

Technology for healthy ageing: Selection, optimisation and compensation strategies used by older adults to live well with technology

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Abstract

Background: With rapid digitalisation, technologies are increasingly integrated as part of our everyday lives, and are becoming increasingly essential for individuals to participate in society. Technology presents opportunities to support healthy ageing, however the processes in which older adults select and integrate technologies into their daily live has not been well examined.

Objective: This study uses the Selection, Optimisation and Compensation (SOC) Model to understand how older adults integrate technology into their everyday lives to live well. The two key research questions are as follows: 1.How do older adults describe their technology use and their choices, analysed with respect to SOC processes? 2. How do older adults perceive that technology is a part of living well?

Methods: A descriptive qualitative study was conducted. Purposive sampling was used to recruit older adults who were aged 55 and above, living in the community, who speak and understand English, and resided in Australia. Five focus groups comprising 20 older adults were conducted. Data were analysed using hybrid inductive and deductive reflexive thematic analysis, based on the SOC Model

Results: Older adults selected technology intentionally to enhance different aspects of their daily lives. Perceived 'involuntary' selection of technology could lead to feelings of resentment or frustration. Optimisation strategies included self-monitoring, integrating technology into daily routines, digital literacy and proficiency, and problem-solving skills. Compensatory strategies included choosing alternative technology that suited participants' abilities or skills, and seeking support through informal or formal avenues.

Conclusions: These findings provide important considerations for technology developers to design technology in collaboration with older adults to ensure that they align with needs and preferences. Digital literacy is not sufficient to empower older adults to use technology; when empowering older adults to use technology, service providers should also consider facilitating other intrinsic and extrinsic resources and skills. Clinical Trial: Not applicable.

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Original Manuscript

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Abstract

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Results: Older adults selected technology intentionally to enhance different aspects of their daily lives. Perceived 'involuntary' selection of technology could lead to feelings of resentment or frustration. Optimisation strategies included self-monitoring, integrating technology into daily routines, digital literacy and proficiency, and problem-solving skills. Compensatory strategies included choosing alternative technology that suited participants' abilities or skills, and seeking support through informal or formal avenues.

Discussion: These findings provide important considerations for technology developers to design technology in collaboration with older adults to ensure that they align with needs and preferences. Digital literacy is not sufficient to empower older adults to use technology; when empowering older adults to use technology, service providers should also consider facilitating other intrinsic and extrinsic resources and skills.

Keywords: Technology, older adults, healthy ageing, optimisation strategies

Introduction

According to the World Health Organisation (WHO), healthy ageing entails creating the environments and opportunities that enable people to be and do what they do throughout their lives (WHO, 2020). As populations are ageing globally, healthy ageing is a priority in many countries, and interventions and programs have been developed to support older adults to avoid negative impacts associated with disability, or to maintain or improve their functional ability. Interventions have also focused on supporting older people to sustain or enhance participation in social engagement and other meaningful activities (Koh et al., 2024). Examples include education, problem-solving and goal setting, leisure exploration (Koh et al., 2024), and activities to improve physical capacities (Moreno-Agostino et al., 2020). Synthesised evidence suggests that physical activity programs can improve healthy ageing by reducing physical limitations and improving psychosocial outcomes (Pinheiro et al., 2022). Similarly, non-exercise-based interventions, such as leisure-based interventions or programs to increase older adults' self-awareness or self-acceptance, have led to improvements in older adults' quality of life (Koh et al., 2024).

With rapid digitalisation, technologies are increasingly integrated as part of our everyday lives, and are becoming increasingly essential for individuals to participate in society. For instance, payments for services and goods have become digitised through mainstream telephone-based services, app-based services and ATMs (Wallcook et al., 2024). Correspondingly, technology presents new opportunities to digitise interventions aimed at supporting healthy ageing (WHO, 2024). Examples of technology that have been developed and leveraged to support healthy ageing include web platforms, mobile health apps, and wearable technology, which have been designed to support older adults in self-monitoring and decision-making, measuring physiological, cognitive or physical metrics, or delivering interventions (Ienca et al., 2021). While these technologies are intended to simplify and enhance older adults' daily lives, they can also make everyday lives more complex (Wallcook et al., 2024). To understand how technologies can be best used to support healthy ageing, it is necessary to understand how they have been assimilated in older adults' everyday lives. Several studies have been conducted to understand older adults' experiences with technologies. For instance, Reyes and colleagues (2023) conducted a study in Australia to understand older adults' choices of, and motivations to use technologies for health-related self-management. They also sought to understand barriers and facilitators to technology use. The researchers found that older people leveraged

technology for health monitoring and to remain active and connected. Facilitators include social and organisational influences, accessibility, and cost, whereas some barriers include perceived information overload, ease of use, and concerns about privacy and accuracy. These findings were echoed in other international studies conducted in Canada (Kabacińska et al, 2023) and the United Kingdom (Vaportzis et al, 2017). While existing research has provided valuable collective insights into how older adults experience technology and barriers and facilitators to their use, the processes in which older adults select and integrate technologies into their daily lives has not been well examined.

Selective Optimisation with Compensation (SOC)

The Selective Optimisation with Compensation (SOC) model (Baltes & Baltes, 1990) is a meta-theoretical model focusing on the “how” of ageing well; it describes processes that older adults undertake to reach their goals, particularly considering that their resources may become more limited over time. According to the SOC, when personal and environmental resources become limited, individuals make decisions to allocate these resources to pursue and to achieve their goals. This involves (i) selection, (ii) optimisation and (iii) compensation. Selection entails setting or prioritising goals through loss-based selection or elective selection. For instance, older adults might choose to cease participation in certain activities that might become more effortful and instead, select other activities deemed to be more meaningful. Optimisation entails acquiring and refining resources and skills. Examples include learning new skills or knowledge needed to engage in chosen activities. Finally, compensation involves acquiring or substituting resources to achieve their goals. For example, older adults might leverage technology or support services to help them participate in activities. According to Freund and Baltes (2000), the orchestrated use of these three action strategies effectively manages the loss of resources across individuals' lifespans and conserves resources. There is limited research on the application of the SOC model to the understanding of how technology is leveraged as part of, or integrated into, older adults' process of selection, optimisation and compensation. This study aims to understand how technology is integrated into older adults' everyday lives to live well using the SOC model. Specifically, the key research questions are as follows:

1. How do older adults describe their technology use and their choices, analysed with respect to SOC processes?
2. How do older adults perceive that technology is a part of living well?

Method

A qualitative descriptive approach (Sandelowski, 2000, Sandelowski, 2010) underpinned our qualitative inquiry, where we stayed close to the 'surface of the data and events' (Sandelowski, 2000, p. 336) to gather rich descriptions of the views of participants and describe the phenomena from the viewpoints of participants. This study was conducted and reported using the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines (Tong, Sainsbury and Craig, 2007). Ethical approval was obtained from the University of Queensland (Ref: 2023/HE002389).

Sampling and recruitment

Purposive sampling was used to identify and recruit participants who met the following criteria: (1) aged 55 and above, (2) living independently in the community, (3) able to speak and understand English, (4) residing in Australia. Different avenues were contacted to advertise this study to prospective participants. These included national and local senior networks, age-friendly university networks, and the University of Queensland's (UQ) Healthy Living, an interprofessional clinic promoting healthy ageing and wellbeing. Individuals who were interested in participating in this study were invited to share their preferred contact information with the research team. The lead researcher (WQK) contacted potential participants by email and/or a phone call to provide more information about the study and to arrange a focus group session at their preferred time and date. Online and in-person focus group options were planned; however, only in-person sessions were conducted as all participants lived in Brisbane.

Data collection

Data collection took place between April to June 2024. Five face-to-face focus groups, comprising 20 participants in total, were conducted at a community health service for older adults. Each focus group comprised three to five participants and lasted approximately an hour. The topic guide (Appendix A) was developed and discussed with a consumer advisor. Each focus group was facilitated by a moderator (WQK). At the outset of each session, the moderator reiterated the research purpose, explained the session structure and answered any questions. All participants were offered a \$20 gift voucher as a token of appreciation for their time and participation. The average duration of focus groups was 67 minutes. All sessions were audio-recorded and transcribed verbatim.

Data analysis

Data were imported into NVivo14 for data management. Data were analysed using reflexive thematic analysis (Braun & Clarke, 2020) both inductively and deductively based on SOC to identify strategies used by participants. First, WQK immersed herself in the data by reading and re-reading the transcripts and listening to the audio recording. During this process, data were coded descriptively through open coding. Next, codes were organised based on the SOC model and grouped into themes and subthemes. This was an iterative and reflective process, where the researcher moved back and forth between preliminary themes. A meeting was arranged with the research team to discuss and explore the wider team's perspectives on the data and codes. This leveraged multidisciplinary expertise to achieve a richer and more holistic interpretation of the data and the interrelationships between themes.

Findings

Participants' demographic information is summarised in Table 1. Participants' mean age was 75.4 years, and there was a similar proportion of male and female participants. Over half of the sample (n=12) had a Bachelor's degree or higher, and most participants were unemployed or retired. The types and frequency of technology used are summarised in Table 2. All participants were regular users of smartphones, computers or laptops. Most described proficiency and daily use of these technologies. Strategies relating to technology use will be described using the SOC model with three overarching themes: 1) elective selection of technology – which are further divided into two subthemes: 'elective, active selection' and 'passive selection'; 2) optimisation strategies, and 3) compensation strategies.

Theme 1: Elective selection of technology

This theme described ways in which participants intentionally, and unintentionally, chose to use technology to facilitate different aspects of participation in daily living and wellbeing. The subthemes include (i) elective, 'active' selection of technology, and (ii) passive selection of technology, where participants chose technology but perceived the choice as being 'forced' or unavoidable.

Subtheme 1 - Elective, 'active' selection of technology

All participants described regular use of their mobile phones, laptops or personal computers, and a few used other technologies, such as iPads, tablets and smartwatches.

Participants conveyed that technologies and applications were purposively selected to help with daily life organisation. For example, some described keeping digital records of their accounts or finances, organising photographs or photobooks electronically, or moving from using physical diaries or calendars to digital versions for more effective management of schedules and appointments.

"I never seem to have the calendar ... besides, I share it with my husband, so he can see what it's like. When you get older, as so many... medical, specialists... we're trying to keep track of it all". (Olivia, 74)

Some participants described using technology as a means for leisure and social participation. For instance, a few shared their experiences engaging in mobile games such as quizzes or crosswords, which were described as fun or as means to pass time. Technology was said to provide opportunities for mental stimulation and lifelong learning through information seeking and learning through the Internet. Examples included tracing family history and increasing knowledge in various topics of interest, such as medications, artificial intelligence or other educational topics. Participants expressed that technology provided opportunities to feel connected with the world:

"Yeah. I'm a great believer in current affairs. If I have a few moments to scroll, I'm on Twitter ... the commentary on things that are going on is amazing. You just feel so in touch with the world, you know?". (Liam, 69)

A few participants described using activity tracking applications to monitor daily activities, such as physical activity levels (e.g., step-count) and physiological features (e.g., heart rate and sleep). One participant expressed that this served as supplementary information that was provided to his general practitioner (GP) during medical consults:

"It's handy to have, particularly in a medical interaction, like I go to my GP, and I've been recently regularly, two times a month perhaps, for a variety of different reasons, and I like to be able to say that this is what I'm doing, this is how I'm going, and she can monitor my overall activity rates and things like that ... I find that particularly useful". (John, 72)

In addition, participants reported using technology to stay socially connected with family and friends, particularly those living overseas; to reconnect with old friends; and to connect

with new friends and likeminded people:

"I use the cliché apps like Facebook to keep up with friends back in Hungary, family in Australia ... Fair few discussion groups on various things like cooking". (Liam, 69)
"... maintain old friendships. Yeah. And renew old friendships ... I didn't know that [name of friend] would age so well, oh that's great, I'm going to the hairdressers (laughs)". (Hazel, 69)

Subtheme 2 – Passive selection of technology

Many participants described technology uptake as passive or "forced", where technology selection was seen as essential or unavoidable, regardless of their willingness to use them. This was described as resulting from rapid digitisation of services such as banking and electronic commerce. Participants conveyed that this could affect or threaten older adults' participation in meaningful activities and daily routines:

"We're forced into technology. The thing is you haven't got any choice anymore because essentially when I had to get the blue card for PCYC [Police Citizens Youth Club – a network of non-profit organisations], the only way you could do it was online... the other thing is that I just got my license renewed and I thought, well, I'll see if I can get this new digital license. The only way you can get your digital license is you've got to download an app". (Jack, 76)

While most participants identified themselves as being relatively proficient in navigating technology, feelings of being forced into using technology in their day-to-day lives were expressed and described as frustrating and upsetting. They explained that this affected how they engage in activities:

"I'm annoyed and angry with technology... for instance, now... you're running a book sale, but you've got to register it, and if you want to register it, you've got to have an account, and you've got to have a code name, a code word, and you've got to nominate a time. I've got friends up at [regional book club], people who love books, but they refuse to sign up because they can't nominate a time to get there from [regional area] by public transport ...". (Samuel, 80)

Theme 2: Optimisation strategies

This theme described strategies that were identified by participants to optimise the use of their selected technology to ensure meaningful life participation. It also described how participants optimised their life using technology. These included one's ability to self-monitor, to successfully adjust to and/or integrate technology to fit into daily lives, and to

leverage one's digital literacy, positive attitude and problem-solving skills.

Many described the importance of monitoring the relevance of technology, keeping in mind their intended use of technology for well-being. In other words, they described active deliberation about when technology can be, or has been, beneficial in helping them live well. Some participants expressed the importance of using technology purposefully to avoid time wastage or harmful effects:

"I choose what I like to see, who I want to talk, and also connecting with family. WhatsApp, I call my sister once a month or once a week. We talk about things. It's something that I really like ... not the silly thing of scrolling and scrolling and scrolling [social media], and spending hours doing ... that young people do? No. I decide what to do". (Evelyn, 76)

Participants explained that ongoing deliberation about the utility of technology encouraged them to continue to engage with their chosen technological mediums in some instances and disengage in other instances. For example, while some described leveraging mobile applications to track their daily activities (e.g., step-count) for self-monitoring, they reported eventually disengaging from these apps after gaining a sense of their activity levels to benefit from the activity without the drawback of the technology:

"I found that helpful in the beginning, but I just don't use it anymore. I have an idea of how long my walks are ... I'd rather enjoy the walk then look ... if you go out and, you know, bush or national parks or something, you want to look at your surroundings. You don't want to be embedded in this thing [mobile phone]". (Amelia, 80)

Another optimisation strategy was the investment in time and resources to keep updated with technology, and be aware of potential risks, such as misinformation or financial scams. Some participants identified digital proficiency, previous professional experience or personal experiences as assets that enable them to problem-solve through challenges. For example, to keep updated with technology updates, one participant actively acquires knowledge through searching for YouTube videos. A few participants also described the importance of having a positive attitude in seeking resources or in equipping oneself with skills to overcome current or prospective challenges, such as risk management or active problem-solving:

"We'll have problems, but we need the confidence to think, 'Oh yeah, look, a little bit of sorting out.' I mean, you know, we'll be able to understand it, ask. Whereas some

people are just so confused, it's too much for them. But I think if you have a healthy attitude towards ageing, you think, 'Well look, I'll make sense eventually, I'll seek out help, I'll look at the YouTube videos, I'll work it out.' " (Luke, 79)

Theme 3: Navigating technology use and compensation strategies

This theme described challenges that participants encountered during technology use and strategies that were discussed as ways to adapt to challenges or limitations; these included choosing alternative technologies that are better aligned with their knowledge and abilities and seeking formal and/or informal support. These strategies enabled them to continue engaging with technologies in ways that support with their lifestyles and routines without perceived detractions.

Some participants described functional changes or disabilities that limited their abilities to use technology effectively and safely. One participant provided the example of visual fatigue when looking at smaller fonts, particularly through her mobile phone. Correspondingly, she described choosing an alternative technology that was more suited to her physical abilities (e.g., laptop with larger font size). Some participants also described experiencing challenges or feeling stuck when they experienced technical issues, or when they were not able to navigate technology use:

"I was doing a post to Facebook a couple of days ago, and I wanted to reorder the photographs that I was taking, and they were in an event, and I wanted them to be sequential, and I thought, 'Damn it, I don't know how to do it. I want to get this post out; I don't have time now'". (Luke, 79)

A few participants described seeking informal support from their friends or family members, particularly the younger generation whom they described as being more technology-savvy:

"I must admit I call him [husband], as when I get stuck, he's very good with technology. And I just call him ... if he fails, we call [a service] or whatever it is" (Emily, 71)

"Or a 15-year-old grandchild" (Hazel, 69)

One participant expressed concerns that relying on family members to assist with technology could lead to burden:

"My daughter occasionally drops in and tries to sort out things and explain things, but I don't want to burden her anymore". (Samuel, 80)

A few participants described seeking external support from other sources, such as a local non-profit organisation that assist people who are aged over 50 years to become competent

in computer and internet use:

"I am going to shortly join a group that's like a technical men's shed [non-profit organisation to promote socialisation and shared activities among men] ... I'm hoping my technological problems like reordering the photographs on Facebook and that sort of thing will be handy ... to figure out these little perks that I don't quite know at the moment yet". (Luke, 79).

Discussion

This research aimed to understand ways in which older adults perceive they use technology to live well. Specifically, this work utilised the SOC model to understand the hows; how older people select or opt out of using technology (selection), how they optimise their resources and skills to use technology to live well (optimisation), and how they compensate for a lack of resources and skills (compensation) to maintain meaningful participation in the face of challenges. Findings revealed that older adults selected technology intentionally to enhance different aspects of their daily lives. Perceived 'involuntary' selection of technology could lead to feelings of resentment or frustration. In some instances, this led to participation in activities or routines that did not involve technologies. Optimisation strategies to use technology to improve daily living and vice versa included self-monitoring, technology integration into their daily routines, digital literacy and proficiency, and problem-solving skills. Compensatory strategies included choosing alternative technology that suited participants' abilities or skills, and seeking support through informal or formal avenues.

Technology selection – The whats and whys

Participants in our study reported voluntarily and purposefully selecting technologies that facilitated improvements in various aspects of their daily lives, such as improving the effectiveness and efficiency of self-management (e.g., activities within daily routines, health management) and participating in leisure, social, cognitive and physical activities. These are congruent with the literature on how older adults perceive successful ageing (Burton et al., 2024). The most frequently used technologies were smartphones, laptops and/or desktop computers, and the most commonly discussed technological applications were social media and messaging apps, internet searches, digital organisers and calendars. Purposeful and meaningful selection of technology appeared to encourage uptake and continued use. Our work bolsters findings from several studies showing that the perceived benefits of technology and their meaningfulness facilitated uptake (Liddle et al, 2021); whereas low interest or a lack of understanding about the purpose of technology impeded

older adults' use o/r continued use (Chung et al., 2023; Dequanter et al., 2022; Wilson et al., 2021). A possible explanation is that purposeful, autonomous selection of technologies empowers older adults with intrinsic motivation, which could in turn encourage sustainable use of technology beyond the novelty period (Meng & Ma, 2015). On the other hand, some technologies were selected non-autonomously, or in some participants' words, being "forced" upon them with circumstantial changes. These might have been further impacted by the COVID-19 pandemic, which has led to a particular acceleration of service digitalisation (Organisation for Economic Co-operation and Development, 2021; Siette et al, 2024). When technology use is perceived as involuntary, this could lead to reduced satisfaction, a sense of oppression, or frustration (Fang et al., 2020). These findings highlight the importance of ensuring autonomy and providing older adults with a choice in selecting technologies that are seen as meaningful in improving their daily living. This is particularly important given the continual interest and development of technology to support older adults to live well.

Technology use – The 'hows'

Participants in this study described leveraging different cognitive skills, including metacognition and problem-solving skills to optimise the use of their selected technology. Metacognition entails actively monitoring and evaluating information to ascertain whether one is moving towards a goal, and making decisions on how to make changes to achieve the goal (Hertzog & Dunlosky, 2011). In our study, older adults described meta-cognitive processes used to ensure that they use their selected technology in ways that aligned with their personal preferences, lifestyles and routines. Such monitoring and self-regulation skills have been found to improve health outcomes, such as preventing illness and maintaining health (Li et al., 2023).

Older adults also described ways in which they overcame problems that were encountered, such as technical issues or working around software or hardware updates. Such problem-solving skills have been viewed as an important aspect of successful ageing (Chen et al., 2017). According to Chen and colleagues, problem-solving entails having 'fluid resources', which encompasses abstraction and performing mental operations, and crystallised resources which entail gaining resources through cumulative experience and knowledge (Chen et al., 2017). Given that fluid resources are based on reasoning and processing abilities, they can decline with age particularly in later adulthood (Craik & Jennings, 1992; Park et al., 2002). On the contrary, crystallised resources can be maintained or increased

over time up to late adulthood (Park et al., 2002). Our participant cohort was generally highly educated. Most reported high digital literacy skills as part of their previous professional employment. This might have contributed to the development of crystallised resources, which allowed them to work through issues and to consider other avenues, such as YouTube tutorials, as a means to equip themselves with the skills and knowledge to overcome challenges. In addition, technology is rapidly developing alongside potential benefits and risks such as misinformation and online scams or fraud. According to National Seniors Australia (2024), over 600,000 scam reports were made in 2023 with older adults being most impacted. Likewise, the National Council of Aging (2025) revealed that worldwide, older adults aged 60 years and older reported US\$3.4 billion total fraud loss in 2023. Accordingly, problem-solving skills appear to be requisite to afford older adults the confidence and abilities to use technologies in calculated ways. This includes ensuring that the benefits of technology outweigh their risks, and for technology use to be meaningfully aligned with older adults' personal wellbeing goals.

Some participants described a positive outlook, and a 'can do' mentality as being an important strategy for technology use. Positive attitudes have been found to be a psychological resource in healthy ageing (Bryant et al., 2012; Mock & Eibach, 2011), as studies have found that older people with a more positive attitude were more likely to have better self-reported health and wellbeing (Bryant et al., 2016), participate in community and physical activities (Sánchez Palacios et al., 2009) and activate health-promoting behaviours (Levy & Myers, 2004). In our study, such behaviours include trying to find solutions to overcome potential problems encountered to continue using technology in a meaningful way. This suggests that when designing interventions to support older adults to engage in technology, considerations should also be made to inculcate positive attitudes and consider measuring attitudinal changes as an outcome measure.

Some older adults may lack the confidence or ability to use technology in ways that they perceive as meaningful. For instance, some participants in this study expressed a lack of confidence to overcome issues encountered and may lack 'crystallised resources' such as digital proficiency to navigate issues. In such instances, support appears crucial, including informal support from family members and formal support from organisations. While informal support is valuable, some study participants also expressed concerns about burdening their family, particularly if they sought help more frequently than they hoped. Such self-perceived burden can impact older adults' self-concept (Pedroso-Chaparro et al.,

2021). Considering that technology is continuously evolving, it is more than likely that any users of technology including older adults, may require support to troubleshoot potential issues. While family members might be able to bridge obstacles (Mizrachi et al., 2020), it is important to consider sustainable ways, such as community training hubs, that older adults can receive technological support as required. While such services might be available, many participants in this study did not seem aware of such services; this resonates with findings from other studies (Mizrachi et al., 2020; Takase et al., 2022).

Implications for Practice

There is increasing interest in using technology to support healthy ageing, as seen through continued development and research in this field. However, a lack of technology uptake and sustained use remains a pertinent issue (Wilson et al., 2021). Regarding technology *selection*, our study suggests that meaningful selection of technology by older adults provides them with a sense of autonomy and motivation for sustained use. Selected technologies must serve a purpose, such as meaningfully supporting aspects of their daily lives. Moving forward, service providers can consider empowering older adults to choose technologies that can be personalised to their routines and preferences (Baraković et al, 2020). Forced selection can be counterproductive in supporting older adults' wellbeing and it must be acknowledged that older adults may opt out of using technologies. If forced selection occurs, additional supports are likely necessary to support older adults in using technologies and to mitigate the risk of excluding participation.

In terms of *optimisation* strategies to use technology purposefully, cognitive processes including meta-cognition and problem-solving appear necessary to empower older adults with the confidence to navigate the use of technology in ways that align with their intended purpose. This is particularly true of technologies that are dynamic, which can impact ways of using or operating them (Peek et al, 2019). Likewise, a positive attitude towards using technology and its challenges appears to be an important, facilitatory resource. Therefore, service developers or healthcare professionals working to equip older adults with technological skills should also consider the cognitive aspects of using technology, and empower older adults to gain skills and knowledge to use them in reasoned ways. Examples might include empowering older adults with problem-solving skills (Nielson et al, 2022), building self-efficacy and confidence in managing prospective challenges, or positive thinking training (Taherkhani et al, 2023). Regarding *compensatory* strategies, being supported to use technologies and navigate challenges is important (Harris et al, 2022).

Such resources may include family support and external support services like community hubs. Given that not all older adults may have family support, it is important to ensure that external support services are readily accessible to promote digital inclusion (Tirado-Morueta et al, 2023) and to minimise the negative repercussions of digital exclusion, such as poorer health outcomes and social isolation (Wang et al, 2024).

Strengths and Limitations

This study followed a methodologically rigorous process, and findings were generated as a research team to leverage multi-disciplinary perspectives, enabling a holistic interpretation of the data. Another strength is its use of an established theoretical framework (SOC) to guide data analysis. However, findings must be within the study context and limitations must be acknowledged. While several recruitment avenues were used to recruit participants, all participants were recruited from a healthy ageing clinic; and were relatively physically active. Most identified themselves as being technologically savvy and relatively well-educated. There is the likelihood of response bias, as participants could be likely to be more digitally proficient. As such, findings from this research may be more resonant with this population and may be less representative considering other demographic groups, particularly older adults who are less active and technologically savvy. Future studies might consider further exploring understanding technology use and non-use in other population groups.

Conclusion

Framed with respect to the SOC model, this study contributes to a theoretical understanding of how older adults use technology to live well. Older adults purposefully select technologies that align with their priorities in living well, and this appears to be a facilitator for technology uptake and sustained use. Older people leverage different resources and skills to use their selected technologies in meaningful ways. These include metacognitive skills, problem-solving skills, positive attitudes, and internal and external support. These findings provide important considerations for technology developers to design technology in collaboration with older adults to ensure that they align with needs and preferences. It is also evident that digital literacy is not sufficient to empower older adults to use technology; when empowering older adults to use technology, service providers should also consider facilitating other resources and skills.

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Table 1: Participants' characteristics

Characteristics	Participants
<i>Gender, n (%)</i>	
Male	11 (55%)
Female	9 (45%)
<i>Age in years, M (SD), range</i>	75.4 (68 - 82)
<i>Educational Attainment, n (%)</i>	
Bachelor's degree	12 (60%)
Diploma/advanced diploma	7 (35%)
Certificate III/IV (vocational qualification)	1 (5%)
<i>Employment status</i>	
Part-time or casual employment	2 (10%)
Retired	18 (90%)

Table 2: Types and frequency of technology use

Technology use	Frequency; n (100%)				
	Weekly	Monthly	Used/ seen previously	Never used it	No response
Computer/Laptop	22 (100%)	-	-	-	-
Smartphone	22 (100%)	-	-	-	-
Tablet computer	22 (100%)	-	-	-	-
Pedometer or smart watch	6 (30%)	-	7 (35%)	4 (20%)	1 (5%)
Virtual reality	-	-	8 (40%)	9 (45%)	3 (15%)

Supplementary Files

Multimedia Appendixes

Topic Guide.

URL: <http://asset.jmir.pub/assets/b7569580ccf328861d278594d2ba49f1.docx>