the Internet really improve the lives of older adults? The literature around information and communication technology would suggest that use of the Internet can help to promote social inclusion but is this the case for older adults? The aim of this study was to understand the relationship older adults have with the Internet. In-depth qualitative interviews were conducted with a purposive sample of 15 participants aged 70 to 90 in Fall 2014 to explore the perceived benefits and barriers older adults experience with regards to Internet use.

The Internet was found to plays an important role in the lives of older adults who use it. Light Internet users were the group most dissatisfied with their Internet abilities. Light users and non-users both expressed feeling left out due to their perceived lack of abilities. Non-users had no intention of learning to use the Internet despite having access to potential support, whereas light Internet users indicated feelings of frustration around perceived lack of support. Users and non-users discussed feelings of concern and suspicions related to the Internet and their ability to access the resource. Medium and avid users stated that the Internet played an important role in their lives and that they would be lost without it.

This research explores the lived experience of older adults and the Internet, offering a better understanding of how the Internet impacts their lives and ability to maintain social inclusion. This research can inform policy around promoting the use of the Internet among older adults and whether it is necessary to focus efforts on bridging the digital divide.

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Chapter 1: Introduction

In light of the global demographic shift that will see two billion of the world's population over the age of 60 by 2050 (United Nations, 2013) attention needs to be paid to the forces that impact the successful aging of this population, that is, that individuals feel they have access to social support and economic security, are maintaining a high level of physical and mental functioning, are independent, and are engaged with their community (Hsu & Jones, 2012; Kerz, Teufel, & Dinman, 2013; Liang & Luo, 2012; Rowe & Kahn, 1987). The United Nations calls the aging of the baby boomers "one of the major global demographic trends" (United Nations, 2012a), and the statistics are inescapable. In 2011 the first baby boomer turned 65 years old, with older adults making up one in seven persons in the Canadian population (Statistics Canada, 2013). This figure will increase as those individuals born between 1946 and 1964 turn 65. Statistics Canada estimates that by 2036 older adults will make up one in four persons in the Canadian population. This means that the number of older adults in Canada will more than double from five million older adults in 2011 to 10.4 million older adults by 2036 (Federation of Canadian Municipalities, 2013).

Such a huge demographic shift has never been seen before, and it is raising concerns that there may not be enough resources, including working people and health care, to properly address this shift (United Nations, 2012b). The United Nations (2013) states that by 2050 the ratio of working persons to older adults will be 58 to 100, a slight increase from the 52 to 100 ratio in 2013, but a significant drop from the ratio of 76 to 100 that was seen in 1950. These statistics are important to note due to the impact that this ratio may have on government services, health care, and the cost of these services. These changes in this ratio, known as the potential

support ratio (PSR) show the impact a demographic shift to an aging population might have on a variety of services and various levels of government (United Nations, 2012b). The drop in the PSR may have significant impacts on social security systems and health care services as program beneficiaries are supported by a significantly smaller group of contributors (United Nations 2012b). In other words, there may not be enough people contributing to the various social security programs and to the health care systems to support the people drawing on those services.

This demographic shift is a trend that is seen worldwide. In 2010, older adults made up 22.7% of the population of Japan, 20.4% of the population of Germany, and 16.1% of the population of the United Kingdom (Statistics Canada, 2010a). Globally, by 2050 one out of every five people will be over the age of 60 (United Nations, 2013).

Another prominent trend is the increasing prevalence of technology in the everyday lives of people worldwide. People can check email while riding the bus to work, talk with friends thousands of miles away using *Skype*, and get directions to a new destination while on the way there. Information and communication technology (ICT) allows people to access information wherever they are, and it allows them to easily connect to family and friends far away.

Along with increased access to family and friends, a wealth of information can now be accessed online, which has created an ever-growing trend of locating public and other services online, a trend that Gripenberg (2011) refers to as "technologized" services. For example the Government of Canada now uses its website as its primary tool to transmit service information to Canadians. When visiting the Government of Canada website, a user can learn what services are provided by the federal government, and how to access such services, including forms to apply for benefits such as the Canada Pension Plan or Veteran Benefits (Veterans Affairs, 2013). Online can be a very convenient "one stop shop" way of providing services to Canadians. It

allows the Government of Canada to cut costs associated with providing face-to-face services to Canadians and allows Canadians to access service information and forms 24 hours a day, seven days a week. Unfortunately this technologizing of government services leaves people who cannot access resources online at a disadvantage due to the increased difficulty in accessing service information from government agencies face to face.

Gripenberg's (2011) idea of technologized services is in prominent use in government today. As of January 31, 2014, the Canadian government had closed eight of its Veterans' Affairs offices, stating that veterans can locate any required information on its website (Veterans Affairs, 2013). In 2014, the Canada Revenue Agency ended its counter service; Canadians can no longer go to a physical location to access information regarding their taxes. The CRA states on its website that more than two thirds of Canadians file their taxes online; thus, counter service is no longer required (Canada Revenue Agency, 2013).

The Canada Revenue Agency has also implemented changes to encourage filing tax returns online; individuals can no longer file their taxes using Telefile, a service that allowed individuals to file simple tax returns over the telephone (Canada Revenue Agency, 2013). Additionally if an individual wants to file a paper tax return, the forms needed are located online for download or at a Service Canada outlet of Canada Post Office, and unfortunately, there are no CRA representatives on site to answer questions (Canada Revenue Agency, 2013).

This trend of locating government services online offers many benefits to older adults such as:

- convenient 24-hour access to service information,
- a paperless application process,

- all the information located in one place, and

- no need to travel to multiple locations.

Accessing information and services online can also contribute to an increased sense of independence, improved quality of life through increased social support, and overall psycho-social well-being (Blaschke, Freddolino, Mullen, 2009).

Unfortunately the new reality of technologized services may also leave many people at a greater risk of not being able to access services, information, or simply be part of the wider societal conversation online (Gripenberg, 2011). Older adults represent a large percentage of this "at risk" group, as they have among the lowest ICT usage rates among any demographic. Only 45% of adults aged 65 to 74 and 21% of individuals aged 75 and older were found to be using the Internet compared to 94% of individuals between the ages of 15 and 24 in a report released by Statistics Canada in 2014. It must be acknowledged that while this report was released in 2014, the statistics used are from 2007. While older adults have the lowest Internet usage rates, the current usage rates are most likely higher than what has been reported in this Statistics Canada report.

Due to older adults' lower Internet-use rates, they are at a greater risk of not being able to access service or program information, as well as being excluded from the online world, which can push individuals to the periphery of society. These individuals are then at a much greater risk of being socially excluded. The World Health Organization defines social inclusion as "the development of capacity and opportunity to play a full role not only in economic terms, but also in social, psychological, and political terms" for the majority of people in society (Levitas et al., 2007, p. 21). Social inclusion allows individuals to access opportunities, options, and choices in

life, thereby increasing personal capacity, self-confidence, and individual resilience (World Health Organization, 2008).

Social inclusion is characterized by the participation of an individual in all areas of society, both socially and economically (World Health Organization, 2008). Individuals are said to be contributing members of society when they are able to consume, make purchases, produce, participate in the labour market, and engage politically, as well as be aware of their rights, and be able to socially interact (World Health Organization, 2008). In the post-industrial world, the Internet and technology are the keys to participation. The ability to participate in society and to be an active and contributing member of society has been shown to have a positive impact on an individual's successful aging (Hsu & Jones, 2012; Kerz, Teufel, & Dinman, 2013; Liang & Luo, 2012; Rowe & Kahn, 1987).

There exists a substantial amount of quantitative data about older adults and their Internet usage rates. For example, in May 2013 the Pew Internet and American Life Project completed a survey on the age breakdown of Internet users; in 2014, Statistics Canada conducted an Internet use and e-commerce study; and also in 2012, the World Health Organization released a report that among other things stated Internet use rates for the developing world from 2001 to 2011. What is lacking in this discussion is an abundance of qualitative data.

A qualitative inquiry into older adults and their realities with the use of the Internet is needed to understand their perspectives, to hear their voices. This research provides a further understand of the relationship that older adults have with the Internet, a relationship that goes far beyond their usage rates. While usage rates are important to help identify users, they do not identify the users' needs or the contexts in which they use the Internet, or experience barriers. A

qualitative methodology will give voice to those needs, the perceived benefits, and the perceived barriers older adults experience with regards to the Internet.

It is of great importance to understand needs, benefits, and barriers, as doing so will help to inform policy concerning older adults and the Internet. Currently the Canadian government and governments around the Western world are expanding their presence online, but are they doing it the right way? Do they need to be concerned about older adults who are not using the Internet and, therefore, are not accessing the information provided online? Are older adults who are not using the Internet at a greater disadvantage than older adults who use the Internet? Or is there an expectation that family and friends will bridge the gap and access the resources on the Internet for the older adult? The literature around social inclusion and successful aging would suggest so, but we need to know what older adults actually think. This research answers these questions and, therefore, provides some of the information needed to create effective polices concerning older adults and their usage of the Internet.

The purpose of this study is to gain a better understanding of the realities and perspectives of older adults and their relationship with the Internet, and how the Internet impacts older adults' social inclusion. The research focuses on the intersection of Internet use and social inclusion of older adults, and the following research questions will be explored:

- What advantages and disadvantages does the Internet provide older adults?

- What role does the Internet play in an older adult's life?

- What impact, if any, does the technologizing of services have on older adults?

- According to older adults, how does the Internet impact social inclusion?

Data were collected using qualitative research methods, through semi-structured interviews. This research sheds light on the lived experience of older adults who are active online; it provides a

better understanding of how going online impacts their lives and their ability to be included

socially. The research also demonstrates the impact of not using the Internet on older adults in a

world that is increasingly dependent on Internet technology. The term digital divide is often used

to discuss the gap that exists between those who use and have access to computers and the

Internet and those who do not (Warschauer, 2003). The findings of this research can be used to

inform policy around promoting use of the Internet among older adults, as well as whether it is

necessary to focus efforts on bridging the digital divide.

Chapter 2: Review of Literature

In this chapter, the current literature on older adults and the Internet is reviewed. The review goes beyond looking at older adults and the Internet to also include research on older adults and information and communication technology (ICT). Literature regarding digital divide and successful aging is reviewed as it provides an understanding of why the topic of older adults and the Internet is relevant today. As well, literature related to the Technology Acceptance Model is reviewed, as this model informed the interview questions asked of participants. Finally there is a review of relevant literature on social inclusion as social inclusion is the theoretical base of this research.

Research on Older Adults and Their use of ICT

In this section, some of the most recent literature on ICT is reviewed to identify the issues around the use of ICT by older adults. From this review of literature four themes emerge:

- the benefits of use, or what benefits do older adults receive from using ICT, such as cognitive stimulation and improved emotional well-being,

- the barriers to use, or what is stopping an older adult from using ICT,

- attitudes toward use or how does the older adult feel about ICT, and

- the demographic characteristics of the ICT user and non-user.

. The review highlights the current findings with regards to older adults and ICT, as well as any gaps that may exist in the current literature. The four themes help to identify the reality of ICT for older adults. That reality is complex and multifaceted, and while four themes were identified, all four themes were found to interact with each other to form a complex web, which is the reality for older adults and the Internet.

Benefits of Use

A number of benefits of using ICT have been found: to protect against cognitive decline, combat isolation, increase social participation, and increase personal capacity. As people age, their cognitive abilities can decline. As well, many older adults can begin to feel isolated. The social networks that once combated feelings of loneliness and isolation change over time. People retire from formal employment, friends move out of their homes, and some pass away (Beckenhauer, 2009; Hill, Beyon-Davis, & Williams, 2008). Many researchers have found important benefits that can be experienced by older adults using ICT because it can help to ward off some of the difficult issues associated with aging (Delmore, 2000; Ivan & Fernández-Ardèvo 2014; Larsson, Larsson-Lund, & Nilsson, 2013; Ordonez, Yassuda, & Cachioni, 2011; Slegers, van Boxtel, & Jolles, 2012).

Computer use has been linked to a change in cognitive abilities. Computer usage has been found by a number of researchers to protect people from declines in attention and memory (Ordonez et al.,, 2011; Slegers et al., 2012). In a research study by Ordonez and colleagues, participants in a 15-session computer-training program were found to have significant improvement in their memory, language, and visuo-spatial skills compared to participants in the control group. In a longitudinal study by Slegers et al. (2012) computer use was found to have a safe-guarding effect on cognitive decline, with computer users scoring better on the *Stroop* test[1], which measures the interference produced by another attribute of the same stimuli (Treisman & Fearnley, 1969), than non-users.

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[1] The Stroop test was developed by John Ridley Stroop and has since become a common tool used in neuropsychology. Participants are asked to name the color of the ink of a word as opposed to reading the word. The test is used to measure concentration effectiveness (Lezak, 2004).

Many of the benefits to use were related to social participation and social connectedness, including lower reports of social isolation, and increased efficiency with banking, shopping, and bill payments. (Beckenhauer, 2009; Czaja et al., 2006; Delmore, 2000; Hernandez-Encuentra, & Pousada, & Gomez-Zuniga, 2009; Ivan & Fernández-Ardèvo, 2014; Larsson et al., 2013; Loges & Jung, 2001; Nimrod, 2010; Richardson, Weaver, & Zorn, 2005; Slegers et al. 2012; Xie, 2008).

Delmore (2000) profiled a computer exposure project run in various senior care homes in the United States, where program users identified feeling more connected to their families and friends through use of the Internet. Larsson et al. (2013) reported increased feelings of empowerment and self-esteem on the part of older computer users. As well, users felt that the computer helped them to sustain their social networks and gave them increased opportunities to interact with others (Larsson et al., 2013). This research study examined the Internet-based activities of established users, new users, and non-users (Larsson et al., 2013). Established users and new users stated the same perceived benefits. New users reported their new use of Internet-based activities allowed them to participate more in society (Larsson et al., 2013).

Older adults gave very common reasons for why they used the Internet and ICT for banking and communication. They used it because of its efficiency and because it helps them to stay current with what is happening in the world (Hernandez-Encuentra et al., 2009). Loges and Jung (2001) found that easy access to information could be very beneficial to older adults by helping them play an active role in their own health (Center of Technology and Aging, 2009). Individuals can search for additional information about a specific condition and access preventative health information, as well as look up side effects and risks associated with certain

medications, all of which can aid in successful aging (Hill et al., 2008; Karavids, Lim, & Katsikas, 2005; Lasson et al., 2013).

In contrast, Dickinson and Gregor (2006) contend that the literature does not support the claim of increased benefits to the older ICT user. Instead, they state that it is the contact between the instructors and the older adults that is the real cause of any benefit. Dickinson and Gregor (2006) conducted a review of literature on the subject and maintain that there has been a misattribution of causality as well as inappropriate generalization. The authors reviewed twelve intervention research studies where the aim was to "evaluate the impact of general computer or Internet use on well-being or quality of life in adults over the age of 50" (Dickinson & Gregor, 2006, p. 745). While it may be true that the interactions between participants and instructors or researchers impacted the increased rate of well-being, one could argue that the technology provided the opportunity for that increased interaction. For example, in the program profiled by Delmore (2000) in which various retirement communities had computer stations set up in common areas to encourage peer-to-peer learning as well as to encourage interaction among the residents, the users reported an increase in well-being due to the increased social interaction with their fellow residents.

Barriers To Use

Research has shown that there are multiple barriers to use of ICT by older adults. Research has consistently shown that older adults use ICT less than younger adults and teens, though the rates of use differ depending on the research study. There are multiple reasons why older adults do not use ICT as much as younger adults: (a) lack of confidence in their computer abilities, (b) lack of self-efficacy, (c) lack of experience or exposure to ICT, (d) physical or cognitive declines, (e) lack of support, and finally (f) the devices themselves.

Czaja et al. (2006) found that people over the age of 65 have less confidence in their abilities with ICT. These authors conducted a research study on 1,204 adults living in the community. The participants ranged in age from 18 to 91 years old. To assess attitudes held by older adults about computers the participants were given the *Attitudes Towards Computers Questionnaire* (Jay & Willis, 1992). Findings indicate that older adults have less confidence in their computer abilities as well as a lack of self-efficacy when it comes to using computers (Chu, Huber, Mastel-Smith, & Cesario, 2009; Jay & Willis, 1992).

Lack of experience and exposure to ICT has been found to have a profound negative impact on usage as well (Eyon & Helsper, 2010; Hanson, 2010; Hill, Beyon-Davies, & Williams, 2008; Jung et al., 2010). For example, Jung et al. (2010) conducted a quantitative research study of 91 older adults in Los Angeles to discover the participants' previous exposure to and usage of the Internet. The participants were asked about their usage patterns and how much they would miss the Internet if it were unavailable to them. Participants were able to choose their response on an 11-point *Likert*-type scale. A hypothesis that lack of exposure is negatively linked to usage was supported.

Declines in physical and cognitive abilities have also been shown to predict lack of use. Declines in dexterity and vision can make using ICT difficult. Dexterity can affect the effective use of the computer mouse or the keyboard, while vision declines can make the device screen difficult to see or read. Cognitive declines, such as memory loss, can make using ICT seem overwhelming because remembering passwords or the steps required to accomplish a task on the computer can be very difficult if there are memory or cognitive issues present (Charness & Boot, 2009; Damodaran, Olpaert, & Phipps, 2013; Richardson, et al., 2005; Stark-Wroblewski, Eldelbaum, & Ryan, 2007; Wang, et al., 2011).

Lack of support, whether from family, friends, or the community, has been found to be a barrier as well (Agarwal, Animesh, & Prasad, 2009; Damodaran, Olpaert, & Phipps, 2013; DeGraves & Denesiuk, 2000). The research has shown that without appropriate support older adults find using ICT difficult. Based on their research involving more than 1,000 older adults in the United Kingdom, Damodaran, Olpaert and Phipps (2000) found "the availability of help and support emerges as a factor of paramount importance to sustaining digital connection" (p. 34). Lack of support or lack of perceived support was negatively tied to usage rates among older adults (Agarwal, Animesh, & Prasad, 2009; Damodaran, Olpaert, & Phipps, 2013; DeGraves & Denesiuk, 2000).

The devices themselves have been found to be a barrier. Older adults were often found to use their children's old computers, and outdated versions of the technology can be less intuitive than newer versions (Selwyn, 2004). The cost of the technology was additionally found to be a barrier to accessing this resource. While the cost of ICT has decreased significantly over the years, it can still represent a barrier to older adults who are on a fixed retirement budget (Chu, Huber, Mastel-Smith, & Cesario, 2009; McMurtrey, Zeltmann, Downey, & McGaughey, 2011; Saunders, 2004; Seals, Clanton, Agarwal, Doswell, & Thomas, 2008).

Attitudes Towards ICT

Attitudes towards ICT have a significant impact on the likelihood of an older adult using ICT. An older adult's desire to learn how to use ICT, that is the behavioral intention to use ICT, is based on several factors that predict ICT use. Perceived usefulness was consistently found in the research as influencing an older adult's intentions to use ICT (Barnard, Bradley, Hodgson, Lloyd, 2013; Charness & Boot, 2009; Czaja et al. 2006; Delahaye & Ehrich, 2008; Hanson, 2010; Slegers et al. 2012; Wang et al., 2011). If older adults feel that ICT serves a purpose for them, if

they see it as useful, they are more likely to search it out, or put the effort into learning how to use different ICT products (Barnard, Bradley, Hodgson, Lloyd, 2013; Charness & Boot, 2009; Czaja et al. 2006; Delahaye & Ehrich, 2008; Hanson, 2010; Slegers et al. 2012; Wang et al., 2011). For example, Wang et al. (2011) found that perceived usability significantly influenced the participant's intention to use ICT in survey data collected from older adults in China.

When older adults could identify benefits to use such as increased independence, or the maintenance of social connections, ICT usages rates increased (Mitzner et al., 2010). Other studies such as Wang et al. (2011) refer to perceived benefits, which were found to be the number one influencer of intention to use ICT in the older Chinese population researched. These findings are consistent with Mitzner et al. (2010) who found that an older adult's motivation for using email was driven by its perceived usability.

Anxiety or fear of ICT, as well as the perception that support was inaccessible, predicted lower usage rates among older adults (Chu, Huber, Mastel-Smith, & Cesario, 2009; Wang et al., 2011). Chu et al. (2009) reported lower computer anxiety and fear was a factor that contributed to an increase in usage of computers in participants in a computer intervention program offered to participants of a meal program, which took place in at a local YMCA in Houston, Texas. If older adults feel that support is available to them, they are more likely to accept technology. Wang et al. (2011) found that support could come from many different sources such as courses, family, a spouse, or friends; however, support from family or a spouse was listed as the most used source of support (Wang et al., 2011). Whether the research was qualitative or quantitative, the findings were consistent in that attitudes toward ICT predicted ICT use.

Demographic Characteristics

Much research has been done to try and discover which older adults use ICT and which do not; there have been many studies that have tried to explain usage rates and usage style through the demographic characteristics of sex, age, education, income, and rural versus urban areas of residence. These studies show that the typical older adult ICT user is male, younger, educated, and has a higher income (Agarwal, Animesh, & Prasad, 2009; Hernandez-Encuentra et al., 2009; Hill et al., 2008; Jung et al., 2010; McMurtrey et al., 2011; Näsi, Räsänen, Sarplia, 2012, Porter & Donthu, 2006; Richardson e t al.,2005; Selwyn, Gorond, Furlong, & Madden, 2003; Saunders, 2004; Slegers et al.,, 2012; Stark-Wroblewski et al.,, 2007).

Sex was found to be a predictor of use; men tend to use ICT more often than women (Jung et. al. 2010; Selwyn, Gorond, Furlong, & Madden, 2003; Slegers, Van Boxtel, & Jolles, 2012). Jung et al. (2010) found that of odds for enrolling in a community computer class increased if the older adult was male ($p < .05$). Selwyn et al. (2003) found that 32% of men surveyed used ICT versus 15% of women. In contrast, Karavidas, Lim and Katsikas (2005) found that among users of a computer club in Florida, usage rates differed very little among male and female users aged 55-88.

Age was a predictor of use as well. The younger the participants, the more likely they were to be ICT users (Ellis & Allaire, 1999; Jung et al., 2010; Porter, Donthu, 2006; Selwyn et al., 2003; Slegers et al., 2012). Slegers et al., (2012) measured age as a predictor of use at the start of their nine-year study of cognitive functioning and computer use, measured it again nine years later, and found that more participants in the younger group used computers than participants in the older age group. Participants in the younger group were found to be more likely to begin using a computer than participants in the older age groups (Slegers et al., 2012). In addition, the

researchers found that the participants in the younger group had been using computers for longer than the participants in the older group: 10.3 years versus 7.2 years, respectively (Slegers et al., 2012). The younger users also were found to use computers for more things than the older users, such as using email to contact more people and accessing the Internet (Slegers et al.,, 2012). The literature is very consistent in finding that age is a predictor of usage, apart from Eastman and Iyer (2005) who found that chronological age was not a predictor of use of ICT, but that behaviors and attitudes were far more accurate predictors.

The level of education that a participant had achieved was also a predictor of use: Individuals with higher levels of education were more likely to engage with ICT (Ellis & Allaire, 1999; Jung et. al. 2010; Porter & Donthu, 2006; Selwyn et al., 2003; Slegers et al., 2012). Porter and Donthu (2006) found that education was linked to beliefs about the Internet and that individuals who had lower education levels felt the Internet was difficult to use and expensive, therefore, directly lowering their usage rates. Similarly, Selwyn et al. (2003) found that 82% of participants who stopped school by the age of 16 did not use a computer compared to 59% of individuals who completed school beyond the age of 16. Echoing these previous findings, Slegers et al., (2012) in their six-year research study to measure the influence of computer use on cognition, found that education significantly influenced usage rates among older adults, that is, older adults with higher education were more likely to use computers.

Similar to the findings reported regarding the influence of education on usage rates, income was also found to predict use, with individuals with higher income levels exhibiting higher usage rates (McMurtrey et al., 2011; Porter & Dorn, 2006; Richardson et al., 2005). Porter and Donthu (2006) found that individuals living on a low income perceived the Internet and

associated technologies as expensive, which negatively influenced usage rates. Similarly, Richardson et al., (2005) found that individual financial circumstances were a barrier to use of computers, with one female participant stating that her printer sat broken for six months because she did not have the funds to have it fixed.

Rural versus urban area of residence has not been found to predict individual use. ICT usage rates were found to be lower in rural areas, but the research correlated that with low Internet access in rural areas as opposed to individual choice (Saunders, 2004; Stark-Wroblewski, et. al. 2007).

As much as each of these themes of benefits of use, barriers to use, attitudes toward use, and the demographic characteristics of users and non-users are distinct, they are also connected. In many cases they entwine to create a complex web of reasons why many older adults exhibit limited usage of ICT. For example, attitudes towards technology have been found to be also a barrier to use (Hanson, 2010, Wang et. al. 2011), and barriers to use limit the benefits that can be experienced through ICT.

The older adult population is one that is characterized by diversity. The literature shows some older adults are at greater risk of experiencing difficulties engaging with ICT, such as individuals with lower levels of education and individuals with lower income levels, while others are at a lower risk of experiencing these issues due to their attitudes or previous experience with ICT (Agarwal et al., 2009; Damodaran, Olpaert, & Phipps, 2013; DeGraves & Denesiuk, 2000; Hernandez-Encuentra et al., 2009; Hill et al., 2008; Jung, Peng, Morgan, Jin, McLaughlin, Cody, & Silverstein, 2010; McMurtrey et al., 2011; Näsi, Räsänen, & Sarplia, 2012, Porter & Donthu, 2006; Richardson et al., 2005; Selwyn et al., 2003; Saunders, 2004; Slegers et al., 2012; Stark-Wroblewski et al.,, 2007). While these older adults are having difficulty engaging with ICT, other

older adults actively engage with ICT, emailing, making purchases online, and using social networking sites (McMurtrey et al., 2011).

As noted by McMurtrey and colleagues (2011), many older adults are actively engaging with the Internet. Internet usage rates among older adults continue to rise, older adults are the fastest growing user group, and in 2007 Internet usage rates among older adults were found to be four times higher than in 2000 (Pew, 2013; Statistics Canada, 2014). Among older adult Internet users, 47% identified as "intensive users," where intensity is defined by the number of online activities engaged in, as well as how many hours were spent online while at home (Statistics Canada, 2014). Intensive users engaged in an above average amount of activities and time online, from buying and selling goods and services, to conducting online banking, to looking for government information online. These individuals spent more than five hours per week online and performed more than 12 different activities in a week (Statistics Canada, 2014). Similar findings were reported in a Pew (2014) research poll: 59% of Americans aged 65 and older were online, and 71% of those users went online daily. The Pew (2014) study also found that once online, the Internet becomes an important part of an older adult's everyday life, with 56% of older adult users stating it would be very difficult to stop using the Internet.

In spite of these increasing Internet usage rates and an increase in the variety of Internet user activities, Damodaran and colleagues (2013) note that many older adults are at a risk of experiencing "digital disengagement," that is, they have a difficult time sustaining their use of ICT. ICT is continually evolving, and what was cutting edge five years ago is now seen as obsolete, as the shift to a knowledge economy has demonstrated, and this is a trend that is not likely to change in the near future. Due to the continually evolving nature of ICT, the discussion around older adults and ICT is an important one and affects both ICT users and non-users.

The Digital Divide

The most basic definition of the term digital divide refers to the difference in the ability to access computers and the Internet experienced by various individuals in society. In reality the term digital divide encompasses much more, it is not just access to physical equipment like computers and the Internet; it also represents access to the resources that people need to effectively use those physical resources such as content, language, education, and literacy (Viard & Economides, 2015; Warschauer, 2003). Warschauer (2003) states that the digital divide is not simply a situation of the haves and have-nots, but rather a spectrum of access and use.

Waschauer (2003) uses the examples of a U.S. university professor's ability to access computers and the Internet easily every day compared to a student in Seoul, Korea who uses dial up to access the Internet, and an activist in India who has information printed off for her at an NGO. Each individual is accessing computers and the Internet either directly or indirectly, but there exists a gap or a divide between the access to the physical equipment and the access to resources to support effective use of the technology (Warschauer, 2003). This topic is important because, as Viard and Economides (2015) state, Internet access is increasingly important due to reliance on the Internet for economic productivity and the ability to access information that is increasingly located online.

The discussion around the digital divide has traditionally centered on the difference in access and use by developing countries versus developed countries and by marginalized groups versus privileged groups (Viard & Economides, 2015; Warschauer, 2003). This term can also be used to aid in the discussion regarding different usage patterns by older adults; the broadened definition of digital divide proposed by Warschauer (2003), which encompasses a spectrum of access and use, I see as the reality of use of ICT by older adults. Usage by older adults ranges

from individuals who access ICT every day in a variety of ways to individuals who ask family or friends to access information online on their behalf.

Successful Aging

If older adults are not able to utilize the technology that runs the post-industrial world, they may experience real difficulties in being able to meet the criteria of social inclusion. If an older adult is not socially included, his or her ability to age successfully can be compromised. In 1987, Rowe and Kahn, pioneers in successful aging, defined successful aging as comprising three aspects: deceased risk of disease and disease-related illness, maintaining a high level of physical and mental functioning, and continuing engagement in society. This definition persists today, but has been expanded to include independence, the presence of social support, and economic security (Hsu & Jones, 2012; Kerz, Teufel, & Dinman, 2013; Liang & Luo, 2012; Rowe & Kahn, 1987). While there seems to be very little consensus on a specific definition of successful aging, in its most basic terms, successful aging can be measured by an older adult's capacity to thrive (Van Wagenen, 2013).

The concept of successful aging is not without its critics. Rowe and Kahn's (1987) first component of successful aging, decreased risk of disease and disease-related illness, is one aspect that has been widely debated, for it does not acknowledge those who are successfully coping with an illness (Depp, Jeste 2006; Dillway & Byrnes, 2009; Van Wengenen, 2013). In addition it has been argued that the concept of successful aging is objective and excludes older adults' own subjective feelings of their successful aging (Depp, Jeste 2006; Dillway & Byrnes, 2009, Van Wagenen, 2013). The individual's subjective feelings are a much better measure of how an individual is doing; an individual may be living with age-related decline or an illness but still be living a full and happy life (Depp, Jeste 2006; Dillway & Byrnes, 2009; Van Wengenen,

2013). Under the objective definition of successful aging, this individual is not aging successfully, but the individual would disagree. Despite the criticism, successful aging is a useful concept to understand how an individual or group is doing in later life. If the concept of successful aging is used in its simplest form, an individual's capacity to thrive, it can give a functional understanding of where improvements need to be made.

Successful aging is linked to social inclusion. Social participation is a key component in social inclusion, and it is also a key aspect of successful aging. Being an active participant in society assists an individual in maintaining social inclusion and thus contributes to successful aging (Depp & Jeste, 2006).

In addition, the negative effect of social exclusion impacts how we age. Social inclusion is used as a solution to the negative effects of many social issues, such as poverty, unemployment, and housing issues (Warburton & Shardlow, 2013). Individuals who are socially excluded at one stage of their lives will likely continue to be socially excluded in the later stages of life (Warburton & Shardlow, 2013). Associated with the concept of social exclusion is the idea of *cumulative disadvantage*, where an individual who is discriminated against will experience an intensification of that disadvantage as he or she ages due to social exclusion (Warburton & Shardlow, 2013). As individuals progress through the different stages of life, they are at greater risk of social exclusion; life events such as widowhood, retirement, or illness can create social exclusion (Warburton & Shardlow, 2013).

Technology Acceptance Model

To date much of the research on ICT use has been quantitative and has been rooted in the Technology Acceptance Model (TAM) as proposed by Davis, Bagozzi and Warshaw (1989) (Porter & Donthu, 2006). The cornerstone of the model is the assumption that attitude is the

greatest predictor of technology usage (Chen & Chan, 2014). Davis et al. (1989) proposed that the two most important factors that would predict use of new ICT were perceived usefulness and perceived ease of use, both attitudinal factors (Chen & Chan, 2014; King & He, 2006). Perceived usefulness and perceived ease of use combine to create an individual's behavioral intention to use ICT. Behavioral intention to use then creates an individual's attitudes toward ICT, which in turn impacts an individual's actual usage of ICT (Chen & Chan, 2014; King & He, 2006; Porter & Donthu, 2006).

The TAM has been the most widely used tool in predicting ICT use and, over the years, has taken many forms; it has been the starting point of the majority of technology acceptance questionnaires used in ICT research since its inception (Porter & Donthu, 2006). King and He (2006) conducted a meta-analysis of 88 published research papers that used the TAM to predict ICT use and found the TAM to be a "valid and robust model" (p. 740) for predicting ICT use. One such study by Pan and Jordan-Marsh (2010) added two additional factors to the original TAM model: social norms and facilitating conditions. With these additions, extended TAM research was conducted on older Chinese adults in Beijing to uncover the various factors that influenced the decision to adopt the Internet within this group (Pan & Jordan-Marsh, 2010). The findings were consistent with the original TAM: Perceived usefulness and perceived ease of use were excellent predictors of intention to use the Internet (Pan & Jordan-Marsh, 2010).

Similarly, Chen and Chan (2014) expanded the TAM to create the Senior Technology Acceptance Model (STAM). Chen & Chan (2014) borrowed questions from several different versions of the TAM to create the STAM. They asked participants to answer a variety of questions in uncover the participants' intention to the technology, their attitudes towards use,

perceived usefulness, and perceived ease of use. Below is an example of some of the questions used in the STAM by Chen & Chan (2014, p. 640):

- Using technology is a good idea

- You like the idea of using technology

- Using technology would enhance your effectiveness in life

- Using technology would make your life more convenient

- You would find technology useful in your life

- You would find technology is easy to use

The STAM was proposed to address the unique characteristics of older adults. The research sought to uncover older Chinese adults' acceptance of gerontechnology (Chen & Chan, 2014). Gerontechnology uses technology to address aging-related difficulties experienced by older adults (Chen & Chan, 2014). The goal in the use of gerontechnology is to provide older adults with greater opportunities to maintain or improve their health, independence, and social engagement (Chen & Chan, 2014). Findings using the STAM are consistent with the original TAM as well: Perceived usefulness and perceived ease of use were excellent predictors of intention to use gerontechnology (Chen & Chan, 2014).

The findings of Pan and Jordan-Marsh (2010) and Chen and Chan (2014) are consistent with Porter and Donthu's (2006) findings on the factors that impact older American adults' attitudes towards and usage of the Internet. The most significant factors were again, perceived usefulness and perceived ease of use (Porter & Donthu, 2006). In light of this evidence, the TAM is an excellent starting place from which to uncover the perceptions and the realities of older adults and their experiences with the Internet.

Social Inclusion

The concept of social inclusion stems from its counterpart concept, social exclusion, which emerged in France in the 1960s (Warburton & Shardlow, 2013). Social exclusion and social inclusion did not become an area concern for Western governments until the economic crises of the 1980s but have since spread rapidly and have become key factors in policy development for most western countries (Warburton & Sharlow, 2013). Social inclusion has also recently begun to play an important role not only in policy development in economically developed countries due to increased life expectancy, but also in economically developing countries where the aging population is growing quickly (Warburton & Shardlow, 2013).

Research has only recently begun to look beyond the physical and cognitive issues associated with aging to look at the social aspects of aging (Warburton & Shardlow, 2013). The concepts of social inclusion and social exclusion have created a platform from which to look at the social nature of aging (Warburton & Shardlow, 2013).

While there are many definitions of social inclusion, they are all based on the idea that regardless of who an individual is, where a person comes from, or what the personal circumstances are, each person should be able to achieve their potential in life (Warburton & Shardlow, 2013). Based on this broad definition, Warburton and Shardlow (2013) state social inclusion is a complex concept that is not only an outcome, but also a concept that is dependent on social policies and circumstances. That is to say, if the supports are not in place to help and support the individual achieve the outcome of social inclusion, the outcome will not be achieved.

Four domains have been identified to measure social inclusion: consumption, production, political engagement, and social interaction (Warburton & Shardlow, 2013). The concept of consumption defines an individual's capacity to purchase goods and services within the

community (Warburton & Shardlow, 2013). Production defines an individual's ability to participate economically or to participate in activities that the society values (Warburton & Shardlow, 2013). Political engagement defines the individual's participation in the political process, as well as the individual's understanding of his or her own rights within the society. Finally, social interaction refers to the extent to which an individual is connected and interacts with family, friends, and the wider community (Warburton & Shardlow, 2013). In our world today so many of these activities are facilitated by the Internet.

Every single one of the four domains of social inclusion outlined above is linked to the Internet. Consumption is linked to the Internet through the increasingly common trend of locating service information online; the Internet facilitates access to information, goods, and services. In addition, the ability to consume or purchase goods and services is dependent on income or an individual's production capacity. An individual's income is tied more and more closely with an individual's use and knowledge of ICT.

While political engagement is perhaps not as dependent on the Internet currently, the two are certainly tied. Much of the information about government services, programs, eligibility criteria, and application processes is located online. In addition, many aspects of the political process take place online today. News websites give people access to the most up-to-date news, and every political party in Canada and the USA uses social media to interact with its supporters. The parties have Twitter accounts, Facebook pages, and their own personal websites. For example, the Conservative Party of Canada has its own Facebook page, and Twitter account; the Democrats in the United States also have a Facebook page, a blog and a Twitter account (Conservative Party of Canada, 2014; Democrats, 2014). While there are still many ways to engage in the political process without having to use the Internet, it would be like saying the

visible part of an iceberg is the whole iceberg, completely disregarding the fact that the majority of the ice is under the water and not visible. Individuals who are not engaging with the Internet are accessing only a small part of the information available on society's conversations on every topic from politics to trends to breaking news (Gripenberg, 2011).

The ability to socially interact with family, friends, and the wider society is not dependent on the Internet. People can always call one another on the phone, write a letter, or go and visit someone, but this interaction is definitely facilitated by the Internet. A long distance phone call within Canada costs, on average, approximately 40 cents per minute (Manitoba Telecom System, 2014), while someone who has access to the Internet can make that very same call for free, and can actually see the person who is called. Therefore, an individual using the Internet may be more likely to engage with society to a greater extent than one who does not use the Internet.

Traditionally the conversation about social inclusion and exclusion has been around poverty and economic issues (Warburton & Shardlow, 2013). In January 2013 the journal *Ageing & Society* published a special issue completely devoted to social inclusion and older adults. The articles in this issue focus on social inclusion from an economic perspective. In the introduction to the special issue, Warburton and Shardlow (2013) introduce the reader to social inclusion and aging in a global context. The authors posit that the opportunities for older adults to be socially included are limited due to the economic pressures brought on by demographic changes and instability in the global financial markets. However, missing in this conversation is the impact of how services are delivered or offered to the population. Warburton and Shardlow (2013) mention briefly the limited access to social services by citing Townsend (1957) whose pioneering work on social inclusion states that social participation is restricted by limited access to services due to poverty. While this is undoubtedly still true today, the reality of our society has changed

dramatically since the 1950s, and now one could posit that no access to the Internet or limited access could restrict an individual's participation socially.

The Internet allows individuals to access opportunities, options, and choices in life, and to develop personal capacity, self-confidence, and individual resilience (World Health Organization, 2012). Due to the increasing tendency of public and other services to be technologized (Gripenberg, 2011), if an individual is not able to access information that is provided online, the individual may find his or her personal capacity, options, and opportunities limited. Continued low Internet usage rates by older adults can put them at a greater risk of experiencing social exclusion. Inclusion in our post-industrial society requires different social, human, physical, and digital resources (Gripenberg, 2011; Slegers, Van Boxtel, & Jolles, 2012).

Conclusion

While many articles were found that measured usage rates and predicted acceptance of ICT, very few articles were found that reported research on older adults and the Internet using qualitative research methods. This search has identified a gap in the current literature. Missing from the quantitative data is the "voice" of this cohort and the reasons and meaning they interpret behind their Internet usage or lack of Internet use from their perspective. Without the voice, what do these numbers really mean? By changing the way research has traditionally looked at this topic and by using qualitative research methods, we can provide an opportunity in which this group of diverse individuals with unique circumstances can be showcased. Qualitative data creates a greater connection between the topic studied and the individuals who are presented in the information (Denzin, 2003; Foster, 2013). Qualitative research methods are an excellent way with which to give voice to the lived experience of older adults, a cohort that is often undervalued and treated as homogenous.

In light of the research gap identified in the area of older adults and the Internet, I have sought to better understand older adults' perspectives and realities with the Internet. My hope is that through the use of narratives of participants, my research has highlighted any differences in quality of life and social inclusion among Internet users and non-users and has identified potential solutions that could impact Internet usage among older adults, and therefore can inform policy on the digital divide. Research on older adults and the Internet is important in order to increase usage rates among older adults to help them to maintain or increase their social inclusion, and to be engaged in the post-industrial world in which many societies now find themselves.

Chapter 3: Methods

Qualitative methods were chosen due to the research gap identified in the literature review. There has been a substantial amount of quantitative research focused on older adults and ICT, and there has been a tremendous focus on the Internet usage rates and usage patterns of older adults, but very little research has focused on the perceptions and lived experience of older adults and their usage of the Internet. Therefore I felt that it was important to provide a contribution to this discussion that would help to fill that research gap.

The methods that were used to approach the research questions regarding older adults and the Internet will be discussed in this chapter. An inductive approach to theorizing was used to analyze the data collected from the interviews. It must be acknowledged that no approach can be completely inductive, that the researcher's own assumptions and meanings will play some role in the analyzing of data (Madden, 2010; O'Donoghue, 2006); therefore, the goal was to have the theory fit the data and not to force the data to fit the theory, as is proposed by Madden (2010) and O'Donoghue, (2006). During the review of the relevant literature and as data were collected, the framework of social inclusion kept coming up in my mind. I began to see the intersection of social inclusion, the digital divide, and older adults in their usage or lack of use of the Internet. Social inclusion and the digital divide have been discussed together in the past (Waschuaer, 2003). It became clear to me that due to the increased reliance society has on the Internet for everything from economic production to the transfer of information, there must be some kind of impact experienced by individuals who use or do not use the Internet and their ability to be socially included.

Interviews

Semi-structured interviews of adults aged 70 and older were conducted in December 2014 for this research study. The questions used in the semi-structured interviews were informed by the relevant literature on older adults and the Internet, as well as the Technology Acceptance Model (TAM) (Davis et al., 1989). While the TAM questionnaire is used in quantitative research, it provided an excellent starting point for this qualitative research because the goal of the TAM is to uncover perceived usefulness, perceived ease of use, and the behavioral intentions of technology users and non-users, and, according to the literature reviewed, perceived usefulness and behavioral intention to use ICT have a significant impact on ICT usage rates among older adults. In addition, the TAM is an extremely popular model to assist in predicting ICT acceptance among individuals.

The TAM was used as an informing model in combination with the current literature on the subject of older adults, the Internet and ICT. Together they provided an appropriate base from which to construct guiding questions that were used in the semi-structured interviews.

Recruitment

Two approaches were used to recruit participants. The first method was through posters. An electronic version of the poster was sent to the coordinator of a network of francophone older adults (see Appendix A). The coordinator sent out the poster with the organization's monthly newsletter. The second method was recruitment through word of mouth. Family, friends, co-workers, and fellow students were asked if they knew anyone who might be interested in participating in the research. Word of mouth was the most successful recruitment method. One potential participant contacted me through the recruitment poster sent via the newsletter;

unfortunately this individual did not meet the inclusion criteria. Thus, all of the participants were recruited through word of mouth.

Participants

A purposive sample of individuals over the age of 70 from a variety of socioeconomic backgrounds and with various levels of technological understanding were interviewed; my goal was to have a diverse sample. Participants were recruited based on the following criteria:

- aged 70 and over,

- living in Winnipeg and the surrounding area,

- fluent in English or French,

- able to complete a face to face interview of approximately 60 minutes, and

- able to provide informed consent.

Upon contact participants were given an overview of the research and were asked a few questions to ensure that potential participants met the inclusion criteria for the research study. If participants were eligible and wished to participate in the research, an interview was scheduled at a time and place of their choosing. It had been initially thought that 10 to 15 participants would be a sufficient sample from which to collect data on this topic and that proved to be the case. A total of 15 participants were interviewed, 10 women and 5 men. Participants ranged in age from 70 years old to 87 years old. After completing interviews with 15 participants I reached data saturation, that is to say, I was no longer uncovering new information. Strauss and Corbin (2008) state that to achieve thick and descriptive data, collection should continue until the researcher starts to hear the same things again and again; at that point data saturation has been reached.

Interviews

Prior to the start of the interview participants were given another brief overview of the research purpose. They were told how the interview would proceed, including the approximate length of the interview and the types of questions that would be asked. They were reminded that the goal of the interview was to have a conversation about the participant's Internet use or non-use. I went over the consent form with all participants and sought their approval to record the interview with a digital recorder (see Appendix B). I explained that consent was completely voluntary, and they could withdraw their consent at any time. Before the interview began participants were asked to fill out a demographic questionnaire (see Appendix C). One question at the end of the demographic questionnaire asked participants if they felt they were aging successfully. No definition was given for successful aging; the participants' responses were based on their own interpretation of successful aging. At the end of each interview participants were given the opportunity to ask any additional questions or offer any additional comments.

The following seven questions were used to guide the interview:

- Tell me about your use of the Internet?

- How do you feel when you use the Internet?

- Tell me about how the Internet impacts your life?

- Can you tell me about any pros or cons there are to Internet use?

- How do you feel the Internet impacts your ability to age successfully?

- Governments are changing the way their services are offered, putting more things online. Could you tell me what you think about that?

- Can you think of any improvements to the Internet that you would like to see?

As the interview progressed, additional questions and follow-up questions were asked. It was extremely important to me that the interview feel more like a conversation between the participant and myself as opposed to a question and answer session. I felt that if I were able to have a conversation with a participant as opposed to engaging in short questions and answers it would lead to richer data. Since I only interviewed participants once, it was very important to quickly develop rapport. This was accomplished by spending some time when I first arrived talking generally with the participants. All participants were assigned a pseudonym to ensure their anonymity. I chose as pseudonyms names from my family.

All but three participants chose to have the interview take place in their homes; one participant chose his place of work, and two participants, a couple, chose my home as the interview location. Interviews lasted between 45 and 120 minutes with the average interview lasting approximately 60 minutes. All interviews were recorded using a digital recorder and transcribed verbatim. After each interview field notes describing non-verbal cues, mood, and general observations were recorded.

Ethics

Approval for the research was given by the Joint-Faculty Research Ethics Board at the University of Manitoba. Consent (see Appendix B) was discussed with each participant prior to the interview. It was explained that consent was completely voluntary and they could withdraw their consent at any time. One copy of the consent form was given to the participant; I retained the other. Participants were offered a summary of the results and all participants requested a copy.

Content Analysis

Once an interview was completed I began transcribing the interview verbatim. Initially my goal was to have each interview transcribed before my next interview. This did not occur. Because I interviewed two to three participants each week, there was insufficient time to complete the transcription of one interview before beginning the next. To deal with this problem, once an interview was finished I wrote notes about the interview, my observations, feelings, and thoughts about how the whole interview had proceeded. A hired transcriber transcribed four interviews; only interviews that did not contain identifiers, such as names of people or street names, were outsourced to the transcriber in order to maintain the privacy of the participants. I transcribed all other interviews. Once transcriptions of all the interviews were complete, the data were entered into Nvivo 10, a software program that facilitates the organization, coding and analysis of qualitative data.

Next the data were read looking for content that related to the research questions and the literature on the subject. This process involved an initial coding where I looked for general themes, statements that were mentioned by the majority of participants, as well as outlier statements that were made by only one or a few participants. Once this initial coding for themes was complete, I reviewed my themes and transcripts with one of my thesis advisory committee members. After this review and discussion I became aware that my coding was too broad and the descriptors that I had chosen were much too expansive and were not effectively portraying the data. I went back and reread everything, recoded all the themes, and assigned all new descriptors using the language of the participants. The transcripts were read again to examine the relationship of each theme with the relevant literature on this subject, the other themes, and their relationship to the research questions. Once this final reading and organization was complete, all

themes were placed in order of importance to this research topic and the literature. The order was based upon what I found to be new and interesting with regards to this research topic, as well as through in-depth discussions with my peers and thesis committee members. Themes that have been researched at length previously were ranked lower than new and emerging themes. In the end, the themes explored in this research were those not found in the literature on this subject or themes that have been under researched.

Credibility and Trustworthiness

The quality of the data and the analysis is key: "without it you are just another person with an opinion," said Sir Ken Robinson (Saldaña, 2011, p.136). To avoid being just another person with an opinion, I used the 15-point checklist of criteria for good thematic analysis by Braun and Clark (2006) as cited in Braun and Clark (2013) (Table 1). The checklist outlines guidelines for every stage of data analysis starting at the time of transcription though coding and analysis to the writing up of results. Braun and Clark's (2006) guidelines with regards to transcription were followed, the interviews were transcribed verbatim, and the transcriptions were checked with the interview audio file for accuracy. During coding, individual data items were treated equally; the process was comprehensive and inclusive. All themes were compared to one another and back again to the data as recommended by Braun and Clark (2013). Finally, frequent check-ins with my thesis advisory committee and thesis advisor with regards to study design, data collection, and analysis have contributed to the rigor of this research. The data has been situated within a theoretical framework and triangulated with the use of peer review, literature on this topic.

Chapter 4: Results and Discussion

In this chapter a comprehensive description of the study participants and a detailed analysis of the data and discussion will be provided. Semi-structured interviews were conducted with 15 participants; these interviews yielded a significant amount of data. Through data analysis, using the methods described in the previous chapter, four overarching themes were uncovered: *Feeling Left Out, Frustrations, Suspicions and Concerns, and I Would be Lost Without It* (see Table 1). The four overarching themes were analyzed in greater detail and sub-themes were added. Interview excerpts have been used to support the reasoning behind each core theme and sub-theme.

Table 1

Core Themes and Subthemes of Older Adults and their Experience with the Internet

Core Theme	**Feeling Left Out**
Sub theme	Language associated with the Internet
Core Theme	**Frustrations**
Sub theme	Feelings of dependency
Core Theme	**Suspicions and Concerns**
Core Theme	**I Would be Lost Without It**

Participants

Over the course of three weeks in December 2014, fifteen older adults, ten women and five men, were interviewed about their thoughts, feelings, and experiences with the Internet (see Table 2). The fact that there are more women than men in this research study is different from

what was found in the in the literature on this subject, where Internet usage rates were found to be higher among men than women. Three participants, two women and one man, had never used the Internet. Of the remaining users the majority were light to medium users with only three participants self-classifying as avid users. Statistics Canada (2010b) has created a rubric to define what constitutes high intensity use and low intensity use. High intensity users were defined as having Internet use exceeding five hours per week, going online everyday, and participating in more than 10 Internet-related activities, such as online banking, online shopping, emailing, using the Internet for music, and using the Internet to access government information (Statistics Canada, 2010b). Low intensity users do not use the Internet everyday, spend less than five hours per week online and perform fewer than 10 Internet related activities (Statistics Canada, 2010b). This rubric was used only to compare a participant's self-identified Internet usage patterns with those established by Statistics Canada. The Statistics Canada classification was not used to reclassify the participants of this study.

Of the fifteen participants, four participants had immigrated to Canada (see Table 3). For two participants English was their second language. Nine participants were married, five participants were widowed, and one participant self-identified as single. One participant had not finished high school, four participants had graduated from high school, eight participants had a university degree or certificate program, and two participants had a graduate degree. Thirteen participants lived in the city of Winnipeg, and two participants lived in a small rural community outside of the city of Winnipeg. All participants indicated that they were doing either well or very well financially. All participants were asked how they felt they were aging, and all stated that they felt they were aging well. Many admitted they were dealing with some challenges typically associated with aging, but they maintained that they were happy in their lives.

Table 2

Demographic Characteristics of Participants (N = 15)

Characteristics	Count	Percentage
Age		
70-74	9	60
75-79	2	13
80-84	2	13
85-89	2	13
Sex		
Male	5	67
Female	10	33
Country of birth		
Canada	11	73
Other	4	27
Mother tongue		
English	13	87
Other	2	13
Martial Status		
Single	1	7
Married	9	60
Widowed	5	33.3
Education		
No high school	1	7
High school	4	26.6
Certificate program	1	7
University degree	7	46.6
Graduate degree	2	13.3
Location		
Urban	13	87
Rural	2	13

Table 1 (continued)

Characteristics	Count	Percentage
Financial Well-Being		
Very well	10	67
Well	5	33
Aging well		
Yes	14	93
No	0	0
So-so	1	7
Usage		
Avid	3	20
Medium	4	27
Light user	5	33
Non-user	3	20

Participant Description

Janis is a 70-year-old Canadian-born widow. The interview took place in her home. Janis was very comfortable talking about her experiences using the Internet. She enthusiastically talked about her use of Skype to connect with her grandchildren who lived in another province. Janis identified as a medium user of the Internet; however, her usage patterns and the variety of tasks she does online would classify her as a high intensity user as per the Statistics Canada (2010) criteria. Janis was for the most part satisfied with her Internet abilities and had access to appropriate Internet support when she felt she needed it. She was not reluctant to call on that support when it was needed. Janis stated that she was doing very well financially; she felt she was aging well and saw the Internet as a tool she could use in the future that would help her to age successfully. Janis was not asked how many hours per week she spent online.

Faith is a Canadian-born married woman in her early 70s. Faith identified as an avid user of the Internet. While she had not used the Internet in her job prior to retiring, she had used the Internet extensively in her volunteer work to the extent that she had created webpages in the past. The interview took place in Faith's home. It was quiet and comfortable, and Faith was very happy to talk about her Internet use. She stated a few times that she was happy she could contribute to my research. Faith stated that she was doing very well financially and that she felt she was aging successfully. Faith had access to excellent Internet support. There was no reluctance on her part to call on that support when it was needed. Faith saw the Internet as a potential tool that might help her to continue to age successfully, but she did express concern that she may encounter difficulties if she no longer had access to her support person. Faith estimated that she spent 20 hours per week online.

Cyndi is a Canadian-born married woman in her early 70s. The interview took place in her home. Cyndi was very enthusiastic about contributing to the research study. Cyndi is an avid user of the Internet. She had used computers and the Internet in her career before she retired and continued to learn new things about the Internet after retirement. She stated that she was doing very well financially and that she was aging well. Cyndi was very proud of her Internet abilities and discussed them openly. She stated that while she encountered frustrations they did not deter her Internet usage. Cyndi estimated she spent 20 hours per week online. Cyndi did not talk about turning to others for support when she encountered problems online. She indicated that she was a source of Internet support to others.

Lois is a Canadian-born widow in her early 80s. Lois identified as a medium user; however, like Janis, her usage pattern places her in the high intensity user category as per the Statistics Canada (2010) criteria. The interview took place in Lois's home; we spoke in her living room, which was comfortable. Lois had a radio playing loudly in another room, which I found to be slightly distracting; however, it did not seem to bother Lois at all. Lois estimated her Internet usage as 10 hours per week; she took part in a variety of Internet-related activities. Lois had taught herself to use the Internet. She did not have access to informal support with regards to her Internet use, and she had to pay for assistance with an Internet support company. Lois is doing very well financially and stated that she was aging very well. Lois saw the Internet as a resource that she could use as she ages. She also saw the Internet as a tool that helped to combat loneliness.

Jason is a Canadian-born, married man in his late 70s. He identified as a very light user of the Internet. The interview took place in Jason's home. He was very happy to share his experiences and frustrations with the Internet. Jason has a university degree. Before his retirement, computers and the Internet were introduced at his place of employment. He had a difficult time remembering how to use the Internet while he was at work, and this continued after retirement. Jason had access to the Internet at home and access to appropriate support, that is, someone willing to show him and help him, but despite this he had difficulties. Jason joked that he was basically a Luddite when it came to the Internet. While he was dissatisfied with his Internet use, he made it very clear that he had a full and happy life. It is important to point out that Jason's support person would complete tasks online for him, so that despite his very light use he was still able to access everything online.

Gertie is a European-born widow in her early 80s. Gertie identified as a medium Internet user. She is doing very well financially and feels she is aging successfully. The interview took place in Gertie's home; we very quickly developed a nice rapport. Gertie had very strong feelings about her Internet abilities. She was happy to have the opportunity to discuss her frustrations and feelings on the subject. Gertie felt that she did not have access to appropriate support. She identified instances where, due to her lack of abilities and her perceived lack of support, she was forced into a situation of dependency. Gertie felt that there were many resources located online but that her access to those resources was being impeded by her lack of abilities and her lack of support. Gertie estimated that she was online for 20 hours per week.

Isabel is a single Canadian woman in her late 80s. Isabel stated that she is a very light user of the Internet. The interview took place in Isabel's home. She is doing very well financially and stated that she is aging "so-so." When asked if she would like to clarify her answer of aging "so-so" Isabel reaffirmed that she was aging "so-so." I did not pursue any further explanation. Isabel seemed to have a complicated relationship with the Internet: She talked about many positives associated with the Internet in broad terms, like in business, but she also felt like the prevalence of the Internet in society today made her further dependent on others, something that she absolutely did not like. Isabel had some access to support with her Internet use but felt that this support was not sufficient and was not tailored to her needs. Isabel estimated her Internet use at 2 hours per week.

Sophie is a married European-born woman in her early 70s. Sophie does not use the Internet. The interview took place in Sophie's home, and she was very happy to share with me her thoughts about the Internet as well as her non-use. Sophie is doing very well financially and feels that she is aging successfully. Towards the end of her career computers and the Internet were becoming tools increasingly in use. When asked about this Sophie said that luckily she had managed to avoid using them before she retired. Sophie's children encouraged her to use the Internet, suggesting she get set up for Skype to be able to connect with her grandchildren, but Sophie was not interested. She stated that the phone was just fine. Sophie leads a busy and full life.

Rob is a Canadian-born married man in his early 70s. Rob's interview did not take place in his home but at another location. Rob stated that he was a light user of the Internet; he is doing well financially and feels he is aging successfully. Rob seemed a little reluctant to be interviewed. While initially he agreed quickly, when it came time for the interview rapport was difficult to establish. The majority of his answers where "yes" or "no" and a lot of probing was required. Rob initially seemed to say that he barely used the Internet and that it was not important to him; however, after more discussion, he stated that he had just bought a tablet and was learning how to use it. Rob talked about the lack of support he had. He did not like asking his children for help as he felt that they could not provide him with the support he needed. He also did not like not understanding what was happening online, and he expressed a lot of frustration. Rob estimated his Internet use at seven hours per week.

Noah is a married man in his early 70s who immigrated to Canada from Europe. The interview took place in Noah's home, and he was happy to talk about his Internet use. Noah is doing very well financially and he feels he is aging successfully. Noah is an avid user of the Internet. He used the Internet extensively during his career but felt it was difficult to keep up with the fast pace at which Internet technologies change. Noah did not talk about requiring support from others to support his Internet use; he seemed very comfortable in troubleshooting his own issues. Noah was a source of Internet support to many people in his life, from his spouse to friends. Noah estimated he spent 6 hours per week online.

Jeff is a married man in his early 70s, who was born in Canada. Jeff's interview took place in my home. Jeff is a non-user of the Internet. He stated that he is doing well financially, and he feels he is aging "well enough." Jeff was a little reluctant to be interviewed; it was not that he did not want to be interviewed, but he stated that he did not really have anything to say on the subject. The majority of Jeff's answers were "yes" and "no." While we did have rapport, it was extremely difficult to get him to elaborate, and in the end I feel that Jeff had a lot more insights than I uncovered. Jeff talked about the Internet as a resource but one that he did not access directly. Jeff identified three people who he asked to "look things up" for him; he seemed satisfied with this arrangement. Jeff was the only participant who talked about concerns over breaking the computer. Also he felt that he did not have the skills needed to learn to use the Internet.

Bailey is a Canadian-born married man is his early 70s. Bailey stated that he was a light user of the Internet; however according to the Statistics Canada (2010) criteria, he would be classified as closer to a high intensity user: He may not spend a large amount of time online, but he did do a variety of activities online, such as emailing, accessing music and videos, and searching for information. Bailey was the only participant who was not completely retired. He had returned to work part-time, and in his job is required to use the Internet daily. Bailey's interview was the shortest of the interviews conducted, but he was very open about his feelings and experiences. Bailey estimated he spent 7 hours per week online.

Émilie is a Canadian-born widow in her early 70s, and she is a medium user of the Internet. Émilie's interview took place in her home, and she was very excited about participating in a research project. Émilie stated that she was doing well financially, and she feels she is aging

successfully. Émilie had taught herself how to use the Internet and had access to family members for support. Émilie's family encouraged her to use the Internet and try out new things online. Her family was there to troubleshoot and provide her with appropriate support when she needed it. She seemed very comfortable asking her family for help if she needed it. Émilie spent 16 hours per week online.

All participants enthusiastically discussed their feelings and perceptions of the Internet; it seemed to be a topic about which they had a lot to say. Every participant expressed views in line with at least one of the themes that were discussed in the literature review. I felt that it was important to look at the new or under-researched themes that emerged as data were analyzed.

As previously stated, there exists a gap in the research on this topic. Whereas a large amount of data has been collected related to older adults and the Internet, very little of it contains the lived experience or the "voice" of the participant. Due to this limitation, creating an opportunity to have the voice of participants heard was of extreme importance to me. Besides giving a voice to the data, participant quotes create a tangible connection to the data for the reader and provide for richer interpretation.

The literature on this subject has primarily focused on older adults' usage of information and communication technology (ICT) and not solely on their use of the Internet. This study has sought to add to the current body of knowledge by focusing on the lived experience of older adults and their use and perceptions of the Internet. Through the use of narratives, participants expressed their feelings about not being a part of the wider society due to their limited use of the Internet, their feelings of dependency on family and friends for support, their frustrations with their Internet abilities, and their suspicions and concerns about using the Internet. Some participants also talked about the significant role the Internet played in their lives, stating they

would be lost without it. Something that was unexpected that came through in the narratives of the participants was the role that ageism played in the participants' experiences.

Whereas each participant's story was his or her own and was unique, all participants' feelings were echoed in one way or another in each narrative. Thus it is important to note that although each overarching theme and sub-theme will be discussed separately, they are connected. Each of these themes is connected, creating an intricate web of feelings and experiences that the participants have in connection with Internet.

Core Themes and Subthemes of Older Adults and their Experience with the Internet

Feeling left out

Many things happen online and going online allows individuals to access services and information that may not be easily available in other ways. Participants expressed feeling left out of what was happening online, were unable to take advantage of promotional offers, and experienced difficulty in accessing information. For example Sophie, a 72-year-old non-user, talked about feeling left out and unable to access discounts that require one to use the Internet. While this inability to access the grocery store discounts may not initially seem like a major issue, we must think about it in a broader context. There is a real impact for Sophie in this situation, a financial impact. Additionally, Sophie has to endure the judgment of the young cashier however unintentional it may be.

> **Sophie —** . . . *because I don't use a computer, I cannot get any points at SuperValue. I used to be able to go into SuperValue and on certain days of the month you could . . . if you spent $250 they'd give you $25 coupon cash, you could apply to your next bill. So I said to the girl, I said that's a bit of discrimination, I said, "I can't get a coupon because I'm not willing to go online." She said "that's right." And the girl, innocently said, "well, it is 2014."*

Sophie's experience at the grocery store and her inability to access the savings could be tied to her social inclusion. Sophie's ability to consume, one of the four components of social inclusion, is being directly impacted. As Warburton and Sharlow (2013) state, there already exists an economic disadvantage that can be experienced by older adults, particularly during retirement due to living on a fixed income. Here we can see a real life example. Although the older adult may not be intentionally excluded or limited it does happen. There is also an excellent example of the reality of the systemic and entrenched ageism in our society today in the young cashier's statement "well it is 2014."

Gertie, an 84-year-old woman who is a very light Internet user, talked about the difficulty of accessing information without using the Internet. Gertie states that there is some information that she cannot access on her own no matter how hard she tries. This points to a real issue that exists when services and information are only located online. People are left out. They find it difficult to access what they need, whether it is an overseas telephone number or financial savings.

> **Gertie —** *You just can't exist almost without a computer. I was shocked when I wanted to have a telephone number. I called the telephone company and they said you have to use a computer, and I thought that this lady was rather unfriendly. I called again. There was a gentleman, and he said the same thing. So I said one moment, if I don't have a computer what should I do? It was a telephone number in Italy. He said well, your grandson or grandchildren or somebody has a computer, try to get it there. I mean for a telephone number, should I take a taxi or a bus to go to my grandchildren or children and say, "get this telephone number for me?"*

Gertie's experience highlights the barriers that she faces while trying to maintain her independence and continued interaction with the wider society. Gertie's inability to access everyday information, like a telephone number, directly impacts her level of social inclusion. Burchardt, Le Grand and Piachaud (2002) propose that an individual is not socially included if

they cannot participate in "key activities" of the community in which they are a part; social inclusion is dependent on the individual's ability to participate in their community. Gertie's story provides us with a real life challenge that is directly related to her ability to participate in her community in the way that she desires, and that has a negative impact on her social inclusion.

Gertie's experience also demonstrates Townsend's (1981) concept of socially manufactured dependency: an older individual has circumstances and conditions imposed on her that society justifies with the supposition that an older adult is merely a passive being. The goal of integrating older people into society through the promotion of socially inclusive policies was created to counter Townsend's (1981) concept of socially manufactured dependency (Warburton & Sharlow, 2013). We can see in Gertie's narrative that her ability to find a telephone number on her own has been taken from her. She now has to turn to family or friends to get the telephone number for her; previously this was an activity that she could do without assistance. By limiting the way in which an individual can access information, an unnecessary dependency has been created.

The constant changes to the Internet and Internet technology also brought about feelings of being left out. Gertie and Cyndi, a light user in her early seventies, talked about how they have a hard time keeping up with the changes in the way one carries out tasks online and end up feeling lost. This inability to keep up with the Internet negatively impacts their ability to access resources and information.

> **Gertie —** . . . *more that they change so much, that the development [referring to software to updates] is too fast and there is no chance for elderly people to catch up and to keep up and then you're lost.*

> **Cyndi —** *um so sure they want to think this is the best way to do it, but they're forgetting about the rest of us up there who aren't so technically inclined, that it's not easy.*

In the statement above, Gertie states directly that her difficulty in keeping up-to-date with the changes on the Internet has a real life impact on her, creating feelings of being lost and left out.

> **Gertie —** *I would say uh, the Internet helps us seniors to get more and better informed about certain things, but it is depending that you can, that you are able to use it, and the question is, and this boggles me tremendously, that uh it is forgotten to give older people access to education for those technical and other things. I always have to call my daughters . . . they are so busy with their lives that I finally get a grandson from a friend, and I have to pay him. I'm fortunate that I can do this, but other people can't. I think that if you are not able to use the computer you are somehow pushed at or onto the periphery of the society.*

One can see that Gertie and Cyndi's level of engagement with the Internet has been limited due to the difficulty they have with changes and updates as evident in Gertie's statement regarding software updates. In both Gertie's and Cyndi's stories we can see that they want to use the Internet, they want to be a part of what is happening online and want to access this resource, but they encounter real barriers. We can see a real life example of an older adult's social inclusion being negatively impacted due to this barrier. Gertie's comments about being "pushed at or onto the periphery of the society" are especially poignant as living along the periphery of society is a component of social exclusion. Gertie sees the risk to her social inclusion if she is not able to engage with Internet technology.

Language

Within the theme of *Feeling Left Out*, the Sub theme of *Language* emerged. Many participants, non-users and light users, talked of the language that surrounds the Internet and commented that they do not speak that language. They viewed the terminology associated with the Internet as a foreign language and as a barrier to their use of the Internet.

Rob, a male in his early 70s who self-classified as a very light user of the Internet, talked about how language has been a barrier to his use of the Internet, creating another level of frustration in his interactions with the Internet.

> **Rob —** *That's another one, I don't like the terminology they use . . . I find that very frustrating because it is a whole other language . . . So if I don't have use it I don't use it. [Referring to the Internet]*

Bailey, another male light user in his mid-70s, echoed these sentiments.

> **Bailey —** *what's all this jargon like Tweet, Twitter.*

Gertie discussed this issue further, highlighting that the language of the Internet is not part of her daily life, and that this conversation is happening around her but does not involve her.

> **Gertie —** *See, you . . . say webpages. I have to think, because I have nobody to talk about this. You are in office or at the university, and this is your daily exchange. I sit there, and sometimes I probably make up my own words.*

Speaking the language of the society in which one lives directly impacts one's ability to interact within that community. While speaking the language of the Internet is not imperative to an individual's participation within society, it does facilitate interactions due to the constant presence of the Internet in our daily lives. If one were to think of how many times a day one references the Internet or uses the Internet, one can see how not understanding the language used to describe the Internet could cause an individual to feel left out. The inability to speak the language limits Rob's, Bailey's, and Gertie's connections and interactions with the wider society, which highlights older adults' lack of social interaction, the fourth dimension of social inclusion described by Warburton and Sharlow (2013).

Frustrations

All participants, from non-users to avid users, identified frustrations with using the Internet, whether it was feeling frustrated with their own abilities or with the technology itself, the speed of their Internet connection, webpage design, or the devices themselves. These

frustrations impacted their ability to use the Internet and made the use of the Internet a source of

frustration.

> **Rob —** *I have frustration, I have frustration for lack of computer skills. Like today I was trying . . . I wanted to get a schedule and my computer was very, very, very, slow, so I had to take it into the repair shop to find out what was wrong with it. Well, I'll give you an example. When I took my thing in to get cleaned or whatever they do to it, they changed my search browser from Google to Bing or whatever, and one of the things I liked was that Google had a favourites column, and for the life of me, I couldn't find anything on the Bing for, you know, airports, Winnipeg airport authority, for example, which would be one of the things that I would use for when flights are coming in or whatever. Anyways the long and the short of it is I couldn't find it, and the guy showed me a little star in the corner type of thing. You know there are so many things on that one page that it just becomes; it's frustrating in that sense.*

Isabel, an 87-year-old woman who is a light user of the Internet, talked about how the Internet

can feel so frustrating to her that she simply feels like giving up.

> **Isabel —** *It is frustrating in a way, to me it is not as simplistic as it could be. And sometimes you get nowhere and then it tells you to do this and then it disappears on you, and no I don't care to do that a lot at all.*

Jason, a male light user in his late 70s, talked about the frustrations that he experiences

due to the constant changes in the technology.

> **Jason —** *I'd no sooner learned something, under great duress, then they would then change it, and it it uh, you know, just really frustrated me.*

Gertie echoed the sentiments expressed by Jason, stating that she found frustration in her

inability to perform certain tasks related to her use of the Internet. At times her frustration would

get to the point where she needed to stop using the computer and Internet and do something else.

If Gertie had the support and resources that she feels she needs, one could wonder if her

experience would be different.

> **Gertie —** *I'm sitting with two recycling bins, and I can't empty any, I don't know how to, I tried and clicked and tried to and it just doesn't empty.*

Gertie — *But I have frustrations, yes. And I tried to solve it, usually I do more harm, or sometimes I find something and then I'm very happy. With my new computer the formatting doesn't work the way I wanted. He (referring to paid instructor helping with document formatting and the Internet) has to show me this, uh, it's completely different. Before I could type in how many uh centimeters, and I can't find it and moving the bar is not exact enough for the 10 pages, so, well I don't know. And that makes me angry; yes, and sometimes I just stop and do something else.*

Bailey a light user in his early 70s also commented on feeling frustrated with certain tasks online.

Bailey — *Usually I can find it easily, what I find really frustrating is when you have to use passwords and something that has worked all along now they wont accept that password, Argh! It just drives me nuts.*

Noah, an avid user in his mid 70s, talked about the pressure he felt to stay current and on top of the ever-changing Internet and how his perceived inability to stay on top of the changes contributed to his decision to retire.

Noah — *Yes. One reason I retired early because I did find it more and more difficult because it is a very fast changing field. I realized I'm probably, my expectations of myself are higher but the position I had in, I thought it was a good time to quit early. But I do continue to read about computers and keep up to date up to a certain point beyond what I'd have to have for my own needs. I dig into areas that I personally want to use for myself so I can do it, and other areas, I ignore because I can't do anything.*

This statement by Noah is very poignant, one could wonder if he felt his retirement was completely voluntary? What role did ageism and socially created dependency play in Noah's decision to retire? Had he been offered better training or had society valued his skills and experience to the same degree as his younger co-workers, perhaps he would not have felt the pressure to retire when he did. In Noah's experience we can see another fundamental aspect of social inclusion, the ability to produce. Social inclusion is partially dependent on circumstances; had the circumstances been different Noah might still have retired when he did, but perhaps he would not have felt the pressure to do so.

In the statements above we can see the impact of the barriers experienced by the individual. Each participant has his or her own personal unique experience, but all of them are facing real barriers to their participation online. Whether they are trying to access information, learn something new, or keep up with the pace of change, either the supports are not in place to assist in that task, or they are ineffective. The older person is left feeling lost, frustrated, and dependent on others for assistance, an example of socially manufactured dependency, which erodes an individual's social inclusion (Warburton & Sharlow, 2013).

Feeling of Dependency

Within the theme of *Frustrations* a subtheme of *Feelings of Dependency* emerged. Light users, non-users, and even an avid user talked about the role that family and friends played in their Internet use. Participants discussed how they often needed to turn to their children, friends, or even strangers to help them with certain Internet-related activities. Many participants talked of feeling helpless or dependent on other individuals to help them with their use of the Internet. Participants talked of not wanting to bother their children or friends because they were so busy, but of feeling that they had no other option but to ask them for help.

Interviewer — *Do you mind asking your family and friends how to do things?*

Rob — (big sigh) *I tend to rely on my daughter, and she will be very quick and fast and more impatient with me. So you know, if I can avoid it I try to avoid it. And my son-in-law is the same way. He downloads movies and that sort of thing. Trying to get him to explain, he will rattle it through, and then "that's all you need to do." Again I learn by doing rather than listening and reading.*

Jeff, a non-user in his mid 70s, talked about how he knows there is useful information online that he wants to access but cannot due to his lack of experience with the Internet and computers; due to his lack of experience and ability to use computers Jeff turns to his spouse or sister-in-law for help.

Jeff — *So there are some things that you think okay yea, that would be on the computer, and I'll get Patricia or Lorraine to look for it.*

Faith an avid user in her early 70s, whose spouse provided her with a lot of Internet support, expressed concerns over what would happen if he could no longer provide her with that support.

Faith — *But I know this technology can go belly up, and if he [referring to spouse] wasn't around to, you know, help me and make sure we have a decent virus check, and you know it's a good one, and they won't let things in. And he's educated me about what kind of emails are dangerous or most you know, you need to watch for. So I do think, you know, I'm hanging in there, but I'm hanging by a thread. And the thread is Noah.*

Isabel talked of the consequences of needing to rely on her family or friends to help her with the Internet, and how this reliance is a further loss of her independence, which she feels as an older adult is being eroded already.

Isabel — *It probably will, it will probably mean that instead of, I'll have to go to someone and ask for their help, which again is something an aging person, it is the last thing they want to do, it just means losing more and more and more independence.*

While support is available to Isabel and Rob, they do not want to use it. Either the support does not really provide them with what they need, or they simply do not want to be put in the position to have to ask for it. When people are included socially, they have the support and resources they need and are better able to deal with problems and stressors in their daily lives (Moody & Phinney, 2012; Public Health Agency of Canada, 2004). Isabel's and Rob's statements about their perceived lack of support show how lack of support negatively impacts their social inclusion.

Suspicions and Concerns

All participants, regardless of user status, expressed suspicions or concerns related to their

Internet use or non-use. Participants expressed concerns related to causing damage to their devices if

they pressed the wrong thing. They discussed worries related to security: They wondered whether they

were at risk of identity theft, or if someone or something was trying to victimize them in some way.

> ***Gertie —*** *I'm always afraid of hackers. No matter how careful you are, I have*
> *nothing to hide, they could look into everything. It's a danger; it's something I don't*
> *like. We could make mistakes or trust something, which is very dangerous. I'm so*
> *careful with, I never click yes and do this for me or something because I'm too much*
> *afraid, and I think this is not right. We should know.*

While no one stated outright that his or her concerns or suspicions with regards to the

Internet were a major deterrent to use, their concerns certainly had an impact. It seemed to affect

these older adults' confidence in their own abilities and limit the activities that they performed

online because they were worried there might be negative repercussions. In Gertie's statement

we can see the frustration in not knowing what is safe and what is not. When she says "we

should know," one can see that she feels it is unjust that she does not have the information that

she thinks she needs to effectively navigate the Internet.

Rob and Bailey both talked about concerns with viruses; in their statements we can see that

they place limitations on their Internet activities due to these virus concerns. Rob also talked

about his concerns over privacy, indicating that avid use of the Internet leads to a loss of privacy,

something he felt as a real negative.

> **Rob —** *You have to be watchful. I guess . . . I don't know if watchful is the right*
> *word but . . . you hear of problems that can result of [sic] you going into obscure*
> *sites and getting viruses and that sort of thing. But I don't tend to go . . . I go to the*
> *first page and that's it.*

> **Rob —** *Just your sense of privacy is over. It's out there somewhere.*

Bailey — *Yeah, well I am very suspicious, I have had so many viruses that I hate, I am very careful about changing stuff, like I have tried to download stuff, and then oh oh all of a sudden the computer doesn't work, and then it's these viruses, yeah.*

The literature on this topic states that often times older adults are afraid of Internet technology and worry about breaking something (Chu, Huber, Mastel-Smith, & Cesario, 2009; Wang et al., 2011). Rob's and Bailey's comments about the need to be watchful, and Rob's concerns over privacy, are not unique to older adults. The literature highlights older adults' concerns over using the Internet (Chu, Huber, Mastel-Smith, & Cesario, 2009; Wang et al., 2011) and seems to paint those concerns as unique to older adults, reinforcing commonly held beliefs that older adults are afraid of technology and the Internet.

In contrast, a Statistics Canada (2009) report found that younger Internet users share the same concerns as older adult users. Participants of this study, for example, Rob and Bailey, despite being very light users of the Internet, are aware of the potential pitfalls of the Internet, just like younger Internet users who have extremely high usage rates. We can see through the comments made by the participants that their so-called "fear" of the Internet is no different than that of younger Internet users. In fact, according to Statistics Canada (2009), 32.6% of individuals under the age of 34 had concerns regarding privacy compared to 32.8% of individuals over the age of 65. The difference is miniscule, yet ideas of the older adult who is terrified of technology persist.

It is important to note that ageism was present in this research. It can be seen in the cashier's comments to Sophie when she says she does not have the Internet, and it is present in Gertie's experience when she tries to find a telephone number. Ageism is also present in the created dependency that was experienced by the participants. Ageism may

also have played a role in Noah's decision to retire; perhaps had his employer supported

his continued professional development, Noah would not have felt the need to retire. This

pervasive ageism, which has been highlighted above, must have an impact on the older

adult's ability to be socially included. If society believes that older adults are merely

passive individuals, why should any effort or changes be made to include them in society?

Participants in this research all had very different experiences with the Internet based on

their own level of engagement and skill. We can see in the experiences of the participants

that these individuals are not passive; they want to participate and maintain their

independence. They express the same frustrations and concerns as younger Internet users.

I Would Be Lost Without It

All of the participants, whether they were light users, avid users, or non-users, talked

about the benefits that the Internet could provide. Medium and avid users were the most

satisfied with their use and the benefits that using the Internet afforded them. This group of

participants was extremely engaged with the technology, and through the interviews I

could see that the Internet played a very important role in their lives. Many of the

participants who were medium or avid users stated that they felt the Internet contributed to

their ability to age successfully. When an individual is aging in a way that she or he views

as successful, that individual is socially included. For users, these benefits were tangible

and many participants commented that the Internet contributed to their sense of

independence.

Émilie, a medium user in her early 70s, talked about how the Internet allows her to

maintain her independence. The Internet provides her with access to information that she

can access herself without the assistance of others. Émilie talked about how she uses the

Internet to better inform herself with regards to her own health. In this case the Internet is

giving Émilie easy access to information, and allowing her to make informed decisions,

maintain her independence, and actively participate in society.

> **Émilie** — *So these things [referring to computers and the Internet] are great for Skype . . . I think it keeps you, for seniors, I think it is really good. If you don't know something, look it up. Don't have to depend on somebody else to do it. I mean there are certain things, of course, but for your own self-use and self-knowledge. If you don't know something, look it up. It will tell you. Like I say, even with medications, I go online first before I go to the pharmacist and then I ask them.*

Faith, an avid user in her early 70s, talked about the ease of accessing information

online. She talked about how using the Internet makes her feel good, current, and capable.

> **Faith** — *. . . to find out a piece of information . . . I think okay that's how I'll look for it. Or this is what I'll Google. I'll see if it works. When it works I feel really terrific. Yes. You know? So that makes me feel like you know, you're not over the hill. You can actually do this. It certainly does give me these feel good moments when something you know, clicks. Yeah. And I get it, and I can solve the problem . . . or somebody asks me some information, and I can go boom, boom, and I can go and find the information. I can get it for them, and I can say like, somebody yesterday, I said, "well I went online and this is what I found out for you. Da, da, da, da, da." So that does always make you feel "like I'm competent." I can handle one up. Yeah.*

In both Émilie's and Faith's comments we can see the impact that the Internet is

having on their sense of self–efficacy. Both women are actively engaging in an activity

that society values, and it is contributing to their sense of social inclusion.

When asked if she thought using the Internet contributed to her successful aging,

Janis, a medium user in her early 70s, stated that she was not always sure it did, but

finished by saying that she would be lost without the Internet.

> **Janis** — *Uh there are days that I do think [so], and there are other days that I don't think so. There are days when I am looking for a word or I am looking for something on a health issue; like I really like it that I have access to that right away rather than having to phone over to find out about things. I think I would be lost without it really.*

Janis' comments echo those of Émilie and Faith, in that the Internet gives her convenient access to information, both health-related and other. Janis clearly defines the impact that the Internet has on her life with her comment "I would be lost without it." Janis is a socially active person, and the Internet plays a role in her overall successful aging.

Lois, a medium user in her mid 80s, felt that the Internet helped to keep her connected, current, and positively contributed to her successful aging.

> **Lois** – *I think it is! [Referring to the Internet positively impacting her well-being] You try to keep up with things that are current, I mean you could sit in a chair and feel sorry for yourself if that's what you wanted to do, cause I don't have family here, my husband died. But yeah it's a something that I like to do.*

In the above comments we can see the positive impact that the Internet can have on the lives of older adults. It can help them to connect with family and friends, maintain their independence, and in their own view, age successfully. In these comments we do not hear the stereotypical comments that society expects from older adults. We hear comments that are very similar to younger Internet users, such as those surveyed by Statistics Canada (2009), which again shows that society's ideas about older adults and the Internet are not based in fact but are based in ageist stereotypes.

Reflexivity

Reflexivity is a term used to describe the role or the presence of the researcher in the research (Madden, 2010). It is an acknowledgement that the researcher's thoughts and ideas will inevitably have an impact of the on the research itself (Madden, 2010). This project is one that is very close to my heart. My mother's experiences with computers and the Internet were the catalyst for this research. My thoughts and passion for this project

has had an impact on the research, it has helped to push this project forward, my subjectivity and reflexivity were, as Madden (2010) states, a "productive force" (p21).

While interviewing the participants, I could hear an echo of the comments my mother would make when she talked about using the computer and the Internet. I had to work at not drawing comparisons between the experiences that my mother had had and what the participants were telling me. I feel that due to my awareness of this predisposition I was able to maintain my reflexivity.

What surprised me the most while conducting this research was the sometimes overt ageism that was experienced by participants while just going about their daily lives and trying to accomplish everyday tasks. I was naïve in not recognising the systemic and deep-rooted ageism that exists in our society today, which we can see in the off-handed remarks of individuals who are supposed to be providing assistance, such as those made to Sophie at the grocery store, and the lack of support and understanding of the needs of some older adult Internet users. In addition, I began to feel a real sense of frustration at the lack of acknowledgment by society of the resources that all the participants possessed. Their skills and experiences are being completely ignored and devalued. During every interview that I conducted with a participant there was at least one moment where I thought, here is a real talent or skill that is being ignored by the rest of society, something that if the person wanted and had the opportunity to share, would be beneficial to the wider community.

All of the individuals who participated in this research showed real engagement with the topic; they felt passionately about sharing their experiences with me. All participants stated that they hoped they had been helpful had and contributed useful information. I

truly enjoyed meeting all the participants and hearing their experiences; I often found it difficult to leave.

My past experience with conducting interviews was a real asset during the interviews. I feel that it gave me the ability to establish a certain level of rapport with participants that might have been more difficult had I not had that past experience. I did, however, find the whole process of recruiting participants and entering their homes a little stressful. It felt unnatural to call complete strangers and enter their homes, but the experience was entirely positive. The participants were so welcoming; they openly told me of their struggles, triumphs, and experiences.

On a few occasions a participant would express frustration with a certain task related to the Internet. Luckily these issues were ones that I had some familiarity with and I was able to offer some assistance. The participants seemed happy that I was able to offer them a solution. These occasions were especially rewarding for me as it lessened the sense that I was only taking something from them and that they were getting nothing in return.

As I completed more interviews, I felt that my interviewing skills improved; I was better able to formulate relevant follow-up questions quickly and not to talk as much. In the first few interviews I was nervous and provided long explanations, which, as I gained more practice, I realized were not necessary.

Chapter 5: Conclusions and Recommendations

The topic of older adults and the Internet is an important one, as well as one that is especially timely due to the growing reliance that society has on the Internet. The Internet has become one of the greatest tools in society today; I would go so far as to say that it has touched just about every aspect of our world: the economy, communication, healthcare, education, government, and social participation. Today's world places great value on information and communication technologies (ICT) and prioritizes the use and promotion of ICT. Whether an individual uses the Internet or not, it is impacting his or her life. The Internet has changed the way we interact with one another, as well as how we access information and services. While it is still possible to live one's life not using the Internet, it is becoming increasingly difficult to do so.

Simultaneously, we are experiencing a major demographic shift of the world population with the aging of the baby boomers. This demographic shift will have significant impacts on society, from the ratio of working persons to retired older adults to the possible strain on the healthcare system. Due to this demographic shift, more research has focused on ways in which to promote the healthy and successful aging of this population. Social inclusion has been seen as a framework that can positively impact an individual's well-being. Social inclusion ensures that individuals remain a part of their communities and have access to the services and information that they require to live a full life. In the later years of life, if an individual is able to maintain social inclusivity, this will positively impact their overall well-being and can contribute to their ability to age successfully.

While the term successful aging is not without controversy, it has been used in this research because it provides a useful tool with which to discuss an individual's well-being in the

later years of life. The term successful aging in this context has been defined by the participants of the research and not by the traditional definition of decreased risk of disease and disease-related illness, maintaining a high level of physical and mental functioning, and continuing engagement in society (Rowe & Khan, 1987). Each participant had his or her own personal definition of successful aging and used that definition as a reference point from which to state whether or not he or she is aging successfully.

Due to the increased reliance on Internet technologies, discussion of the digital divide is increasingly important because the Internet can help to contribute to successful aging by either strengthening social inclusion or hindering it. The digital divide is a term that has increased in popularity over the years as the use of ICT has increased. Warschauer's (2003) view is that the digital divide is not a situation of the haves versus the have-nots, but rather a framework that should be applied to a spectrum of ICT use. The concept of a spectrum of use is very helpful when thinking of the intersection of older adults and the Internet. Even the participants in this research who stated they were non-users of the Internet still accessed the Internet in one way or another. They had a family member or friend look something up on the Internet or had someone show them photos that were posted online. They represent one end of the spectrum of the digital divide and the avid users in the research, who are shopping online, banking, emailing, and more, represent the other end of the spectrum.

Research Questions

At the onset of this research I hoped to be able to answer four questions:

- What advantages and disadvantages does the Internet provide older adults?

- What role does the Internet play in an older adult's life?

- What impact, if any, does the technologizing of services have on older adults?

- According to older adults, how does the Internet impact social inclusion?

I found that some of the questions were easier to answer than others. Some of the answers to the first question were in accordance with what has been found in the literature on this subject. Other answers were more of a surprise, such as the spectrum of Internet use among participants.

What Advantages and Disadvantages Does the Internet Provide Older Adults?

Throughout the interviews participants identified many advantages to using the Internet; this was true of users and non-users. Avid users were the participants who were the most satisfied with their Internet usage and abilities. They were able to complete a variety of tasks using the Internet; it was a resource that they accessed frequently. Avid users believed they would continue to use the Internet as they aged, and they saw it as a tool that could help them to age successfully. These results are consistent with what has been found in using the Technology Acceptance Model (TAM). When a participant is able to identify benefits to technology use they are more likely to use the technology (Chen & Chan, 2014; King & He, 2006; Porter & Donthu, 2006).

Medium users actively used the Internet for a variety of tasks, from banking and online shopping to accessing government information. Like avid users, medium users saw the Internet as a tool that they would use as they age to help maintain their independence and to continue to age successfully. The advantages identified by avid and medium users were similar to those benefits found in the literature. The literature states that the use of ICT can increase social participation and personal capacity, therefore helping older adults to maintain a certain level of independence (Beckenhauer, 2009; Hill, Beyon-Davis, & Williams, 2008).

Light users identified advantages to Internet use but often fell victim to their lack of Internet skill. They pointed out disadvantages to the Internet; however, these disadvantages often had to do with their lack of abilities or lack of support. Light users were the group most dissatisfied with their Internet abilities. This dissatisfaction is not completely surprising, as they do not possess the skills needed to complete all the tasks they want to complete online. They are very aware of the variety of things they can do online but are severely limited by their abilities.

Light users had access to support, but they did not see that support as adequate, oftentimes saying they did not want to bother their children or friends to help them. Three issues seem to play a big role in the difficulty that light users had in accessing appropriate support. The first is level of previous experience light users had with the Internet. Participants often stated that the people who they turned to for support would rush them, quickly glossing over what needed to be done, not taking the time to see if they really understood or could do it the next time on their own. This finding is echoed in the literature on this topic; lack of support was identified as a barrier to use well (Eyon & Helsper, 2010; Hanson, 2010; Hill, Beyon-Davies, & Williams, 2008; Jung et al., 2010).

The second issue has to do with Internet-related terms. The light users stated that they did not know all the terms associated with the Internet, which contributed to their difficulty understanding directions given by the support person. Finally, light users had a hard time remembering the steps needed to complete a task online. Perhaps because they did not complete these tasks on a daily or even a weekly basis, the information did not have to chance to become permanent.

While non-users had no intention of learning to use the Internet, they were able to identify benefits to use, but felt it was not for them. They cited many reasons for not wanting to

learn to use the Internet, including cost. One participant stated that she could not justify the cost of getting the Internet; she did not see the Internet as a necessity. Two other participants felt that they did not have the skills necessary to learn to use the Internet. One non-user stated that he had never taken typing in school and saw this as a barrier to accessing the Internet. It is important to point out that the results of my findings are contrary to what was found in the literature. The literature shows that when older adults could identify benefits to ICT use, usage rates increased (Mitzner et al., 2010; Wang et al., 2011).

One non-user did identify disadvantages to the Internet. These disadvantages seemed to centre around the change in society due to the Internet and social media specifically. She was not happy about the current trend of posting personal information and daily or hourly updates about what one is doing, eating, or where one is going. She felt that this shift in communication was having a negative impact on society. She stated that the Internet and social media have changed the way that we communicate and interact with one and other. This user felt very strongly that she did not want to be a part of this trend. Her feelings on this subject contributed to her decision, despite the encouragement of her family, not to learn how to use the Internet.

What Role Does the Internet Play in an Older Adult's Life?

It was interesting to see the role that the Internet played in the lives of the participants. All the participants in the study had some kind of contact with the Internet, whether directly or indirectly. All of the non-users interviewed had people in their lives who would go online on their behalf. One non-user frequently asked his spouse or a family to access the information that he wanted. He often wanted resources with regards to his hobby and would ask his family to go online and print these resources for him. So despite being non-users, these participants were

accessing information on the Internet indirectly. These participants' family members would search for specific information the participant thought might be online.

All of the participants saw the Internet as a tool. It was seen as a resource with which to access information and a way to spend some of their leisure time. Users saw the Internet as a way to stay connected to family and friends and a way to stay informed and up to date with the wider community. One light user stated that before she would go to the pharmacy to have a prescription filled she would search the medication online. She stated this made her feel prepared and that she had the "right" questions ready to ask. The statements made by the participants in this research echo the literature on this topic, which states that the use of ICT can increase social participation and personal capacity (Beckenhauer, 2009; Hill, Beyon-Davis, & Williams, 2008). For non-users the Internet did not play these roles; while participants did say that the Internet could be used to maintain social connectedness and provide them with information that was not enough of an incentive to learn to use the Internet. As noted previously the non-users in this research study had no intention of learning to use the Internet.

What Impact, If Any, Does The Technologizing Of Services Have On Older Adults?

Throughout the interviews it became apparent that the technologizing of services does impact older adults. For the avid and medium users the impact was positive. They were quickly and easily able to access services and service information. For the light users and non-users the impact was much more negative. These participants pointed to the dependency that was created because they either could not access the services, or they had a great difficulty in accessing them. Based on the experiences of these participants, we can see that the technologizing of services is a double edged sword: It provides easy access for some, but many are left without access to the

resource, or they have to turn to others for support with a task that they could have easily completed on their own had the services not been relocated online.

Bases on my findings, the unfortunate outcome of this difficultly in accessing services online for these individuals is that they are dependent on others for assistance, a socially manufactured dependency that negatively impacts an individual's social inclusion (Warburton & Sharlow, 2013). Several of the light users gave examples of how the technologizing of services has negatively impacted their ability to age successfully. These examples were present in their comments around their feelings of a forced dependency, like the comments made by one participant that as an older adult her independence is already being eroded and the technologizing of services compounds this erosion. This participant used the example of no longer being able to drive, she was no longer able to hop in her car and go where she liked when she liked, she now had to depend on others to help her complete her daily errands. The results of my findings show that there is a real impact experienced by older adults when there is a push to technologize services.

According To Older Adults, How Does The Internet Impact Social Inclusion?

Many activities happen online or are facilitated by going online, and participants were very quick to discuss the impact that this activity had on them. Light users and non-users talked about feeling left out of what was happening online

Participants did not mention the term social inclusion by name, but it was most definitely present in their narratives. All of the participants were socially active: They were mobile, spent time with family and friends, had hobbies, and many of them were active volunteers. This group was not one that was experiencing the full force of social exclusion by any definition. What was present was a sense of being a part of something or not being a part of it. Participants who used

the Internet were proud of their Internet use. They identified the Internet as a resource that could

be used to maintain their social inclusion as they aged. They saw the Internet as a way to stay

connected to family, friends, and the wider community. Many participants talked about using the

Internet to maintain their independence: They felt that the Internet could enable them to do tasks

on their own without having to ask for assistance from family and friends.

Having said that, light users of the Internet felt the most excluded while using the Internet

compared to the other user groups. This group could identify what was available online, but had

difficulty accessing the resources due to their lack of skills and a perceived lack of support.

While participants stated that they could ask family or friends for help, they did not want to.

They felt their families were too busy or did not have the patience to explain things in a basic

way. Many of these participants stated that their difficulties using the Internet created a

dependency on others that otherwise would not have been present, based on my finding this is

another example of this socially created dependency.

Participants who were light users demonstrated that lack of Internet use, or a lack of

Internet skills, can negatively impact a person's social inclusion. The individual knows where the

information or resources are but cannot access them. A forced dependency is created for these

individuals, and their sense of self-efficacy is negatively impacted. Participants talked about

feeling frustrated with their lack of abilities and feeling left out. If a person is socially included

they do not feel left out (Warburton & Shardlow, 2013). While Internet use is only one area of

these individuals' lives, it most certainly has an impact. The Internet is the fastest growing tool

we use today.

The language used to talk about the Internet was also an issue for participants. Light users

were the only user group that mentioned this issue. They felt left out of the dialogue. It added to

their general frustration and contributed to the feelings of exclusion that they were already experiencing. Language facilitates participation, and participation positively impacts social inclusion. Since these individuals do not "speak" the language of the Internet, they find it more difficult to navigate and utilize. Their access and usage has been curbed, and therefore, their participation has been limited.

Interestingly, the non-users did not express the same sentiments as light users with regards to their social inclusion. Non-users did not feel that their lack of Internet use had any impact on their social inclusion. Non-users identified benefits to Internet use and were able to give personal examples of how using the Internet could benefit them, but they did not feel that using the Internet would help them to remain socially included. These feelings regarding social inclusion may be due to the support networks these participants had. All the non-users had access to one or more individuals who would go online for them, whether it was to access government information or just information of interest to them, and these users, unlike light users, were willing to access supports. In these cases, my findings indicate that family and friends are providing the support and resources to help participants maintain their sense of social inclusion and are therefore not experiencing the negative impacts experienced by light users.

However, both light users and non-users did feel it was unjust that there were resources that are solely located online such as coupons or telephone numbers. There was a sense of frustration and anger that they could not access these resources on their own either because of their lack of Internet abilities or their complete lack of use of the Internet. Based on my findings these barriers experiences by the participants are an excellent example of the real life consequences of the technologizing of services; it can impact many aspects of the person's life, from their finances to their independence. This observation is important because it was not

always this way. In the past these individuals could access the coupon or find the phone number of a friend on their own. Now due to the increased reliance on the Internet these individuals cannot, and a dependency has been created that was not there before.

It is important to look at the intersection of this socially manufactured dependency and ageism as ageism can also impact social inclusion. Ageism is a socially created form of discrimination that can intensify the at-risk status of older adults by placing limitations on individuals and passing judgment on their abilities (Warburton & Shardlow, 2013). This form of socially created discrimination has the public overvaluing the ability and experience of the young and undervaluing the ability and experience of the older adult (Townsend, 1981). The symptoms of social exclusion can influence successful aging by influencing an individual's capacity to thrive. Poverty, unemployment, and poor housing impact an individual's well-being, and well-being is associated with successful aging (Hsu & Jones, 2012; Kerz, Teufel, & Dinman, 2013; Liang & Luo, 2012; Rowe & Kahn, 1987). These symptoms of social exclusion are impacted by ageist ideas. As we age we may need to rely on others for certain things, but to create this reliance sooner than necessary seems counter productive to the principles of successful aging.

Individuals experiencing the effects of the digital divide are also at risk of experiencing socially manufactured dependency, due to society's increased reliance on the Internet and the technologizing of services. Those at the non-user or light user end of the spectrum of use are not able to access the services and information and therefore need to rely on others to assist them or access the information on their behalf. Older adults are experiencing the digital divide, but not homogeneously. This heterogeneous use of the Internet by older adults is an extremely important point to make as a stereotype persists that sees all older adults as being cut off from technology and the Internet, when the reality is very different. As can be seen in this research, access to and

use of the Internet are completely dependent on individuals and their circumstances. Older adults are avid users, light users, and non-users of the Internet. This difference must be understood if we want to promote increased use of the Internet among older adults. Resources and services that are meant to promote Internet use among older adults must be created with the understanding that the needs of individuals are very different depending on their user status.

One participant had used the Internet moderately at the end of her career; she retired and got a computer and the Internet at home. She proudly told me the story of a service technician coming to her home to install the Internet and how the technician commented on her excellent understanding of how Internet technology worked. However she had very little support available to her when she encountered difficulties online and this caused her great frustration. When she downsized to a smaller home she did not bother bringing her computer with her, as it had become a source of frustration and annoyance. This person was using the Internet and had a sense of pride in her abilities but, due to a lack of support, was unable to continue using the Internet.

Based on the comments about access to appropriate support, the focus should not be just to get older adults online, but to provide support to their continued learning and use of the Internet. Without such support, certain older adults' access to and usage of the Internet is at risk, with the individual needlessly falling victim to the digital divide. It is completely unnecessary to have these individuals cut off or have to access the Internet through a second party when they have the motivation to use the Internet.

Successful Aging

As noted previously above all participants were asked if they were aging successfully. The responses of the participants were based on their own subjective definitions of successful aging. All of the participants with the exception of two participants stated that they were aging successfully. The other two participants stated they were aging "well enough" and "so-so." One of the goals of this research study was to see if using the Internet impacted an individual's ability to age successfully. Did using the Internet help or contribute in some way?

All users of the Internet were quick to identify the Internet as a resource that could be accessed in the later years of their life. Participants said the Internet would help to keep them connected to the wider community. Several participants stated having access to the Internet would be helpful if their mobility declined. They identified several scenarios in which using the Internet would be helpful if they experienced mobility issues later in life, such as continued access and control over their finances through Internet banking, online shopping for themselves or gifts for others, access to library books through their E-book services, and continued contact with family and friends through the use of video calling such as Skype and Face Time.

Several participants spoke about how they use the Internet to get further information about prescription medications, whether it is to research the medication before they go to the pharmacy so they are able to ask the right questions or to look up drug interactions to enable them to take charge of their health. One participant identified the Internet as a supplement to his own memory; he stated that as he got older and experienced a decline in his memory he turned to the Internet to remind him of all kinds of things. He saw the Internet at a tool to help him. The idea of the Internet acting as a tool was a common thread through the comments made by users of the Internet; the Internet could help them to maintain their independence. Non-users did not

identify the Internet in this way; it was not seen as a tool that could help them as they aged. While they did identify benefits to Internet use, and had others access information online for them, they could not see how they would need to use the Internet in the future.

Users of the Internet saw the Internet as a tool that could positively impact their successful aging. They identified tangible ways in which they saw themselves using the Internet to maintain their connections to the community and their independence, therefore helping them to age successfully.

Recommendations

"Older adults" is a label that is used to identify individuals between the ages of 55 to the third age. Older adults are a heterogeneous group with vastly different needs, wants, and abilities. The same can be said of older adult users of the Internet. They are different, their needs are different, and their usage patterns are different. Participants were very quick to point out what they felt they needed to better support their Internet use and not fall victim to the digital divide. It is clear that support is needed, but it needs to be the right kind of support, support that bridges the gap between brand new users and medium or avid users. With Internet usage rates among older adults continually on the rise, support is even more critical.

When the narratives of the participants are analyzed, the solutions are very clear: better support and custom training. All of the participants in the study were doing well financially but chose not to purchase Internet support. One must ask why? Is it that the support available is not the right kind, that is to say that it is not tailored to the needs of the older adult user? If that is indeed the case, a new style of exposure and education classes should be implemented. Learning groups would be very beneficial; having a peer to turn to for support was noted by one

participant as a real support to her continued use of the Internet. She felt that her children were too busy, but this friend filled the gap by providing her the support that she needed. As demonstrated by the medium users in this research study, they had access to support when they encountered problems. Due in part to the access to support, the medium users were satisfied with their Internet abilities and expressed very few frustrations about their use of the Internet. They had a very easygoing attitude when asked about dealing with change online, such as navigating updated websites. The medium users stated they would try to figure out the issue, and if that did not work, they would try again later or ask for help. We can see that having access to appropriate support can be very beneficial. Based on my findings, classes would be an excellent source of support offered within the community, curriculum used should be student driven. The classes should respond to the older adults learning needs and desires. It would be beneficial for these courses to be offered within the community at a grassroots level.

Light users talked about the language the surrounds the Internet and how it is a barrier to their access and use of the Internet. Participants stated that the people who give them instruction should be aware of the language they use when talking about the Internet and be sure the person understands the terms. Participants also stated that they need time to practice the various tasks and have the opportunity to access follow-up support. They stated often when they asked for help the individual would quickly go through the steps and not allow the older adults to try it for themselves or check in to see if they understood.

More support should be offered at the point of purchase or set up. My research has shown that when technology is new and unfamiliar, a lack of instruction can be very intimidating.

A simple addition of a paper user manual added to every box, or as a free requested item at the point of sale could do a lot to help address the anxiety and frustration. If a manual were

offered as an optional free item, the cost to the company would be minimal and most likely offset by the increased sales to older users, because the device would be easier to use. The manual should provide basic, as well as advanced information, such as, where the power switch is located and what it looks like. The manual should also contain step by step set-up instructions, with information about how long each step will take and the sounds that the device will make. The manual should also provide information on simple trouble shooting; currently the trouble shooting guide to most ICT products is in the device itself, which can make accessing it difficult for certain users. Most companies provide some kind of technological support, either online or via telephone, but often the contact information is only available in the user manual located in the device. It would be incredibly helpful to have that information listed in the paper manual, so the older adult can feel that they are not alone in the set-up process and if something occurs that they are concerned about, they can easily access the information in the manual, or speak to a customer service representative.

Older adults should be encouraged to go online and learn to use the Internet. The Internet can be a useful tool in helping an older adult age well. It can contribute to their continued independence and allow them another way to stay connected to the wider community. The important point to keep in mind is to provide appropriate follow-up support. Follow-up support is needed to promote the continued use of the Internet in the later years.

Limitations

There are limitations to every research study. The biggest limitation in my research was that I met with the participants only once. Had I met with them more than once I could have probed further on certain subjects. Additionally there were limitations within my sample. All the

participants in my research stated that they were doing well or very well financially. The review

of the current literature on the subject of older adults and ICT showed that income impacted ICT

use. Unfortunately the perspective of older adults from lower socio-economic backgrounds is

missing in this research. Additionally, in a sample of 15 participants I had only three non-users

and those users had access to family and friends who went online for them. Due to not having

any participants who were non-users and had no one to go online for them, I was not able to

uncover the lived experience of individuals who do not use the Internet and who do not have

family or friends who access the Internet on their behalf. Future research on this subject is

needed to uncover the reality of those individuals who are completely isolated from the Internet.

The real impact of not using the Internet for these individuals may be very different from the

individuals in this study who did not use the Internet but had access to people who could go

online for them.

Conclusion

This study has highlighted the struggles that older adults can face when accessing the

Internet. It has uncovered the ageism that older adults are faced with and the stereotypes that

exist about older adults and Internet use. Finally it has uncovered the role the Internet can and

does play in the lives of older adults.

This research has explored the intersection of older adults, the Internet, and social

inclusion. The Internet and social inclusion go hand in hand, the Internet does positively

contribute to an individual's ability to be socially included. The Internet is also a tool that older

adults can use to help them to age successfully. They see it as a way to maintain their

independence, supplement their memory, and take charge of their health

I chose qualitative methods for this research because while I was conducting a literature review on the topic of older adults and the Internet I discovered a real lack of use of qualitative research methods on this topic. The "voice" of older adults was missing. I felt that it was extremely important to lend the voice and experience of older adults to the conversation on older adults and the Internet. Older adults are typically a group that is talked about but not often given the opportunity to express their experiences. By choosing qualitative methods, an opportunity for some older adults to share their experiences was created. Older adults are a heterogeneous group. Many use the Internet, some do not; however, if they want to use the Internet they should be offered the support they need as it can positively impact their inclusion in society and their ability to age successfully.

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UNIVERSITY
OF MANITOBA

Faculty of Human Ecology
Family Social Sciences

Student Researcher: Melina Elliott <u>Faculty of Graduate Studies University of Manitoba</u>
Research Project Title: Should Older Adults be Online? An exploration of Older   Adults᾽
Internet Use or Non-use

Hello,
My name is Melina Elliott and I am a graduate student in Family Social Sciences in the Faculty of Graduate Studies at the University of Manitoba. I am conducting research about older adults and the Internet to complete my master's degree. I would like to understand better how older adults use the Internet or why they do not use the Internet. The goal of this research project is to examine the barriers that exist for older adults in terms of Internet usage, as well as to better understand if access to the Internet benefits older adults. This project will help increase the understanding of what role the Internet plays in older adults' lives, including older adults' perspectives about the accessibility and usefulness of technology.
Interviews will take place at any place that is agreeable to both of us.
With your consent I will record the interview with an audio recording device; if you do not consent to being recorded I will take notes. All information that you provide will have all identifiable information removed, you will be assigned a pseudonym, which will be used on all transcripts. After the thesis has been successfully defended the recording of our interview will be destroyed. At the end of the study I will present my findings to my master's thesis committee and will attempt to publish the results of the research, as well as present the findings at professional conferences. I will do so without revealing any personally identifiable information such as your name or contact information.
If you have been referred to this research study through a community organization, please note that your decision to participate or not to participate in this study will not impact your involvement or access to any services within that community organization.

If you have some time I would like to ask you some questions about your use of and feelings about the Internet. If you are interested or would like more information please contact:

Faculty of Human Ecology
Family Social Sciences

Research Project Title: Should Older Adults be online? An exploration

of Older Adults'Internet Use or Non-use

Principal Investigator and contact information: Melina Elliott <u>Faculty of Graduate Studies, University of Manitoba</u>

Research Supervisor and contact information: Dr. Karen Duncan <u>Faculty of Human Ecology, University of Manitoba</u>

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

I would like to do an in-depth interview with you. The goal of this research project is to examine the barriers that exist for older adults in terms of Internet usage, as well as to better understand if access to the Internet benefits older adults. This project will help increase the understanding of what role the Internet plays in older adults' lives, including older adults' perspectives about the accessibility and usefulness of technology.

The purpose of this interview is to try and understand how you use the Internet and your feelings about it. I will be asking you various questions on this topic, and you will be asked to share your experiences and opinions.

Interviews will take place at any place that is agreeable to both of us; the interview is not expected to exceed 90 minutes in length.

With your consent I will be recording the interview with an audio recording device; if you do not consent to being recorded I will take notes. The recorded interview will be analyzed along with interviews of other participants and this analysis and reflection will be used to write a thesis about older adults and the Internet. The thesis may contain some quotes from our interview. If you are quoted in the thesis all indicators of your identity will be removed, your privacy will be completely protected. All information that you provide will be assigned a pseudonym, which will be used on all transcripts. After the thesis has been successfully defended the recording of our interview will be destroyed.

I do not foresee any risk that you will suffer from taking part in this interview, just as I do not foresee any potential benefits that you will receive from taking part in the interview.

At any time you may decide you no longer want to participate in the interview; you may withdraw your consent at anytime.

If you have been referred through a community organization, please note that your decision to participate or not to participate in this study will not impact your involvement or access to any services within that community organization.

Following the interview I may contact you for clarification or additional information; this brief contact would happen over the phone and would be completely voluntary. Once I have analyzed the data from our interview, I will contact you and present my findings to see if you agree with my interpretation. At the end of this research you will be given the option to receive a brief outline of the findings of the study. At the end of the study I will present my findings to my master's thesis committee and will attempt to publish the results of the research, as well as present the findings at professional conferences. I will do so without revealing any personally identifiable information such as your name and/or contact information.

The only people to have access to the data collected will be my thesis supervisor and myself. All information will be kept strictly confidential. Documents related to the research will be kept on my password protected laptop and any hand written notes will be stored in a locked cabinet in my home. As I transcribe the audio recordings all personal identifiers will be removed, and the data containing the personal identifiers will be destroyed once my master's thesis has been successfully defended.

The results of this research should be available January /2015 at which time a summary of the findings will be available. If you would like a copy, I will provide you with one.

I would like to receive a copy of the summary of the findings: YES/NO

If you have any additional questions please do not agree. Only agree, and give your consent if you understand and are in agreement with all of the information that I have just outlined.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Joint-Faculty Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at 474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Participant's Signature _____ Date _____

Researcher's Signature _____Date _____

Appendix C

Demographic questionnaire

1. Do you currently use the Internet?   YES / NO

2. How would you define your Internet use?

   - Avid user.

   - Medium user.

   - Light user.

   - Non-user.

3. On average how many hours per week do you spend online?

4. Please indicate your age group

   - 70-74

   - 75-79

   - 80-84

   - 85-89

   - 90-94

5. Please indicate the highest level of education that you have completed?

   - Elementary

   - High School

   - Certificate or Trade school

   - University undergraduate degree

   - University graduate degree

6. Please indicate your marital status

   - Married or living with a common law partner

- Separated/divorced

- Single or never married

7. How would you describe your financial situation? Would you say you manage

- Very well

- Well

- Not very well

- Get by

- With difficulty

8. Do you think you are aging successfully? YES / NO