# DISASTER RESILIENCE AMONG OLDER ADULTS

**SAMANTHA OOSTLANDER**

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Population Health Program
Interdisciplinary School of Health Sciences
University of Ottawa

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# Abstract

With each passing year the impacts of climate change become more pronounced and lead to increasingly frequent and severe disasters. Disaster risk reduction (DRR) strategies emphasize a whole-of-society approach to mitigate climate change impacts and enhance resilience. Older adults are a population whose agency has historically been overlooked, and vulnerability emphasized in disasters. Painting older adults as homogenously vulnerable is fascinating, and paradoxical, considering they are a diverse population in terms of age range, capability, and capacity. Older adults are also the fastest growing demographic globally, and in the context of mounting pressure to address climate change, there is a need to better understand how their resilience can be supported. With this in mind, the purpose of my dissertation research was to explore how resilience can be supported for older adults in disasters.

My research is comprised of two qualitative studies and three articles. In Study 1, a narrative approach was used to capture the lived experiences of 67 older adults at two time points during the COVID-19 pandemic. Specifically, in Study 1a (Article 1), we explored what older adults identified as assets to support their resilience. In Study 1b (Article 2), I used my lens as an occupational therapist (OT) to further understand how older adults used their assets to adapt daily occupations, and described connections to the literature pertaining to the role of OTs in supporting older adults in pandemics. Through Study 1, we developed an empirically derived asset map and described how older adults used their assets to support their resilience and that of their households during the pandemic. Using their assets at the community level was challenging due to pandemic-related restrictions, in addition to influences of self- and societal perceptions of older adults as vulnerable. We draw connections to the experiences of older adults during the pandemic, and the role of occupational therapists in supporting participation in disaster contexts.

To better understand older adults as partners in DRR at a broader level – in Study 2 (Article 3) – we used a problematization approach to examine assumptions that appear in 10 guiding disaster and emergency management documents. Under an overarching theme of vulnerability, those considered 'young' older adults were afforded more agency in disaster contexts than 'old' older adults. The framing of older adults as contributors and resilient was reserved for those who fit preconceived notions of younger, ableist aging. Further, the protection of older adults in disasters was framed as a moral discourse, which has implications for their inclusion and participation as partners in DRR.

I used *The EnRiCH Community Resilience Framework for High-Risk Populations* to situate my understanding of older adults from a salutogenic and asset orientation. In the dissertation discussion, I highlight the need to redress the balance between the participation and protection of older adults to enhance disaster resilience. This dissertation research provides insight into the asset literacy of older adults and draws connections to the ways in which empowering participation can enhance resilience, while restriction may perpetuate vulnerability under the guise of protection. To advance work in this field, there is a need to engage more diverse partners, like OTs, who work with older adults and can help to dismantle dominant constructions of vulnerability in old age. A greater role for older adults and OTs in DRR aligns with movement towards a whole-of-society approach to mitigating disaster risk and enhancing resilience. Efforts to enhance the resilience of older adults now are invaluable for climate resilience for the future.

# Dedication

I dedicate my dissertation research to my parents.

To my mom – Bonnie Oostlander – who was a tenacious leader in her career, and always emphasized the importance of relationships, "*it's all about the people*".

To my dad – Ron Oostlander – who models dedication, curiosity, and perseverance in his work, and who reminds me to, "*just keep plugging away at it*".

Thank you for your unwavering support and encouragement on my path to – in your words – "*get a good education*".

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As an OT, I received support from my colleagues at The Ottawa Hospital, where I worked for five years. With Diana Bissett and Dr. Katrine Sauvé-Schenk, we completed a study within the OT department and in the span of three years saw it through from conception to completion. Thank you for the opportunity to be part of this study. Thank you both for your continued support and kindness over the years. I appreciated every check-in and word of encouragement. Thank you to Sandy MacLeod for supporting the project in her capacity as Professional Practice Manager and creating a Research Assistant opportunity for me through The Ottawa Hospital Research Institute. I am so thankful to have been part of such a supportive department.

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With a grateful heart,

Thank you!

Sam

# Ethics

For Study 1, the University of Ottawa Research Ethics Board approved the use of secondary data from my supervisor's research program on April 21, 2022, file number: H-04-22-7965. A copy of the ethics approval can be found in Appendix A. The interview guides for the initial and follow-up interviews are included in Appendix B.

Ethics approval was not required for Study 2, which involved the use of grey literature.

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# Acronyms

| | |
|---|---|
| CanMOP | Canadian Model of Occupational Participation |
| CDA | Critical Discourse Analysis |
| CDC | Centers for Disease Control and Prevention |
| CRC | Canadian Red Cross |
| DRM | Disaster Risk Management |
| DRR | Disaster Risk Reduction |
| EnRiCH | Enhancing Resilience and Capacity for Health |
| FEMA | Federal Emergency Management Agency |
| ICID | International Centre for Infectious Disease |
| IPCC | Intergovernmental Panel on Climate Change |
| NIA | National Institute on Aging |
| OT | Occupational Therapist(s) |
| SDGs | Sustainable Development Goals |
| UN | United Nations |
| UNDRR | United Nations Office for Disaster Risk Reduction |
| WHO | World Health Organization |

# Chapter 1. Introduction

People transform through their everyday experiences, whether they are mundane daily activities or spectacular adventures. Through these experiences, each person gains knowledge and resources, and develops strengths and skills – all of which are assets. As individuals, we reach for these assets like tools in a toolbox when we encounter obstacles, and they support us to cope, adapt, and be resilient in our environment. In my clinical role as an occupational therapist (OT), I have experience supporting people who encounter obstacles to identify and reach for their assets, whether it be resources they already have or resources they can access in the community. With experience working in a hospital setting, I am familiar with the ways in which health conditions disrupt people's lives, forcing them to adapt in the face of new or chronic health concerns. But what about disruptions outside of individual health conditions in a hospital setting? What happens when the health and well-being of communities are challenged due to adversity stemming from climate change?

Climate change is leading to more frequent and severe disasters, which pose serious threats to human health and sustainable development (Intergovernmental Panel on Climate Change [IPCC], 2021). Disasters are devastating; the 2016 Fort McMurray Wildfire and 2018 Ottawa Tornadoes are two examples of disasters which destroyed homes and community infrastructure – and led to traumatic experiences for people affected. Influenza pandemics can also be conceptualized as disasters, SARS-CoV-2 in 2019 (COVID-19) triggered a worldwide economic recession, altered labour markets, and was socially devastating (UNDRR, 2021). In many parts of Canada, pandemic response efforts intersected with response pressures from other disasters, referred to as cascading disasters; for example, the pandemic was thought to have exacerbated health impacts from the 2021 Heat Dome in British Columbia due to conflicting public health messages about masking (Tetzlaff et al., 2023). Cascading disasters are becoming

more common around the world, and intervening efforts are needed at multiple levels of society to reduce risk and strengthen resilience (Thomas et al., 2020).

The impacts from disasters can be felt across a single setting, or many communities - and even whole countries. However, the impacts are not equitability distributed; social and colonial determinants of health can point to specific populations within society that are at greater risk of being negatively affected, such as older adults (Greenwood et al., 2018; O'Sullivan & Bourgoin, 2010). Risk associated with older adulthood is often attributed to the presence of chronic health conditions that coincide with the aging process, and because of this, it is not unusual in Western colonial societies to hear older adults being referred to as vulnerable, colloquially (WHO, 2020). In a disaster context, the label *vulnerable* can become even more pronounced, through media communications and government press briefings, highlighting who is most at-risk. While this label may be helpful, for example, for professionals who work in disaster and emergency management to identify where additional resources should be directed in the aftermath of a disaster, it also has many negative connotations.

The word vulnerable emphasizes deficits, and tends to evoke images of people who are dependent, fragile, and weak (Enarson & Walsh, 2007; Lemyre et al., 2009). An emphasis on deficits and needs makes it difficult to see the assets older adults have that contribute to their resilience, and that of their communities. Research on resilience highlights the importance of resources and skills gained and developed with life experience, which enable people to face age-related and other challenges (Cosco et al., 2017; Wister et al., 2016). Assets accumulate with age so that, in theory, a person has a greater pool of tools to draw from in old age, more than they would in their younger years (Hayman et al., 2017).

Older adults can effectively be considered assets within society, whose potential contributions could help address complex problems, such as those stemming from climate change and disaster impacts (Howard et al., 2017). Yet older adults have historically been excluded in disaster and emergency

management activities (WHO, 2008). At such a time when solutions and a collectivist mindset are needed more than ever, older adults have been largely invisible in this context. For example, in the past, humanitarian organizations and government agencies leading disaster response and recovery efforts mistakenly assumed that older adults' needs would be addressed by their family members (WHO, 2008). Currently, when older adults are discussed in relation to disasters, narratives of vulnerability are dominant and can have damaging consequences, for example, through creating intergenerational tension where older adults are framed as burdens on society (Ayalon et al., 2021; Lagacé et al., 2024; Levy et al., 2022).

Painting older adults as homogenously vulnerable is fascinating, and paradoxical, considering they are a diverse population in terms of age range, capability, and capacity. Identifying and leveraging the assets older adults possess, particularly in disaster contexts, is an interesting avenue that would benefit from further investigation. This is particularly salient given mounting global pressures to address climate change impacts to enhance human health and sustainable development (UNDRR, 2015, 2021). Simultaneously, as the number of people aged 60 years and older is expected to surpass 1.4 billion globally by 2030 (WHO, 2020, 2022), understanding the role of older adults as active partners to support their resilience and climate resilience is essential. With this in mind, the purpose of my dissertation research was to explore how resilience can be supported for older adults in disaster contexts.

## Research Questions and Objectives

My dissertation is comprised of two qualitative studies and three articles (Study 1a and 1b, and Study 2). Study 1 focused on exploring the assets, adaptation, and resilience of older adults during the COVID-19 pandemic. In Study 1a, I explored assets, and in Study 1b I sought to understand how older adults used their assets to adapt in the context of the daily occupations. Moving beyond the pandemic, in Study 2, I examined assumptions about older adults that appear in relevant guidance documents in disaster and emergency management, and relevant to the Canadian context. These texts are influential;

at a surface level, they indicate priorities for action and roles for partners, but the lens through which they are written can further shape how we view the participation of diverse groups in our society. Table 1 provides an overview of the purpose and objectives for each study.

Table 1

*Overview of the Purpose and Objectives for Each Study and Article Comprising my Dissertation Research*

| Study | Article | Purpose | Objectives |
|---|---|---|---|
| 1a | 1 | To explore the assets and asset literacy of older adults, contextualized as a high-risk population during the COVID-19 pandemic | 1) To explore what older adults identify as assets and examine how they framed the value of these assets<br>2) To understand how participants were able to use their assets to support adaptation and resilience during the pandemic |
| 1b | 2 | To explore and understand how occupational participation of community-dwelling older adults was experienced during the COVID-19 pandemic | 1) Understand how older adults adapted to participate in valued occupations;<br>2) Describe changes in experiences of occupational participation over time, from initial to follow-up interview;<br>3) Draw connections from our findings to the literature to further elucidate the role of OTs in supporting older adults in pandemic contexts |

| | | | |
|---|---|---|---|
| 2 | 3 | To identify and examine assumptions about older adults that appear in guiding documents related to disaster and emergency management, and relevant to the Canadian context | 1) To understand and examine assumptions underlying risk and agency, giving rise to the framing of older adults as partners<br>2) To propose a path forward for conceptualizing the role of older adults in disasters |

## Structure of this Dissertation

This document is structured by chapter, and there are a total of 10 chapters comprising my thesis dissertation. Chapter 1 is an introduction to the research topic, questions, and objectives of the dissertation. Chapter 2 follows with a review of the literature. In Chapter 3, I provide a description of my ontological and epistemological position, selected theoretical frameworks, and positionality. Chapter 4 offers a brief description of the methodology used in the three research articles in this dissertation, which is then followed by a description of my contribution and those of my co-authors in Chapter 5. Chapters 6, 7, and 8 are the three articles themselves, followed by an integrated discussion in Chapter 9. Finally, Chapter 10 offers concluding remarks.

Beyond the chapters of this dissertation are the references and appendices. Appendix A is a copy of the University of Ottawa research ethics board approval. Appendix B contains the semi-structured interview guides used in Study 1. Appendices C and D contain figures of selected frameworks and models which underpin this research, [Appendix C is the EnRiCH Community Resilience Framework for High-Risk Populations (O'Sullivan et al., 2014) and Appendix D is the Conceptual Model of Asset Literacy for Household Resilience (O'Sullivan et al., 2018)].

# Chapter 2. Literature Review

## Climate Change, Disasters, and Emergency Management

'Planetary health' is a concept which recognizes the health of humans is interconnected with that of the Earth on which we live (Whitmee et al., 2015). Humans have profound impacts on the Earth and have contributed greatly to climate change through unsustainable practices that deplete precious resources. In the short-term, these practices lead to improvements in the longevity of humans (Whitmee et al., 2015). However, this is not without cost; with each passing year the impacts of climate change become more pronounced through the increasing frequency and severity of disasters, changes in air and water quality, and degrading biodiversity (IPCC, 2023). Growing awareness of climate change impacts, like disasters, is shaping how societies are structured, across all sectors, to support the well-being of people and planet (Whitmee et al., 2015).

Definitions of disasters continue to evolve, and while there are mixed opinions as to what constitutes a disaster, for the purposes of my dissertation research I use a definition by McFarlane and Norris (2006); "*a potentially traumatic event that is collectively experienced, has an acute onset, and is time-delimited*" (p.4). What makes disasters particularly concerning is their volatility and complexity, for example, disasters can have a slow or fast onset, be small or large scale, and stem from innumerable hazards (i.e. technological, environmental, man-made, natural, etc.). Efforts to prevent, plan for-, respond to-, and recovery from disasters are essential functions of emergency management (Waugh, 2000).

Emergency management (often used interchangeably with disaster management or disaster and emergency management) refers to the oversight of risks and hazards in our society, and the resulting disasters they may cause (Waugh, 2000). There is a tendency to think about disasters in terms of their destructive aftermath, but the emergency management cycle includes efforts that span prevention/mitigation, preparedness, response, and recovery (Neal, 1997). The need for technically

trained professionals in this field – like Emergency Managers, Emergency Social Services Directors, and Public Health Emergency Preparedness Practitioners – emerged from the continuous demand disasters have on society (Waugh, 2000). This essential work includes administrative and operational tasks that span all phases of emergency management (Oostlander et al., 2020).

In Canada, work in the field of emergency management became more professionalized in recent decades with an increasing number of people entering into the workforce with relevant post-secondary education and training (Oostlander et al., 2020; Oyola-Yemaiel & Wilson, 2005). As work in this field has evolved, so too has understanding of efforts required to mitigate and address disaster risk. Disaster risk reduction (DRR) refers to strategies for reducing and preventing disaster risk, whereas disaster risk management (DRM) refers to their application in practice (UNDRR, 2015). In Canada, disaster risk management formally emerged as a government priority after World War II out of interest in understanding how to protect the general population from safety and security threats (McConnell, 1998; Yong & Lemyre, 2019). Over time this evolved further to also include understanding of how to support people to adapt and be resilient when threats occur (Yong & Lemyre, 2019).

*The Sendai Framework for Disaster Risk Reduction 2015-2030*, is a guiding document which outlines priorities for disaster risk reduction and management (UNDRR, 2015). As a signatory, Canada endorsed *The Sendai Framework* and used it to develop a guide for DRR specific to the Canadian context (Public Safety Canada, 2019). The priority areas for the *Canadian Emergency Management Strategy* are as follows (Public Safety Canada, 2019):

- Enhance whole-of-society collaboration and governance to strengthen resilience;
- Improve understanding of disaster risks in all sectors of society;
- Increase focus on whole-of-society disaster prevention and mitigation activities;

- Enhance disaster response capacity and coordination and foster the development of new capabilities; and
- Strengthen recovery efforts by building back better to minimize the impacts of future disasters

## Disaster Risk Reduction and a Whole-of-Society Approach

Calling for whole-of-society (also referred to as a whole community or all-of-society) collaboration within DRR efforts is a way of acknowledging disaster complexity. It is well known that disasters require a significant level of coordination across many actors that make up the emergency management system (Olson et al., 2020). Whole-of-society approaches emphasize the important role these diverse actors can play within this system, from the highest government levels to humanitarian organizations, charities, volunteer groups, and all the way down to each individual person (Federal Emergency Management Agency [FEMA], 2011; Waugh, 2000). Essentially, everyone has a part to play, and there is a need for community engagement and resources across all sectors of society to be leveraged to optimize DRR.

Historically, in Canada, disaster and emergency management has been driven by Federal, Provincial, and Territorial governments, however naming whole-of-society collaboration as a priority area acknowledges the need for more diverse partners in decision-making and operational processes (Public Safety Canada, 2019). For example, in light of Truth and Reconciliation, greater emphasis has been placed on creating mutually beneficial relationships between government and Indigenous communities, to support inclusive and culturally-sensitive emergency management capability in these contexts (Public Safety Canada, 2019). This represents a shift away from traditionally dominant top-down strategies driven by government, to more people-centered, bottom-up strategies with communities in mind (UNDRR, 2015).

Despite movement towards a whole-of-society approach, there are known challenges with putting this into practice. For example, management of complex relationships across sectors, inadequate upstream investment for prevention and preparedness activities, lack of formalized agreements for

collaboration and data sharing, and a gap between academia and practice in terms of practically carrying out inclusive engagement activities (Bournival et al., 2022; Oostlander et al., 2020, World Food Program and United States Agency for International Development, 2011). Compounding these challenges is the cyclical nature of investment in disaster and emergency management, driven by the issue-attention cycle (Downs, 1972), where an influx of resources comes to bear after an event has already occurred and begins to dissipate once it no longer poses a threat and fades from the spotlight (O'Sullivan et al., 2014).

## Inequitable Disaster Impacts and Older Adults

Adding to disaster complexity is the resulting inequitable impacts that disasters leave in their aftermath. Inequitable impacts stem from social and colonial vulnerabilities, such as age, gender, ethnicity, race, and health, which can intersect and have compounding effects (Cutter et al., 2003; Greenwood et al., 2018). Disasters exacerbate these vulnerabilities because social structures and systems leave people exposed to harm, for example, through quality and availability of resources like health care and social services (Cutter & Emrich, 2006). Cascading disasters are concerning because they have the potential to continuously keep certain populations in a state of vulnerability, exploitation, and marginalization (Thomas et al., 2020).

*The Cascading Hazards to disAsters that are Socially constructed eMerging out of Social Vulnerability (CHASMS) Conceptual Model* is a useful tool for understanding why social structures and systems must be considered – in addition to technological, engineering, and behavioural strategies – when addressing inequities (Thomas et al., 2020). The CHASMS model highlights how social vulnerabilities are entrenched in power dynamics stemming from social, political, economic, and cultural factors that shape risk at multiple levels (Thomas et al., 2020). Communities lie at the center of the model and are nested in higher level macro structures at regional, national, and global levels, with which they interact (Thomas et al., 2020). For meaningful change to take place, DRR practices which decrease vulnerability and improve resilience must occur within each of these nested structures (Thomas et al., 2020). This is because

susceptibility to disaster impacts is derived from intersecting individual, social, and environmental factors rather than individual characteristics alone (Cutter et al., 2003).

Age is often used as an individual indicator for risk in disasters (Cutter et al., 2003). Older adults' heightened risk has been attributed to overall declining health with age, systemic exclusion and discrimination based on age, lack of adequate services and information, and lack of social protections contributing to economic insecurity (HelpAge International, 2015; WHO, 2008). For example, when Hurricane Katrina hit New Orleans in the United States of America in 2005, 75% of people who died were aged 60 years and older despite making up just 16% of the local population (HelpAge International, 2015). Similarly, during the 2021 Heat Dome in British Columbia, two thirds of heat-related deaths were people over the age of 70 years (British Columbia Coroners Service, 2022).

As gaps related to the visibility of older adults in disaster and emergency management have become more prominent over the years, greater emphasis has been placed on identifying and addressing their needs (Gibson & Hayunga, 2006). Identification of needs is helpful for the allocation of resources in disaster and emergency prevention, planning, response, and recovery (Phraknoi et al., 2023). The needs of older adults are often interdependent and include, health, socioeconomic, evacuation and displacement-related, information and communication, and cultural needs (Phraknoi et al., 2023). Research related to older adults' needs in terms of their preparedness levels, and response and recovery capacities are conflicting and inconsistent. Some literature indicates older adults, like other high-risk populations, have limited disaster awareness and resources to support preparedness activities (Bogdan et al., 2024; Chan et al., 2016). While other literature highlights older adults as a population which may be better prepared, and have more resources to cope with disaster due to their life experiences (Cong et al., 2021; Murphy et al., 2009). The heterogeneity of this population likely contributes to conflicting understanding of needs (Cong et al., 2021).

Despite progress towards increasing the visibility of older adults in disaster contexts, research suggests the supports they receive remain inadequate (Phraknoi et al., 2023). The inclusion of older adults in a whole-of-society approach remains a persistent recommendation to reduce their risk and enhance resilience though activities such as community meetings or workshops, for example (Bogdan et al., 2024). A whole-of-society approach which includes older adults recognizes the (potential) contributions they can make in disaster contexts, for example, as knowledge keepers and champions who motivate their communities (HelpAge International, 2015). Scholarly literature points to the important assets older adults bring to disaster preparedness activities, like their relationship-building capacity and life experience; despite this, older adults remain an untapped resource in DRR activities (Hayman et al., 2017; Howard et al., 2017).

### *Older Adults and the COVID-19 Pandemic*

The COVID-19 pandemic is an example of how social vulnerabilities remains a persistent challenge in disaster and emergency management. The pandemic put progress towards prevention, planning, and preparation for disasters to the test, with its unprecedented complexity in terms of scale, duration, and impact requiring whole-of-society (and global) collaboration. The pandemic triggered a worldwide economic recession, altered labour markets, and was socially devastating (UNDRR, 2021). In Canada, improvements to pandemic preparedness were made following the global outbreak of Severe Acute Respiratory Syndrome (SARS) in 2003 (O'Sullivan & Phillips, 2019). Most notably, investment from the federal government led to the establishment of the Public Health Agency of Canada (PHAC) in 2004, and the *Canadian Pandemic Influenza Plan for the Healthcare Sector* was published in 2006 (O'Sullivan & Phillips, 2019; PHAC, 2018). Despite these investments, the H1N1 pandemic in 2009 highlighted social disparities influencing the distribution of risk for health outcomes (International Centre for Infectious Diseases [ICID], 2010). Fifteen years later, the same may be said about the COVID-19 pandemic (Thomas et al., 2020).

Older adults experienced disproportionately negative impacts during the pandemic, particularly in the earliest waves (UNDRR, 2021). Older adults are at greater risk for fatality from COVID-19, and experiencing complications stemming from the virus and underlying health conditions (Centers for Disease Control and Prevention [CDC], 2023). For example, from 2020-2021, people aged 60 years and older accounted for over 80% of COVID-19 related deaths (CDC, 2023). Social factors, like reduced social supports (formal or informal), isolation, and limited income further challenged the quality of life of older adults during the pandemic (Mental Health Commission of Canada, 2021). To address these impacts, public health agencies implemented strategies like prioritizing older adults and persons with comprised immune systems for vaccination, and targeted efforts to raise awareness about the mental health concerns of this population (Mental Health Commission of Canada, 2021; UNDRR, 2021). While the WHO declared the end of the pandemic as a public health emergency on May 05, 2023, older adults continue to remain a priority group for COVID-19 vaccination booster doses (WHO, 2023).

## Disaster Risk Communication and Discourse

Disaster risk communication involves the exchange of information about risks (Covello et al., 1986), for example, between a government agency and the public about a wildfire, ice storm, or pandemic. Essential information can help the public understand the level- and significance- of risks posed to them, and ideally helps them make informed decisions (Covello et al., 1986). Disaster and emergency risk communications aim to reduce loss of life, property damage, and ultimately support adaptation and well-being (Covello et al., 1986; Fakhruddin et al., 2020). The language used within risk communication can help build trust between government and the public if it is consistent and clear; language that is too technical and difficult to understand can lead to conflicting interpretations and confusion (Fakhruddin et al., 2020; Holmes et al., 2009). Further, different people can interpret and respond to the same message differently based on their own unique sociocultural and political views (Fakhruddin et al., 2020).

Essentially, innumerable versions of the same event are available to humans through language, and this is referred to as 'discourse' (Burr, 2015).

Through discourse, humans derive meaning and make sense of the world to act within it (Dunn & Newmann, 2016). In disaster contexts, beyond influencing how people understand and interpret risks, language can shape how we understand the role of government agencies, humanitarian organizations, and community members as partners. For example, global guiding bodies, like the United Nations and World Health Organization play influential roles in channeling progress towards improving planetary health. The outputs include discourse within global guidance documents. These essential tools help to set priorities and targets for action to achieve progress towards Sustainable Development Goals (SDGs) – global calls to action to support the health and wellness of people and planet (UN, 2015). Of the 17 SDGs, Goal 13 is to *"Take urgent action to combat climate change and its impacts"* through raising awareness about institutional capacity to address climate change, updating policies and practices to reflect this growing awareness, education, and strengthening the ability of people and society to adapt and be resilient (UN, 2015, p. 23). Countries who endorse these global collaborative efforts shape their own policies and practices based these outputs.

## Asset-Based Approaches and Disaster Risk Reduction

Asset-based approaches arose out of a need to redress the balance between identification of both problems (i.e. deficits, needs, weaknesses) and assets (i.e. gifts, strengths, resources) (Kretzmann & McKnight, 1996; Morgan & Ziglio, 2007). Historically, focus centered around the identification of 'problems' that lead to disparities, and this results in the development of policies which are grounded in the inability of people to avoid disease and depend on social services (Morgan & Ziglio, 2007). Taking an asset-based approach empowers communities to use their assets to support themselves, thereby leading to a more effective action for addressing health inequities (Morgan & Ziglio, 2007). For this reason, asset-

based approaches are increasingly used in health promotion and community development projects (Evans & Winson, 2014; Rippon & South, 2017).

The concept of salutogenesis underpins asset models; salutogenesis is focused on optimizing and moving towards health, rather than preventing disease (Antonovsky, 1996; Morgan & Ziglio, 2007). Work in the field of human development and related to the Capabilities Approach have also advanced the concept of asset models and emphasize the importance of opportunities or freedoms as a core feature (Nussbaum, 2000; Sen, 2000). Asset-based approaches and the Capabilities Approach are both centered around human rights and dignity, with the former focused more on assets to achieve health and well-being, and the later focused on what people can do with their assets (Nussbaum, 2011).

Scholarly literature in this area continues to expand our understanding of assets. For example, work led by Lindström and Eriksson (2010) builds on salutogenesis and combines it with ecological and resilience approaches to bring together health risk, protection, and promotion factors in one model, to support the development of healthy public policy. In another vein, Pérez-Wilson et al (2021) developed a *Synergy Model of Health* to contribute to the integration and depth of salutogenesis and asset models, to demonstrate how general and specific resistance resources are assets that help people manage stress and have meaningful life experiences (Antonovsky, 1979, 1987, 1996; Pérez-Wilson et al., 2021). These assets contribute to individual and collective Sense of Coherence (SOC) or the capacity to use assets to respond and transform when faced with stressors (Antonovsky, 1987; Pérez-Wilson et al., 2021).

Movement towards asset-based approaches does not mean identification of problems should be completely discarded. Asset and deficit models are complementary and allow researchers and policy makers to identify both problem areas and existing capacities of individuals and communities – which is more likely to result in effective solutions (Morgan & Ziglio, 2007). Related to disaster planning and preparedness, approaching a community from an asset orientation makes it more likely that

conversations will cover both assets and needs, rather than focusing on needs alone (O'Sullivan et al., 2014). Khan et al (2018) highlight the importance of connections between public health practitioners and community members as an asset supporting resilience for public health emergency preparedness. Engagement with communities presents an opportunity for enhanced innovation, situational awareness, and resource distribution (Khan et al., 2018).

Asset mapping is an action-oriented component of asset models. Asset mapping is way of developing a 'saultogenic evidence-base' or an understanding of existing assets within a household, neighbourhood, or community (Kretzmann & McKnight, 1996; Morgan & Ziglio, 2007). It is a way of thinking about systems that places importance on 'associational community' and the relationships among individuals and groups (McKnight, 2010). Assets identified in a community can point to the presence of health enhancing or 'salutogenic' factors which can then be used as indicators for evaluation and policy activities (Lindstrom & Eriksson, 2010; Morgan & Ziglio, 2007; Pérez-Wilson et al., 2021). They also represent an upstream investment in DRR to support the resilience of high-risk populations (O'Sullivan et al., 2014). DRR practices and asset-based approaches are complimentary; the inclusive, multi-disciplinary strategies emphasized in asset-based approaches pair well with the whole-of-society, multi-sectoral strategies recommended in the *Sendai Framework for DRR* (O'Sullivan et al., 2018, 2019; UNDRR, 2015).

Asset-based approaches, and asset mapping, have been used in relation to older adults and disaster contexts broadly. For example, the Provincial Geriatrics Leadership Office in Ontario, Canada used asset mapping to understand the current state of resources in the province to support older adults living with frailty in the community, this included accessing emergency geriatrics services (Kay, 2019). The goal of creating an asset map was to better understand how they could further build capacity in this area (Kay, 2019). Similarly, the Canadian Red Cross in partnership with Aviva created an asset map of accessible and available community services to support socially isolated older adults in the Maritime provinces with the goal of fostering community connection and supporting older adults to remain in their homes (Canadian

Red Cross, 2021). Identification of community assets to enhance the well-being of older adults can be beneficial for fostering a sense of community; in a disaster context they can be critical to support survival and resilience (Patterson et al., 2010).

### *Asset Literacy, Empowering Language, and Older Adults*

For assets to be useful in supporting resilience, community members must first be able to identify their assets, recognize their value and potential contribution, and then know how to mobilize them. Finally, they must be inspired and confident to act on this knowledge. Asset literacy is the individual or collective understanding of assets, their potential contribution, knowledge of how to mobilize them, and the motivation and self-efficacy to move from awareness to action (O'Sullivan et al., 2014, 2018). Unlike health literacy, which focuses on obtaining, understanding, and using information to make health-related decisions, asset literacy includes other domains such as, social, physical, and personal characteristics that individuals and organizations may consider assets (O'Sullivan et al., 2018; Sørensen et al., 2012).

As a concept, asset literacy is based on the understanding that if people have an awareness of their internal and external assets, then they can use them to support themselves and others during a crisis (O'Sullivan et al., 2018). It is a focal point when describing people, making decisions that can impact them, and ultimately how to include them. Language is foundational in asset literacy. Empowering language influences discourse -and can sway people to see attributes as assets or deficits (Gendron et al., 2016). For example, the term 'vulnerable' has negative connotations – such as dependent, needy, fragile, and weak – that can mask other strengths and resources that people also embody (Enarson & Walsh, 2007; Lemyre et al., 2009). For this reason, Enarson & Walsh (2007), suggested the term 'vulnerable' be replaced with 'high-risk' because it takes into consideration both situational and physical characteristics that increase susceptibility to negative outcomes when disasters occur (Enarson & Walsh, 2007). This helps to reduce the likelihood of placing undue blame or burden on high-risk populations (Fakhruddin et al., 2020).

In relation to older adults, it is essential to ensure language does not perpetuate ageism, for example, the framing of 'old' as negative and 'young' as positive (Ayalon et al., 2021; Gendron et al., 2016). Ageism is the stereotyping, prejudice, and discrimination of individuals based on age, and is commonly directed towards older adults (Butler, 1969). Ageism can have both direct and indirect negative impacts for older adults, for example, studies have shown that ageism can negatively impact the health of older adults themselves, while indirectly it can also shape societal perceptions and trickle down through policy development (Chang et al., 2020; Lamont et al., 2015; Levy et al., 2002; North & Fiske, 2015).

During the COVID-19 pandemic, ageism towards older adults intensified and there was a rise in intergenerational tension; for example, the view that restrictive public health measures, such as lockdowns, benefited older adults at the expense of younger people (Ayalon et al., 2021; Fraser et al., 2020; Levy et al., 2022). These tensions contributed to hostility, reinforced ageism, and hindered the social participation of older adults in society (Ayalon et al., 2021; Levy et al., 2022; Swift & Chasteen, 2021). Empowering, inclusive language and a supportive community are essential for fostering opportunities for participation of older adults as valued members of society and partners in DRR. Swinford et al (2020) highlight the COVID-19 pandemic as an opportunity to use a strengths-based perspective to increase the visibility of important issues which have impacted older adults, such as social isolation and lack of intergenerational solidarity. It also presents as an opportunity to advocate for resources, and foster positive change and resilience for the future (Swinford et al., 2020).

## Adaptive Capacity and Resilience of Older Adults

From a systems perspective, resilience is focused on how people adapt within their social, political, cultural, and economic contexts to learn, transform, and sustain well-being in response to change (Folke, 2016). Resources that support adaptation are referred to as adaptive capacities, examples of which include robustness (strength with a low probability of deterioration), redundancy (the ability to substitute elements in the event of disruption), and rapidity (the speed with which resources can be accessed and

mobilized) (Norris et al., 2008). Norris et al. (2008) refers to resilience as "*a process linking a set of adaptative capacities to a positive trajectory of functioning and adaption after a disturbance*" (pp.129-130); networked adaptive capacities can give rise to the resilience of a community. Importantly, resilience is emphasized as a process rather than solely as an outcome.

Research on the resilience of older adults has its roots in biomedical and pharmacological solutions for age-related comorbidities (Cosco et al., 2017). In the early to mid 90s, models of successful and healthy aging assumed a high level of functioning was required to achieve these states, and viewed older adults through binary conceptualizations (i.e. aging successfully or not) (Cosco et al., 2017). Just the complexity of aging discourse being linked with the notion of success can be unpacked in terms of stigma and the value attached to older age. Critiques of these earlier understandings were related to their narrow focus on physical functioning, and exclusion of large proportions of older adults because of the positive correlation between age and functional decline (Cosco et al., 2013). As early as the late 90s, the concept of adversity added greater dimensionality to how the aging process was understood – that people can be resilient in spite of experiencing a decline in physical, cognitive, or other domains of functioning (Cosco et al., 2017; Wister et al., 2016). Some authors suggest older adults may be more resilient than other age demographics because of the greater pool of assets they can draw from, gained through life experience (Hayman et al., 2017; Staudinger & Fleeson, 1996).

With the increasing longevity of humans, there is also interest in well-being in old age, or *adding life to years*. In population and public health, there is a focus on enhancing the health, resilience, and well-being of people, particularly in old age, to reduce strain on health systems (Cosco et al., 2017). It is widely understood that social and colonial determinants shape health, resilience, and well-being across the life span (Greenwood et al., 2018; O'Sullivan & Bourgoin, 2010). Asset-based approaches to fostering resilience emphasize the importance of leveraging resources beyond individuals, to also include social and environmental resources that can lead to positive policy changes (Cosco et al., 2017; Wister et al., 2016).

## An Occupational Therapy Perspective: Promoting Sustainable and Resilient People and Health Systems in a Climate-Changing World

Threats stemming from climate change are driving global conversations about sustainability and resilience. For example, health care systems and their resulting services are carbon intensive, and there is a need to adapt to ensure they are climate-resilient – that they can anticipate, respond, and adjust, to support population health despite uncertainty (Eckelman et al., 2018; WHO, 2015). Health care reform leading to climate-resilient health systems means optimizing health promotion and prevention, while moving away from health and human resources that are physician dominant (Craik et al., 2024). Occupational therapists provide a vital role in health system sustainability while supporting the resilience of people (Craik et al., 2024).

As part of their day-to-day roles, OTs support individual, community, and population resilience through advocating for accessibility, modifying environments, and developing community partnerships. Participation in occupation is about more than deriving meaning and purpose, it is a way for people to gather resources, knowledge, and tools, which are assets that will support them to survive, thrive, and be resilient when disasters occur (Laliberte Rudman et al., 2022). Disasters disrupt occupational participation, and challenge people to adapt in less-than-ideal circumstances to rebuild their roles and routines (Craik et al., 2024; Jeong et al., 2016; Scaffa et al., 2011). In this context, the work of OTs can help keep people out of hospital and to stay in their communities, thereby reducing health service use and alleviating resulting pressure on strained health care systems (Craik et al., 2024).

Occupational therapists view people in light of their strengths, and acknowledge occupational rights as human rights, which is essential for disaster-related work (World Federation of Occupational Therapists, 2019). Scholarly literature in this area highlights the work of OTs – primarily in natural disaster contexts – to co-create plans that address functional needs and environmental barriers, provide guidance

on the accessibility of evacuation spaces, assess the need for rehabilitation, provide education on coping strategies, and map community resources (Canadian Red Cross [CRC] & National Institute on Ageing [NIA], 2020; Habib et al., 2013; Jeong et al., 2016; Scaffa et al., 2011). OTs also recognize the importance of promoting equity through an anti-oppressive lens that enhances cultural safety (Craik et al., 2024). This includes being aware of discrimination which can become heightened in disaster contexts and act as a barrier to participation (Egan & Restall, 2022; Levy et al., 2022).

When working with older adults, OTs are often focused on connection to community resources and the use of aids to maintain functional independence, and overall quality of life and well-being (Orellano et al., 2012; Papageorgiou et al., 2016). These interventions help to support the autonomy and agency of people as they experience age-related and other challenges. Scholars suggest that as people age, they navigate functional losses to accommodate and optimize participation in meaningful occupations, for example, avoiding activities perceived as elevating risk for injury (von Faber & van der Geest, 2010). It is through adaptation that older adults define and redefine – on their own terms – what aging means for them (von Faber & van der Geest, 2010).

***A note on 'occupation'**

A taxonomy within the profession of occupational therapy considers occupations as comprised of a set of meaningful activities, activities as a set of tasks, and tasks as involving purposeful action, and so forth, drilling down to the smallest voluntary movements (Polatajko et al., 2004). Colloquially, the terms 'occupations' and 'activities' are often used interchangeably (Polatajko et al., 2004). For the purposes of my dissertation research, I focused on how participation in diverse occupations supported the adaptation, resilience, and well-being of older adults; I did not subscribe to any predetermined categories pertaining to occupation and instead grounded my understanding in participant experiences as described by them.

## Defining 'Population': Community-Dwelling Older Adults

For the purposes of my dissertation research, I chose to focus on older adults as a population, specifically people aged 60 years and older. The definition of 'populations' may vary based on discipline, but are generally conceived of as animate, self-replicating, relational, and bounded entities which are both characterized by and influenced by its members (Krieger, 2012). In scholarly literature, older adulthood is often referred to by chronological age, but there is no agreed upon age at which older adulthood begins. Globally, diverse sociocultural values shape perceptions of aging and the aged (Ghosh et al., 2019). As the life span of humans increases with medical and technological advancements, the idea of what constitutes old age has shifted (Gilleard & Higgs, 2010). More recently, distinctions have been made between the *third age* where there is reluctance to identify as 'old' or 'aged', and the *fourth age* where people are removed of their social status and cultural capital in relation to agency, autonomy, choice, and pleasure (Gilleard & Higgs, 2010). In third age culture, anti-aging strategies are emphasized and praised, while the fourth age is diminished and discredited (Lagacé & Firzly, 2017).

While there has been movement away from a focus on chronological age, having a defined age bracket is useful for the purposes of studying older adults as a bounded population. The Government of Canada defines older adults as people ages 65 and older for the provision of services such as *The Old Age Security Program* (Service Canada, 2018). However, older adults who experience financial insecurity are considered as early as age 60 (Service Canada, 2018). Further, the World Health Organization (WHO) provides guidance for older adults, indicated as people aged 60 years and older (WHO, 2018). With this in mind, we chose to conservatively define older adults as people aged 60 years and older for my dissertation research.

Further, we chose to focus on older adults who live in the community rather than those who live in an institutionalized setting, such as Long-Term Care homes. Regardless of housing, older adults are a

heterogenous population, however, people who live in Long-Term Care homes experience multidimensional factors such as medical and social circumstances which are unique from those who live in the community (Trivedi et al., 2018). Related to disaster contexts, Long-Term Care Homes have their own unique emergency planning, preparedness, response, and recovery tools which may influence the experiences of people who live in these residencies (Ministry of Long-Term Care, 2022). For this reason, older adults living in institutionalized settings were beyond this scope of this research.

# Chapter 3. Theory

In this chapter, I provide a description of my philosophical position, which is a relativist ontological stance and social constructionist epistemology. I also provide an overview of my selected theoretical frameworks. Drawing on Systems thinking and *General Systems Theory* (von Bertalanffy, 1976), I relied on *The EnRiCH Community Resilience Framework for High-Risk Populations* (O'Sullivan et al., 2014, 2018) to guide my overall dissertation. I used *The Conceptual Model of Asset Literacy for Household Resilience* which advances the concept of asset literacy described in The EnRiCH Framework. *The Canadian Model of Occupational Participation* (Egan & Restall, 2022) helped to situate my lens as an OT. Below, I elaborate on each of these theories, frameworks, and models. Finally, this section concludes with a reflection of my positionality in conducting this dissertation research.

## Ontology and Epistemology

I approached my dissertation research from a relativist ontological position which theorizes that reality – as we experience it – is a product of human interaction (Patton, 2015; Braun & Clarke, 2022). Reality is multiple and context-dependent, and therefore as a researcher, my findings do not represent 'the truth' but rather 'a truth' co-constructed through the analytic process and anchored in data.

Relativism is situated in a social constructionist epistemology. Akin to a storyteller, constructionism asserts that researchers 'produce' rather than 'reveal' knowledge (Crotty, 1998). From this epistemological position, language is viewed as powerful, active, and symbolic, such that language use constructs reality and the meaning we derive from it (Crotty, 1998). The researcher values both subjectivity and objectivity because data cannot be understood in isolation from the researcher who is experiencing it (Crotty, 1998; Gergen, 2015). Therefore, the findings I describe in my dissertation research are outcomes of my relationship with the data and they represent one construction of many possibilities.

When we see the world as having multiple realities or 'truths', we move away from more oppressive ideologies that seek to dictate correct ways of knowing and reinforce a single socially accepted 'truth' (Gergen, 2015). Post-structuralists Michel Foucault and Jacques Derrida are influential figures in social constructionism, their work highlights the influence of power in language, for example, how the ways in which we think and communicate about our reality have implications for how we view and treat people (Burr, 2015). Socially dominant constructions of reality are more likely to benefit those who hold 'power' while simultaneously oppressing those who do not (Burr, 2015; Patton, 2015). Social constructionism holds space and opportunity for representations of reality which are not dominant, giving voice to those without power (Burr, 2015).

Older adults are an example of a population whose voices have historically been excluded in DRR. From a relativist ontology and social constructionist epistemology, I co-constructed a representation of the reality older adults experienced during the COVID-19 pandemic. I then used this knowledge to examine discourse in broader DRR guidance documents. Coming from this ontological and epistemological perspective represents a growing movement away from traditional positivist approaches in this field which situate disasters as objective events that exist independent of social context (Sun & Faas, 2018). Using natural disasters as an example, a social constructionist approach acknowledges that while natural hazards may trigger a disaster, it is the sociocultural and political context that determines whether it turns into a disaster (as we understand it in our reality) (Sun & Faas, 2018).

Scholars are increasingly using social constructionism in disaster research. For example, Priya (2018) highlights how a social constructionist approach is useful for conceptualizing mental health through the concepts of suffering and healing in disaster contexts. Pickering et al. (2022) came from this positionality to show the value of- and support for the engagement of youth in DRR. Social constructionism is useful for redistributing power to include the voices of high-risk populations, which has the potential to lead to innovative constructions and alterative pathways for future research.

## Theoretical Framework

General Systems Theory (von Bertalanffy, 1976) and systems thinking as an approach underpin my dissertation research. To situate my understanding of high-risk populations from an asset lens and resilience orientation, I used *The EnRiCH Community Resilience Framework for High-Risk Populations* (O'Sullivan et al., 2014) and drew on the process for asset literacy which builds on this work in *The Conceptual Model of Asset Literacy for Household Resilience* (O'Sullivan et al., 2018). Finally, to ground my understanding of occupational participation, I used The Canadian Model of Occupational Participation (CanMOP) (Egan & Restall, 2022). I elaborate on each of these selected theories, frameworks, and models in the section below.

### *General Systems Theory and Systems Thinking*

General Systems Theory (von Bertalanffy, 1976) is a widely applicable systematic inquiry, increasingly applied to problems in population and public health research (Peters, 2014). Systems thinking is an application of Systems Theory where complex problems are addressed by examining multiple interacting components – which are dynamic, non-linear, and create new patterns (Peters, 2014). Systems Theory is essential for understanding individual and community resilience – particularly when disasters occur. Norris et al. (2008) proposed that resilience and wellness emerge from diverse adaptive capacities or dynamic resources that people and communities have, which evolve in their strength and stability over time. Networked adaptive capacities – the integration of individual level adaptive capacities – give rise to community resilience (Norris et al., 2008). Resilient individuals and communities are able to recover from disasters because systems that influence resilience adapt, allow for functionality, and encourage capacity-building for future disasters (O'Sullivan et al., 2014). To draw connections between people in disaster contexts, it is essential to consider the influence of socioecological factors.

### *The EnRiCH Community Resilience Framework for High-Risk Populations*

*The EnRiCH Community Resilience Framework for High-Risk Populations* (Appendix C) (herein referred to as *The EnRiCH Framework*) is a framework embedded in complexity and culture; it is a guide for designing upstream approaches to DRR practices to support resilience in 'high-risk' populations (O'Sullivan et al., 2014). The framework has a salutogenic orientation and uses an asset-based approach to foster disaster preparedness (O'Sullivan et al., 2014). In this framework, adaptive capacity is central to achieving resilience; four areas for strategic intervention are indicated, including: Awareness/communication, asset and resource management, upstream oriented leadership, and connectedness/engagement (O'Sullivan et al., 2014). Empowerment, innovation, and collaboration are drivers of adaptive capacity which further work to expand asset literacy (O'Sullivan et al., 2014).

The word empowerment is one which has been critiqued for its colonial roots and as such, use of the word empowerment can perpetuate neoliberal agendas rather than signal the dismantling of structural inequalities (Breton, 2023). For the purposes of this dissertation, when referring to empowerment as a driver of adaptive capacity, we are referring to re-centering power to hold institutional space for non-dominant ways of knowing and being. As language around the word empowerment continues to evolve, we view it through a social justice lens where accountability is required to address structural inequalities in society. This is complimentary to the OT perspective that holds rights-based self-determination as essential to foster power sharing and participation of all citizens in society (Egan & Restall, 2022).

Stemming from the EnRiCH Framework is *The Conceptual Model of Asset Literacy for Household Resilience* which describes the concept of asset literacy as a cyclical and dynamic process (O'Sullivan et al., 2018) (Appendix D). Asset literacy is a person's capacity to move assets from awareness to action (O'Sullivan et al., 2014). Social Cognitive Theory (Bandura, 1986) and the construct of Self-Efficacy

(Bandura, 1997) underpin asset literacy. Social Cognitive Theory considers the social context in which a person learns and interacts with their environment; external and internal social reinforcement influence the initiation and maintenance of behaviours over time (Bandura, 1986). Self-efficacy is a construct of Social Cognitive Theory; it refers to a person's belief or confidence in their ability to successfully perform a behaviour (Bandura, 1997). Self-efficacy is influenced by individual and environmental factors such as, intention to take action and perseverance when obstacles arise (Bandura, 1997). An awareness of assets and the self-efficacy to mobilize them can foster the ability to respond to, and cope with adverse events, such as disasters (Hrostowski & Rehner, 2012; O'Sullivan et al., 2018).

### *The Canadian Model of Occupational Participation (CanMOP)*

The *Canadian Model of Occupational Participation* (CanMOP) is a guiding model which can be used to understand occupation. It holds the concept of occupational participation as its central focus (Egan & Restall, 2022). Occupational participation is understood as "*having access to, initiating, and sustaining valued occupations within meaningful relationships and contexts*" (Egan & Restall, 2022, p.76). Accessibility of occupation refers to whether the context for participation is supportive or potentially supportive. Initiation refers to the process of starting (or re-starting) participation, and sustainability refers to continued participation over time.

For any given occupation, people may experience facilitators or barriers related to accessibility, initiation, and/or sustainability. These facilitators and barriers can exist at micro, meso, and macro levels in the environment, and may be explicit and more concrete or abstract and implicit. In this way, environmental factors help to shape occupational possibilities, "*ways and types of doing that come to be viewed as ideal and possible with a specific socio-historical context, and that come to be promoted and made available within that context*" (Laliberte Rudman, 2010, p.55). Occupational therapists are

professionals who collaborate with people to support occupational participation and expand occupational possibilities by bringing awareness to, removing or reducing barriers to participation.

The purpose and meaning that people and populations ascribe to occupation is considered from a life course approach which takes intro consideration the influence of relationship and cultural and historical events. Exploration of purpose and meaning rests on the assumption that people participate in occupations to meet needs, namely needs for safety and survival, autonomy, competency, and relationship (Egan & Restall, 2022).

## Positionality

I am a clinically trained Occupational Therapist with five years of experience working in an acute care setting. My work in acute care is at the level of the individual, is disease-centric, and oriented to supporting people to recover from- or adapt to - deficits to participate in meaningful occupations. Within my first year of practice, I found myself unsatisfied with this work and I struggled with my identity as an occupational therapist.

At the time, my assumption was that occupational therapy was narrowly focused on rehabilitation and remediation for individuals. To explore other disciplinary schools of thought – and what I thought was shifting away from occupational therapy – I joined the Resilience in High-Risk Populations research lab at the University of Ottawa. In this context, I began to explore the world of DRR and enrolled in the Population Health doctoral program where I felt I could shift my focus to macro determinants of health, systems thinking, and challenges at the population level.

I chose to focus on older adults for my dissertation research largely because of my experience working with this population in an acute care setting. I was interested in the health and well-being of older adults because I saw that regardless of which department I worked in, older adults made up the majority of patients. Through this work, I noticed that older adults appeared to experience their greatest challenges

in leaving hospital and returning to valued occupations for a number of reasons, including navigating social isolation, home care versus familial supports, and cognitive and physical challenges. Additionally, I was sensitive to the ways in which I saw clinicians communicate with older adults, for example, at times favoring adult children in the decision-making processes over the older adult patient or using condescending language.

While I thought my journey through the Population Health program would lead me away from OT, I found myself reaching for- and relying on my OT lens to add richer insights to my analysis and findings. However, reconciling how an OT, like myself, fits into a DRR research program was challenging. The link between occupational therapy and the global climate crisis is not obvious; when OTs describe what they do to other people, addressing climate change and resulting disasters is hardly something that comes to the forefront. Throughout my journey in this program, my views of what constitutes occupational therapy are no longer as narrowly defined as they once were, and I hope that my dissertation research can further bridge the connection between occupational therapy and DRR.

Through my training in the discipline of occupational therapy and population health, I developed a holistic, asset-oriented view of people, and the importance of considering how the systems in which they live influence their participation in disaster contexts. Beyond the influence of my scholarly journey, I approached my dissertation research as a white, female, cisgender descent of European settlers who resides in Ottawa on the traditional unceded territory of the Algonquin people. My experiences in this doctoral program have marked a significant period of unlearning, learning, and relearning in both my personal and professional life.

# Chapter 4. Overview of Methodology

The purpose of my dissertation research was to explore how resilience can be supported for older adults in disaster contexts. To accomplish this, I completed two qualitative studies; Study 1 involves two sub-studies (Study 1a and 1b), which were completed concurrently, followed by Study 2 (see Table 1). In Study 1, I took an experiential approach to understanding participant data in exploring and understanding participant experiences. As I moved into Study 2, my research approach became more critical; my view of language focused on how it actively created meaning and shaped reality, instead of simply reflecting reality. This shift in how language is understood is indicative of movement from an experiential to critical approach in qualitative research (Braun & Clarke, 2022; Reicher, 2000). In this chapter, I provide a methodological overview, which is summarized in Table 2.

Table 2

*An Overview of the Methodological Approach and Method of Data Analysis for Each Study*

| Study | Article | Purpose | Methodology | Method of Data Analysis |
|---|---|---|---|---|
| 1a | 1 | To explore the assets and the asset literacy of older adults, contextualized as a high-risk population during the COVID-19 pandemic | Narrative approach | Reflexive thematic analysis |
| 1b | 2 | To explore and understand how the occupational participation of community-dwelling older adults was | Narrative approach | Reflexive thematic analysis |

| | | | | |
|---|---|---|---|---|
| | | experienced during the COVID-19 pandemic | | |
| 2 | 3 | To identify and examine assumptions about older adults that appear in guiding documents related to disaster and emergency management, and relevant to the Canadian context | Problematization | Critical discourse analysis |

## Study 1. Exploring the Assets, Adaptation, and Resilience of Older Adults During the COVID-19 Pandemic

Study 1 was embedded within a more extensive research program exploring how older adults experienced the COVID-19 pandemic, and subsequent public health restrictions in Canada. Ethics approval was received from the University of Ottawa for secondary data analysis of this interview data for the purposes of my dissertation research (see Appendix A). Two rounds of semi-structured interviews were completed with older adults at two time points during the pandemic, the initial interview from September 2020-May 2021 and follow-up interview from January-August 2022 (See Appendix B for corresponding interview guides). Datasets from both the initial and follow-up interviews were included in analysis for Study 1.

For Study 1, I used a narrative research approach to capture the lived experiences of older adults during the COVID-19 pandemic. Narratives are complex social processes that tell stories about daily life, including characters and plots, and are presented in a particular context to share experiences or ideas (Creswell & Poth, 2018; Daiute, 2014). Narrating is an active process and has diverse purposes, such as

developing a connection with others, making sense of social structures, and fitting into a sociocultural and political context or trying to change them (Daiute, 2014). Through narratives, people provide insights into how they see themselves and the world around them, and what they value (Daiute, 2014; Riessman, 2008).

Through stories told by participants about their lives during the pandemic, I explored and co-constructed an understanding of their assets, and how they used them to adapt and support resilience in this context. In Study 1a (Chapter 6), I explored the assets and asset literacy of older adults contextualized as a high-risk population during the COVID-19 pandemic in Canada. *The Conceptual Model of Asset Literacy for Household Resilience* (O'Sullivan et al., 2018) guided my understanding of assets and asset literacy for this study. In Study 1b (Chapter 7), I aimed to explore and understand how the occupational participation of community-dwelling older adults was experienced during the pandemic. The CanMOP (Egan & Restall., 2022) was used as a guide to situate my understanding of occupational participation for this study.

In gathering and triangulating narratives from the diverse perspectives of participants, I was able to identify patterns or themes in the data. I followed the iterative phases of reflexive thematic analysis (TA) described by Braun and Clarke (2006, 2022) to co-construct themes for both studies. A thematic approach to data analysis fits within a narrative methodological approach and involves looking beyond participant accounts to understand constructs like social identity and belonging (Riessman, 2008). Analysis is generally focused on stories *told* (i.e. accounts of events), but there can also be some focus on the *telling* of stories (i.e. how an account is told). This is in keeping with thematic analysis of narrative data where language is viewed as a resource but is not necessarily the topic of inquiry (Riessman, 2008).

## Study 2. Examining Assumptions About Older Adults: A Problematization of Guiding Documents in Disaster and Emergency Management

The purpose of Study 2 (Article 3, Chapter 8) was to use a problematization approach to identify and examine assumptions about older adults that appear in guiding documents related to disaster and emergency management, and relevant to the Canadian context. Our aim was to understand assumptions underlying risk and agency, giving rise to the framing of older adults as partners. Social constructionism is one such theoretical orientation which encourages problematization (Alvesson & Sandberg, 2011).

Problematization is concerned with, to what extent, researchers can think and see things differently from what is known (Foucault, 1972). It is modelled on critical discourse analysis (CDA) where language is seen as a social practice, and explores the tensions between language as socially shaped and socially shaping language (Fairclough, 2010). Practitioners of CDA can view what constitutes a *critical* analysis differently, but it is often understood as viewing data as embedded in its sociocultural and political context, having distance to the data, and being reflexive in acknowledging the researcher's own positionality in relation to the data (Locke, 2004). CDA is ultimately concerned with the ways in which power is maintained or disrupted through language (Locke, 2004).

We applied the problematization method, described by Alvesson and Sandberg (2011), using 10 guiding documents in disaster and emergency management. These documents represent influential and respected texts in the field and are derived from both international sources – like the World Health Organization, United Nations, and HelpAge International – and national sources – like the Government of Canada and Canadian Red Cross. We documented assumptions about older adults and tensions between these assumptions and the overarching goal of disaster risk management, to prevent and reduce risk and enhance resilience.

# Chapter 5. Contributions and Collaboration with Co-Authors

Study 1 involved secondary data analysis of interview data; the semi-structured interviews were conducted as part of a larger research program led by my supervisor, Dr. Tracey O'Sullivan (Principal Investigator). For Study 1, I co-led data collection with my supervisor, managed data transcription, and took on a leadership role in managing data analysis for manuscripts stemming from the larger project. For example, of a total of 67 initial interviews, I conducted 21, transcribed 30, and independently coded 54 after the codebook was developed and tested. Using data stemming from this larger study, I completed two manuscripts which are included as Studies 1a (Article 1) and 1b (Article 2) for my dissertation research. This included leading data analysis, presenting findings to team members for feedback, and drafting and revising the manuscripts.

For Study 2 (Article 3), I developed the parameters for the collection of documents with input from University of Ottawa librarians following consultation sessions with my supervisor and another co-author. I led data extraction, analysis, and drafted and revised the manuscript with feedback from my co-author and supervisor.

I wrote this dissertation under the guidance and direction of Dr. O'Sullivan who made suggested revisions and approved the final dissertation draft before submission.

# Chapter 6. Article 1

## *"I have an image of myself, it's strong and resilient":* Assets Supporting Resilience of Older Adults and Their Communities During the COVID-19 Pandemic

**Authors' names and affiliations**

Samantha A Oostlander MSc(OT), OT Reg. (Ont.)[ag], Camille Joanisse MA[ag], Linda Garcia PhD[ag], Michael S Mulvey PhD[bg], Martine Lagacé PhD[cg], Sarah Fraser PhD[ag], Louise Bélanger-Hardy J.D., LL.M.[dg], Annie Robitaille PhD[ag], Margaret Gillis MA[e], Jill Courtemanche BScN(Ed)[f], Tracey L O'Sullivan PhD[ag]

[a] Interdisciplinary School of Health Sciences, Faculty of Health Sciences, University of Ottawa, Canada

[b] Telfer School of Management, University of Ottawa, Canada

[c] Faculty of Arts, University of Ottawa, Canada

[d] Faculty of Law, University of Ottawa, Canada

[e] International Longevity Centre Canada

[f] Independent

[g] LIFE Research Institute, University of Ottawa, Canada

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**Abstract**

Despite societal perceptions of older adults as vulnerable, literature on resilience suggests that exposure to adversity and resources gained with life experience contributes to adaptation. One way to explore the nature of resilience is to document assets supporting adaptation. Interviews were conducted with older adults living in Canada at two time points during the COVID-19 pandemic, September 2020-May 2021 (T1) and January-August 2022 (T2). Reflexive thematic analysis was completed to report on what older adults identified as assets and how they understood the value of those assets for resilience. Participants indicated that the potential value of their contributions went largely untapped at the level of the community but supported individual and household adaptation. In line with calls for an all-of-society approach to reduce disaster risk and support resilience, creating a culture of inclusivity that recognizes the potential contributions of older adults should be paired with opportunities for action.

**Keywords:** Disaster risk reduction, adaptation

## Introduction and Background

Disasters continue to increase in frequency and severity around the world and are a threat to population health globally. The COVID-19 pandemic and the continued threat of natural disasters stemming from climate change have led to renewed calls to reduce disaster risk and support the resilience of individuals, communities, and countries (United Nations Office for Disaster Risk Reduction [UNDRR], 2021). Disaster risk reduction (DRR) encompasses strategies to identify, evaluate, and reduce factors contributing to disaster risk and prevent new risks from emerging (UNDRR, 2015). There is particular emphasis on strategies to support the resilience of high-risk populations, those who are at disproportionately higher risk of experiencing the impacts of disasters due to social vulnerabilities (UNDRR, 2015).

Older adults are typically considered high-risk when disasters occur because of comorbidities that often coincide with age-related decline (World Health Organization [WHO], 2020). Furthermore, ageist stereotypes which persist in Western colonial societies can affect risk perceptions of older adults, as exemplified during the COVID-19 pandemic in public and political discourse (Ayalon et al., 2021; Fraser et al., 2020; Lagacé et al., 2024). Despite societal perceptions of older adults as a homogenously vulnerable group, literature on resilience suggests that exposure to adversity and the capacities and resources people gain with life experience contribute to the ability to adapt and be resilient (Cosco et al., 2017).

Definitions of resilience vary across disciplines. From a systems perspective, resilience is focused on how people adapt within their social, political, cultural, and economic contexts to learn, transform, and sustain well-being in response to change (Folke, 2016). Strategies that aim to foster the resilience of people and communities by focusing not only on needs but also on existing strengths, gifts, and capacities are referred to as asset-based approaches (Kretzmann & McKnight, 1996). Identification of community assets is an increasingly popular strategy used in population and public health to address complex issues,

including in the field of public health emergency preparedness (Morgan & Ziglio, 2007; Rippon & South, 2017; Khan et al., 2018). Through the use of asset-based approaches there is potential to reduce inequities by strengthening social capital and local action, and building trust and transparency between citizens and decision-makers (Cassetti et al., 2020; Khan et al., 2018).

Programs and policies that highlight and capitalize on existing strengths can reduce disaster risk by empowering people to take action in preparation for and in response to disasters (O'Sullivan et al., 2014). Disaster risk reduction practices and asset-based approaches are complementary; the inclusive, multi-disciplinary strategies emphasized in asset-based approaches pair well with the all-of-society, multi-sectoral strategies recommended in *The Sendai Framework* (O'Sullivan et al., 2019; UNDRR, 2015). Both DRR practices and asset-based approaches emphasize the importance of interdisciplinary and multi-sectoral collaboration, acknowledging that there is no one-size-fits-all solution to addressing disaster risk.

A person's or community's understanding of their capacities and strengths, the value they bring, and the ability, motivation, and self-efficacy to action them is referred to as asset literacy (O'Sullivan et al., 2014, 2018). The Conceptual Model of Asset Literacy for Household Resilience (O'Sullivan et al., 2018) provides a structure for understanding asset literacy as a cyclical and dynamic process. The first step in this model (O'Sullivan et al., 2018) is to develop an awareness of existing capacities, strengths, and resources; we may not refer to these as 'assets' colloquially but these are the things we rely on to cope and adapt. Assets are present across personal, social, physical, and energy domains and at various socio-ecological levels (Morgan & Ziglio, 2007; O'Sullivan et al., 2018). The second step is to recognize the value and utility of these assets. This process contributes to feelings of empowerment; the realization that one *can* impact their situation. In the third step, people begin to understand *how* to use their assets and look for potential opportunities to use them. The fourth step occurs when people use their assets. These four steps: awareness, value recognition, applicability, and action provide a structure for understanding for how people interact with their environment to adapt.

In the final step, awareness transforms into action through feelings of empowerment and self-efficacy; the support of community members is essential at this stage. A society where ageist stereotypes of, and attitudes towards older adults persist can lead to marginalization and exclusion, and this has been observed in humanitarian settings through lack of inclusion impacting resource allocation (WHO, 2008). A supportive community can facilitate movement from awareness to action and, in the context of disasters, encourage the engagement of citizens with diverse attributes to support DRR practices (O'Sullivan et al., 2018).

A tool that can support this process is asset mapping, which illuminates existing strengths within a community. Asset mapping is a way of thinking about supportive relationships within communities through a systems lens (McKnight, 2010). In the field of DRR, discussions around disaster planning and preparedness that focus on assets can support discourse related to both strengths and needs rather than needs alone (O'Sullivan et al., 2014); thus helping to find solutions rather than focussing only on problems that need to be solved. This dialogue can enable change and potentially result in more effective and equitable policies and programs (McKnight & Kretzmann, 1996) where everyone has a chance to contribute.

With the continued threat of disasters and emergencies coupled with the rise of population aging, using asset-based approaches is a timely and essential investment to reduce disaster risk and promote resilience. During the COVID-19 pandemic, particularly in the earlier waves, media and government discourse emphasized vulnerabilities and losses of older adults in the context of high mortality and loneliness stemming from isolation (Lagacé et al., 2024). Yet literature exploring the experiences of older adults have documented negative, positive, and mixed experiences, and factors contributing to both stress and joy during this exceptional time (Whitehead & Torossian, 2021; Xie et al., 2021). In this qualitative study, we were less concerned with exploring the experiences of older adults during the pandemic as we were in understanding how older adults conceptualized their strengths through their

experiences during the pandemic. The purpose of this study was to examine the assets and the asset literacy of older adults, contextualized as a high-risk population during the COVID-19 pandemic in Canada. Specifically, what older adults identified as assets, how they framed the value of these assets, and how they were able to use their assets to support adaptation and resilience are highlighted.

## Methods

The current study is part of a more extensive research program exploring older adults' experiences of resilience and vulnerability during the COVID-19 pandemic. Ethics approval was received to use data from this research program to inform a secondary analysis on April 21, 2022 (H-04-22-7965) from the University of Ottawa Research Ethics Review Board.

Data were generated with community-dwelling older adults recruited across five Canadian provinces from coast to coast at two time points (T1 and T2) during the COVID-19 pandemic. Data generation for T1 occurred from September 2020 to May 2021, after which the same sample of participants was contacted and invited to a second follow-up interview. Data generation for T2 occurred from January 2022 to August 2022. Approximately nine months to one year lapsed between T1 and T2 to capture any changing experiences through the pandemic evolution, for example, with fluctuating restrictions and the availability of a COVID-19 vaccine.

Older adults were recruited using purposive and snowball sampling techniques (Miles & Huberman, 1994). Potential participants were eligible if they were 60 or older at the time of their first interview (T1) and could communicate in either of the official languages of Canada (French or English). Bilingual interview recruitment posters were circulated via email throughout the personal and professional networks of the research team to potential participants. Interested participants contacted the principal investigator (T.O.) via telephone or email to schedule an interview.

Semi-structured interviews were conducted via telephone and were 30-60 minutes long. Multiple authors conducted interviews to meet participant language preferences, English: T.O., S.O.; French: M.L., L.B-H, and C.J. Participants provided written or verbal informed consent at both interview participation and audio-recording time points. Interviewers took field notes to reflect on data generation and interpretation throughout the research process and discussed these observations with the team, which in turn, helped identify further avenues of inquiry.

The interview guide was developed to gain a wholistic understanding of the impacts of the pandemic and subsequent restrictions on participants. The first interview (T1) consisted of open-ended questions centered around eight topic areas: social activities, work activities, social contacts and connectedness, well-being, vitality and health, and perceptions of COVID-19 communications/media. The following are some examples of questions posed to participants: Tell me about your experience in the last year of the pandemic. Can you tell me what is important to you in your life? Which things are important for you to have a happy/satisfied life? What makes (would make) you a happy/satisfied person? Has this changed during the pandemic? These questions help to elucidate the assets which people possess how their assets helped them to cope.

The T2 interview guide included the same topic areas to allow follow-up of participant experiences during the pandemic; two additional sections were added to draw on relevant pandemic changes, namely vaccination and recovery. The following are some examples of questions posed to participants: The last time we spoke, you mentioned that you were doing certain activities. Have these activities changed at all? Have you received the COVID-19 vaccine? Has anything changed in terms of how you view the pandemic since you received your vaccine? What do you hope or expect will happen in the future? What needs to change? Probes and prompts were used during the interview process to clarify participant experiences and to revise the interview guide for clarity.

Audio recordings were transcribed verbatim and checked for quality. To analyze the data, we used the six phases of Reflexive Thematic Analysis described by Braun and Clarke (2006, 2022). For Phases 1 and 2, familiarization and coding, data from T1 and T2 were treated separately. Both data sets were coded inductively (identifying patterns) and deductively by socio-ecological level, individual, household, and community. A sample of five transcripts were open-coded by three authors (S.O., T.O., C. J.) together, for each data set. The three authors engaged in the open coding process and reflected on- and grouped codes in an iterative process to develop a codebook. Data relating to each code was presented to the larger research team at meetings for further reflection and refinement. Two authors (S.O. and C.J.) continued to code the data independently using NVivo 12 software (Lumivero, 2017). The final coding reports for each dataset contained data relevant to participant assets and sub-codes for assets at individual, household, and community levels which were analyzed for the purposes of this study.

For Phases 3 and 4, generating and developing themes, the first author (S.O.) combined data from both datasets to identify initial themes. Classes of assets described by O'Sullivan et al. (2018) influenced theme development; these classes of assets include personal characteristics, energy factors, physical factors, and social factors and were created by combining asset categories from Moser and Satterthwaite (2008) and Hobfoll (2001). The categories are not mutually exclusive but are a way to organize and understand assets that span socio-ecological levels (individual, household, community). In Phase 5, initial themes were discussed and refined with feedback from the larger research team to develop consensus. Resulting themes were written up by the first author (Phase 6) and provide an understanding of what and how older adults conceptualize their assets through narratives about their experiences during the pandemic.

In this study, reflexivity was practiced throughout data generation and analysis through memoing and team discussions. Having a large research team with diverse backgrounds and experiences was a strength of this study and consensus building within the team contributes to trustworthiness of the

findings. Our team consisted of an older adult community member, a private industry expert with experience advocating for older adults, and academic professors and doctoral candidates with experience conducting interdisciplinary research related to older adults.

The final sample includes 67 participants at T1 and 37 participants at T2. Thirty participants were unable or chose not to complete a second interview. Recruitment and retention of older adults in research studies is known to be challenging (Mody et al., 2008) and the COVID-19 pandemic likely compounded these issues. Characteristics of the sample are shown in Table 3. Participants were overwhelmingly white, heterosexual females between 60 and 80 years of age. The majority did not report any disabilities, lived with others, and were from the province of Ontario. Interviews were mainly conducted in English (59 participants in T1 and 36 in T2); importantly interviews were analyzed in the language they were conducted in (i.e. they were not all translated to one language for analysis).

Table 3

*Characteristics of the Study Sample at T1 (September 2020 to May 2021) and T2 (January 2022 to August 2022).*

| Characteristic* | | Number of Participants | |
|---|---|---|---|
| | | T1 | T2 |
| Total | | 67 | 37 |
| Gender | | | |
| | Female | 47 | 26 |
| | Male | 20 | 11 |
| | Other | 0 | 0 |
| Age | | | |

| | | | |
|---|---|---|---|
| | 60-69 | 22 | 13 |
| | 70-79 | 36 | 21 |
| | 80-89 | 8 | 2 |
| | 90+ | 1 | 1 |
| Race/Ethnicity | | | |
| | White | 57 | 33 |
| | Black | 3 | 1 |
| | Asian | 2 | 1 |
| | Brown | 1 | 1 |
| | Not disclosed | 4 | 1 |
| Sexual Orientation | | | |
| | Heterosexual | 62 | 36 |
| | 2SLGBTQ2I+ | 3 | 1 |
| | Not disclosed | 2 | 0 |
| Disability | | | |
| | No | 57 | 32 |
| | Yes | 6 | 3 |
| | Not disclosed | 4 | 2 |
| Living Situation | | | |
| | Living with others | 46 | 28 |
| | Lives alone | 18 | 9 |
| | Not disclosed | 3 | 0 |
| By Province | | | |

| | | | |
|---|---|---|---|
| | Ontario | 50 | 31 |
| | Alberta | 6 | 4 |
| | British Columbia | 3 | 1 |
| | Quebec | 1 | 0 |
| | Nova Scotia | 1 | 1 |
| | Not disclosed | 6 | 0 |
| Language of Interview | | | |
| | English | 59 | 36 |
| | French | 8 | 1 |

Note. *Participant self-identified characteristics were completed through open-ended questions, not pre-defined categories.

## Results

In the following section, the assets older adults identified and the framing of those assets are described as themes. Next, the influence of the COVID-19 pandemic on participants' ability to use these assets in their communities is highlighted. This section concludes with an asset map to visually display assets identified in this study. The asset map provides a starting point for future research exploring how assets are framed in relevant DRR policies and practices.

While data were collected across two time points during the pandemic, no differences were observed in participant experiences of adaptation and resilience warranting an analysis across time. The following findings combine the experiences of participants at T1 and T2.

### Personal Characteristics Attributed to Coping with Uncertainty

Personal characteristics can act as a means for achieving other resources to support adaptation (Hobfoll, 2001). The participants identified three personal characteristics as assets: subjective good health, a strong self-concept, and a positive attitude or outlook. Participants discussed their subjective health in terms of both physical and mental well-being. *"Resilience for me is mental and physical […] I mean because resilience needs a healthy body and a healthy mind, I think" (P34-T1).* Perceived health was connected to self-efficacy and participants' perceptions of their ability to cope and adapt.

> *I'm as physically active as I can be, so that helps as well. I'm healthy. I have an image of myself, it's strong and resilient […] I can tell myself I can get through this. I can adapt. It's a learning experience. (P19-T1)*

During the interviews, participants referred to different coping strategies they used to manage the impacts of the pandemic. However, how they framed coping was similar and was structured through participants' understanding of their self-concept. The structure typically followed the pattern: I am X type of person, so I need Y, and here is how I met that need during the pandemic. For example, *"I'm a glass half full kind of person, so if I ever do get down – which I don't too often – I might just call a friend or call my daughter" (P45-T1).*

Associated with self-concept were participants' beliefs about how their personality traits contributed to coping. While we did not ask them to self-label, participants spontaneously framed their decision-making process using personality traits like introversion and extraversion. For example, participants who self-identified as introverts often mentioned that they were not as socially impacted because they preferred lower social stimulation than extroverts.

> *I think that I'm a bit of an introvert, so I don't mind being at home. I like seeing my friends, I like having something to do, I like having something on the calendar […] But I'm OK not going out in the evening. (P47-T1)*

Participants who self-identified as extroverts highlighted strategies to meet their social needs when restrictions limited in-person contact with others.

> *Because I'm an extrovert I usually go out to seek my entertainment. So now I don't go out as much. I'm more depending on nature to entertain me, for example, this morning when I did my walk, I was looking on what plants are coming up, what's new on the property. And usually, I wouldn't really notice, I just walk for my exercise, that's it. But now I'm observing nature more. (P57-T1)*

Having a positive attitude or outlook was described as an asset during the pandemic, and the participants tended to relate this to a sense of control. Participants viewed the state of the pandemic and evolving public health restrictions as outside of their personal level of control. They expressed how they believed focusing on these factors was not helpful for coping, *"I learn to adjust and no use worrying over things that you cannot change" (P61-T1).*

Participants described strategies such as creating routines with structured activities to create a sense of control at an individual level. This strategy helped to create meaning and purpose and contributed to their positive outlook. Creating a sense of control at an individual level helped participants to cope with a perceived lack of control at a broader societal level.

> *[Playing bridge] is just providing a structure or core to my activities. I know that I need to have everything fired up online, the computer, the encryption system running usually by about quarter after 12 for the online start and the same in the evening. So, it provides a structure that wouldn't otherwise be there and that is a saviour. (P43-T1)*

**Resources Accrued Over a Lifetime and an Awareness of Time Itself Contributes to Resilience**

Energy assets act as building blocks to help us acquire other valuable resources. This study identified three energy assets: 1) Mobilizing knowledge, skills, and lessons learned from life experiences, 2) Financial security, and 3) Time.

Mobilizing the knowledge, skills, and lessons learned from life experiences is an overarching asset identified in this study. Participants often framed their ability to adapt via anecdotes about their life experiences. For example, one participant highlighted how their job training helped them to understand the statistics presented in the media, which then influenced their perception of COVID-19. "*First of all, I'm not afraid of COVID, I understand statistics, I'm an engineer by training as I mentioned. I look at the statistics and put them into context" (P41-T1).*

Another participant relayed that the knowledge they gained from working in a hospital during the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 helped them to adapt when COVID-19 emerged. "*I think only because I went through SARS working at the hospital. So, I knew how to keep safe and just having that little bit of knowledge I think helps" (P45-T1).*

Participants emphasized the lessons learned from adverse life experiences as contributors to resilience. Adverse life events, like war, chronic illness, and personal traumas, were framed as comparators to the COVID-19 pandemic. Experience gained through these adverse events helped participants to adapt and be resilient.

> *I've adapted, I mean I think because I have been through other things in my life that were hard, like having cancer a couple of times, I was a single mother, I've been in the advocacy movement, I've been divorced, I've had ups and downs with my ex. So, you know you go through things in your life but you learn that, as difficult as it is, you get through them. You build up those resiliency muscles, you don't just lose the ability to respond and to do well and to find peace. (P18-T2)*

Money is a crucial resource for acquiring essential items to meet basic human needs and is a foundational support for other assets, like housing. Participants who felt financially secure during the pandemic reported that meeting their basic needs allowed them to focus on fulfilling other needs, such as social ones.

> *I think I'm lucky that myself and my loved ones are all healthy and happy number one…It's all going so well for us, and that's why I said it really hasn't had a huge impact on us. It's had an impact in terms of social interaction, but that's about all because we're retired, financially it's had no impact on us. (P55-T1)*

Finally, time was identified as an asset, especially for slowing down and enjoying a slower pace of life, contributing to a sense of calmness and satisfaction and allowing more time for self-reflection.

> *So, things became a lot more home-based and things just slowed down a bit, and I wasn't bothered by that. I found it very calming and satisfying and I was able to pay attention to things – pay more attention to people like my husband and my friends and myself. I didn't feel like I was being pulled away all the time. So, I would say my satisfaction level has not gone down after COVID, except for being unable to see my family. (P3-T1)*

**Physical and Virtual Spaces Support Health and Well-being**

Physical assets are items that are visible, tangible, and can be touched. The participants described two physical assets: 1) Living space and 2) Digital devices. Having living space is a physical asset because it provides basic shelter that all people require. However, during the pandemic, participants in this study described how their living spaces also contributed to their social needs, health, and well-being. In the following quotation, one participant identified how important it was to have a space to nurture: "*I found during COVID and particularly during the early lockdown we felt so fortunate [to have] personal space and a*

*yard […] to have that space where you can walk around and nurture and feel part of was very important" (P14-T1).*

Physical living space was an asset that helped people to meet their social needs. The first way this was described was by using space to create physical boundaries with other people. This was important for people who lived with others because they used the spaces at their disposal to create time apart and to support time together. This supported the relationships with the people they lived with and overall well-being.

> *She does her thing in the morning, I typically do work or whatever I want to do and then while she's up doing whatever she wants to do, I'll go down and I'll do my workout. And then we'll get together in the afternoon and go for a walk. So, we designed our day so we have separation, so we don't … get too sick of each other. (P21-T1)*

During the pandemic, people had to find new ways to socialize outside of their homes. One participant turned their garage into a social space to meet with others.: *"My son came over this summer and totally cleaned out our garage and we entertained in our garage […] So really, we were having neighbours and friends in, just for a chat, you know, one-to-one, in the garage" (P60-T1).*

Finally, manipulating physical living space also helped contribute to participants' general health. One participant described using the kitchen as a space to exercise in the winter months while being outside was not possible and at a time when public gyms were closed due to the restrictions: *"We're all doing online exercising, we have a trainer three times a week. The kitchen becomes a gym, either rolling around on the kitchen floor or lifting weights or stuff like that" (P51-T1).*

Digital devices like computers and smartphones are needed to access virtual activities like online programs. This study described digital devices like computers and smartphones as physical assets supporting social needs like staying connected to family members.

*We are very fortunate to have [technology], so our greatest loss has been that we don't get to touch our grandchildren. That's the biggest loss, but we count our blessings every day that we live in an era when we have technology to bring us close together. (P56 – T1)*

Other assets like knowledge of how to use technology, motivation to learn new technology, and people who can act as resources for technology use were all beneficial to accessing the virtual world through a digital device. *"I get a lot of help from my son with my technology, but if somebody doesn't have that [help], you're kind of out-to-lunch really" (P49-T2).*

**Positive Relationships and Adapted Community Services Help to Maintain Connectedness**

Social assets are interpersonal factors that contribute to resilience. When public health restrictions limited in-person social contact, participants described how this led to a loss of social connectivity. To fulfill social needs, three assets were identified: 1) Positive relationships with households and neighbours, 2) Tailored activities for social engagement, and 3) Access to appropriate community services.

At the household level, having a positive relationship with a spouse or other family members was identified as an asset, particularly when people were encouraged to stay home and spend more time together. *"Me being with my husband and my best friend so much has not been a bad thing […] We count ourselves very fortunate to be in a bubble with somebody that we like to be with" (P56-T1).*

For people who lived alone, there were additional concerns about the impacts of social isolation during the pandemic. One participant who lived alone described the importance of maintaining social connections with people in their neighbourhood; this connection was framed as a reciprocal social asset whereby neighbours could rely on each other for help.

*As I said, I'm here by myself, I make sure that I if I don't feel well, I can call next door and say 'I'm not feeling well, can you please come over here and do this or this or that'. I try to maintain a relationship based on [knowing] what my needs are. (P61-T1)*

Beyond the household, participating in adapted social activities was an asset to support community engagement. Social clubs, gaming groups, and volunteer organizations that pivoted from in-person to virtual platforms during the pandemic created opportunities for people to maintain social connections. While this was not an accessible option for everyone, many participants in this study acknowledged the benefit of having access and being able to engage on online platforms.

*I belong to [a] book club, which, of course, means that we have to meet by Zoom […] we used to meet at each other's houses before COVID came, but we're now meeting once a month by Zoom, and I belonged to that club for probably 15 years. So, uhm, it's very good. I enjoy it (P49-T1)*

Access to adapted community services was identified as an asset, including online ordering of groceries and medications, contactless pick-up, and home delivery. Dedicated shopping hours for older adults and online booking for blood tests reduced crowding, providing comfort.

*I must say in some ways life became a little easier, like even blood tests. I have [medication] I'm on, I have to take blood tests every month and before I would go to a place to get blood test, I'd sit there for an hour because you didn't know whether its busy or not. Now everything is done online by appointment. It's a lot better. Even grocery stores where you know from 7:00 to 8:00 in the morning seniors can go and shop without crowds, you know, so that's good. (P48-T1)*

**Asset Mobilization at the Community level During the Pandemic**

Figure 1 highlights participant assets across socio-ecological levels to support their resilience. While assets are presented according to four classes of assets, including personal characteristics, energy,

physical, and social, these categories are not mutually exclusive. For example, the self-efficacy to want to join an online social group (personal characteristic asset) coupled with knowledge of technology use (energy asset) to use a digital device (physical asset) can support access to virtual social connection (social asset).

An important topic that emerged from this study was that, in addition to supporting themselves and their households in coping throughout the pandemic, participants also wanted to support others in their communities. Asset mobilization at the level of the community was met with difficulty due to pandemic-related restrictions. In Figure 1, dotted lines illustrate fluidity across socio-ecological levels. There is a thicker dotted line between the household and community levels, and an arrow becomes thinner when attempting to move from the household to the community, demonstrating the difficulty participants had trying to use their assets to support community members.

Formal activities, like structured volunteer work, were limited, particularly during the earlier phases of the pandemic, and adapted to reduce social contact in the latter phases. Adapted activities only sometimes led to satisfactory benefits. In the following quotation, one participant described how the benefits of supporting others through volunteer work diminished:

> *I think you volunteer for two reasons, 1) To do something good that's needed and 2) To validate yourself or to confirm for yourself that you can do things. So of course, it's still good to be doing anything that is helping somebody out, but it's not answering my needs as much in that I don't have any contact with people and that's normally a real side benefit for me in anything I do, is to interact with somebody else at a human level. (P38-T1)*

Informal activities, such as driving someone to an appointment or having a telephone conversation, were less affected than formal activities. Contributing to society by supporting others enhanced personal satisfaction and well-being.

*I went through breast cancer about eight years ago. So that's one of the things I really enjoy doing is finding people or hearing about people that are going through cancer treatment, and I always get in touch with them to give them the benefit of what I went through and just have someone to talk. So, I think those things are really important to me to feel that as if I can make somebody else feel good. (P42-T1)*

Older adults, in this study, highlighted the desire and potential value of their contributions for their communities. However, as one participant describes in the quotation below, the potential of this demographic is often overlooked —and, during the pandemic, went largely untapped.

*I think that other people, retired other people – old other people like me – it's a potential. I mean we have experience; we have a lot of knowledge. I am 78, I can still do things – a lot of things […] the potential is there. Since I couldn't do my volunteer job, I was looking to do any volunteer job during the pandemic, but I couldn't find anything. I contemplated delivering food to old people like me who can't drive or something, but I mean I look around, it's not structured. There is no where to go and see if you can help others or volunteer during this pandemic. Every volunteer job was closed. (P34-T2)*

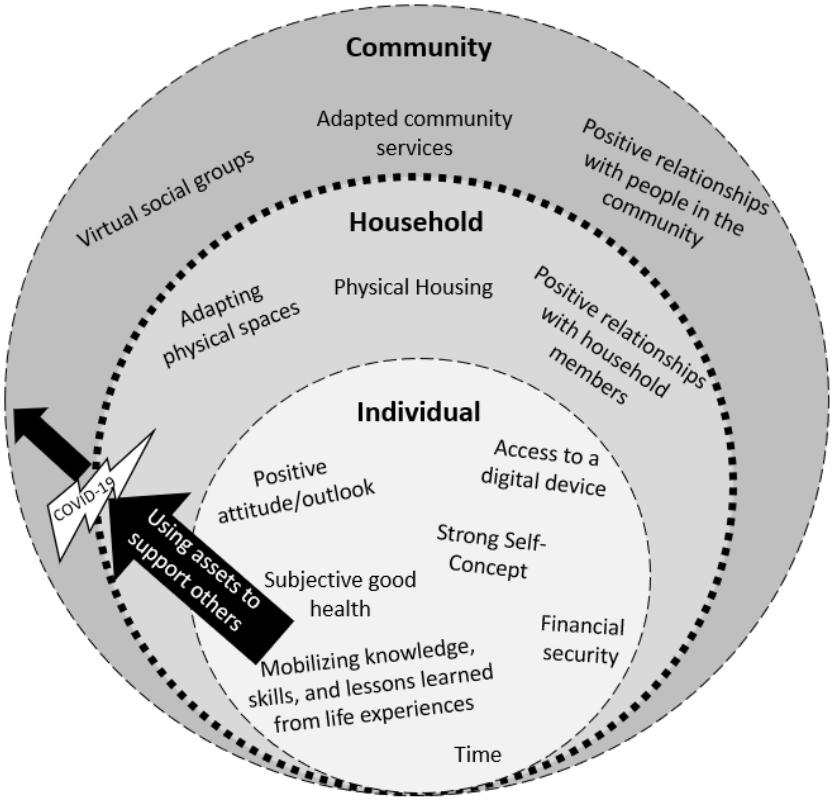


Figure 1

*Asset Map: Assets of Participants Spanning Individual, Household, and Community Levels, and the Influence of the Pandemic on Asset Mobilization at the Community Level*

## Discussion

This study reports on the assets and asset literacy of community-dwelling older adults in the context of the COVID-19 pandemic. The Conceptual Model of Asset Literacy for Household Resilience (O'Sullivan et al., 2018) acted as guide for understanding how a person or collective moves through steps of asset identification, from awareness to action. Assets identified in this study included having a positive attitude or outlook, subjective good health, time, money, knowledge, and skills gained from life experience, physical living space, digital devices to facilitate virtual connectivity and access to adapted

community services, and supportive social networks. These findings are similar to other studies exploring the assets of older adults during the pandemic (Fuller & Huseth-Zosel, 2020; Garnett et al., 2023).

Literature in the field of resilience has long emphasized many of these assets. Hobfoll (2001) identified a plethora of resources, including physical housing, positive social relationships, time, money, and other resources associated with communities. Older adults' knowledge, skills, and experience gained over the life course have also long been recognized as an asset (Cosco et al., 2017). Likewise, personality traits have been associated with cognitive health in old age, which has further implications for the pathology of diseases like dementia (Graham et al., 2021; Hobfoll, 2001). Essentially, age itself leads to the accumulation of a greater pool of assets over time (Hayman et al., 2017). In this sense, being an older adult is an asset where life experience, leading to increased knowledge, skills, and resources allows one to draw on assets as needed.

Of the findings presented, a salient contribution is that participants expressed difficulty using their assets to contribute to their communities, through formal and informal activities, due to restrictions on social participation. This is consistent with other studies of older adults during the COVID-19 pandemic (Herron et al., 2022; Igarashi et al., 2021). Evolving public health restrictions no doubt restricted the participation of whole societies in valued activities, however, research examining policies and practices implemented during the pandemic, reveals the ways in which ageist attitudes and stereotypes towards older adults permeated this discourse and policies (Fraser et al., 2020; Lagace et al., 2024). In line with calls for an all-of-society approach to DRR, there needs to be a culture of inclusivity that recognizes the potential contributions of older adults and promotes opportunities for participation. This has reciprocal benefits for the giver and receiver and is part of the dynamic process feeding back to one's resilience (Norris et al., 2008).

A supportive community is essential for fostering inclusion and opportunities for participation of diverse populations in society. *Age-Friendly Cities and Communities* is an example of an initiative that aims to support the meaningful participation of older adults in physical, social, and digital spaces by recognizing the value they bring to their communities and creating accessible spaces for them to contribute (WHO, 2023). While there is progress towards inclusion, more work needs to be done in the field of DRR where high-risk populations, like older adults, have a tendency to be viewed as passive with a focus on needs rather than as active contributors. In this study, participants clearly expressed their assets and framed the potential value of their contributions as untapped resource for their communities in the context of the pandemic. Future research should also consider more explicitly asking about assets, asset value, and opportunities to use assets when developing scales to measure resilience in older adults and other age demographics.

Reporting on assets also has value for a growing interest in measuring concepts like resilience, scales which measure resilience often use assets as indicators. Indicators typically used in scales to measure resilience in older adults are self-efficacy, self-esteem, hope, optimism, perception of economic and social resources, spirituality, perception of relationships and social support, and ability to participate in daily routines and activities (Akatsuka & Tadaka, 2021; Friborg et al., 2003; Martin et al., 2015). However, using The Conceptual Model of Asset Literacy for Household Resilience (O'Sullivan et al., 2018) as a guide, it is also essential that people have an awareness of their assets and recognize their inherent value in order to use them. Indicators that ask about awareness and asset value did not appear explicitly in the scales we found in the current literature. This is an important consideration for future research in this area because, ageism towards older adults may influence how society and older adults themselves value their assets (Ayalon et al., 2021). It is not enough to list qualities which exist as assets but to also explore whether a person, group, or community has awareness of and opportunity to use them.

With the continued threat of disasters due to climate change and global COVID-19 pandemic, there is renewed interest in strategies to support the resilience of people, communities, and countries (UNDRR, 2021). Asset identification is a crucial upstream investment in DRR practices because it illuminates health-enhancing or 'salutogenic' factors that can be leveraged when disasters and emergencies occur (Lindstrom & Eriksson, 2010; Pérez-Wilson et al., 2021). Beyond identification, creating opportunities for people to use their assets is another essential component of asset literacy. In a disaster context, thoughtful reflection weighing the impacts of public health restrictions is needed to balance perceptions of risk with opportunities for contribution. This is particularly important for high-risk populations whose social participation was limited and protection emphasized during the pandemic (Government of Canada, 2020).

Future research should examine policies and practices related to older adults across diverse disaster contexts to explore if and how assets are identified and highlighted compared to needs alone. With a renewed sense of urgency to address disaster impacts stemming from the COVID-19 pandemic and climate-related disasters, this is an opportune time to review and revise these essential documents and re-examine how we portray older adults as contributors to society. Furthermore, it would be interesting to further understand older adults' perspectives of the pandemic over time given that it lasted longer than anyone could have anticipated. In this study, we did not find significant changes in participant experiences between the two timepoints and therefore did not complete a longitudinal analysis.

**Limitations**

There are varying interpretations about what age older adulthood begins. Rather than focusing on a specific age group, research in the field of aging has emphasized differences between the 'third age,' or younger older adults, who tend to experience perceived active, healthy, and independent lifestyles, and the 'fourth age' or older, older adults, a stage of life marked by decline and dependence (Gilleard & Higgs, 2010). While no distinct number determines the shift from the third to fourth age, this study

included few people aged 80 and older who may have had different perceptions of assets and resilience. Additionally, while we worked to sample a diverse group of older adults across Canada, there was limited participation with respect to racial, ethnic, marginalized, and gender-fluid groups and older adults experiencing housing or food insecurity. Further, we lost half of the participant sample between T1 and T2 which may have influenced our findings; the COVID-19 pandemic posed challenging circumstances which may have affected the continued participation of older adults in this study over time. At least one participant from our initial sample passed away between T1 and T2.

Related to sample characteristics, we did not collect data on income which could have also influenced our findings and the resources that participants had access to during the pandemic. Finally, while we sought to recruit older adults from across Canada, our final sample included five of the 10 Canadian provinces. While older adults living in an institutionalized setting were outside the scope of this study, given that housing and social participation were highlighted as assets, it would be interesting to explore the assets and resilience of those living in institutions like long-term care homes.

## Conclusion

Rapid population aging and the continued threat of climate change are co-occurring and affect population and public health. There is growing interest in strategies and initiatives to reduce risk and the support resilience of citizens. In disaster contexts, older adults are typically viewed as a homogenous group who need protection, and this was exemplified during the global COVID-19 pandemic. The assets – resources, gifts, and strengths – older adults use to support themselves and their communities are typically excluded from the discourse related to this demographic. With respect to DRR practices and policies, building resilience in high-risk populations, like older adults, requires investment in asset identification paired with opportunities for inclusive participation. This has the potential for far-reaching impacts, such as expanding indicators in scales to measure resilience in old age, the inclusion of older

adults in volunteer programs during and after disasters, more diversity in the portrayal of older adults in media reporting, and emphasis on older adults as active participants in DRR policies.

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# Chapter 7. Article 2

**Occupational Participation Among Older Adults During the COVID-19 Pandemic**


**Authors' names and affiliations**

Samantha A Oostlander MSc(OT), OT Reg. (Ont.)[ag], Camille Joanisse MA[ag], Michael S Mulvey PhD[bg], Sarah Fraser PhD[ag], Martine Lagacé PhD[cg], Louise Bélanger-Hardy J.D., LL.M.[dg], Linda Garcia PhD[ag], Annie Robitaille PhD[ag], Margaret Gillis MA[e], Jill Courtemanche BScN(Ed)[f], Tracey L O'Sullivan PhD[ag]

[a] Interdisciplinary School of Health Sciences, Faculty of Health Sciences, University of Ottawa, Canada

[b] Telfer School of Management, University of Ottawa, Canada

[c] Faculty of Arts, University of Ottawa, Canada

[d] Faculty of Law, University of Ottawa, Canada

[e] International Longevity Centre Canada

[f] Independent

[g] LIFE Research Institute, University of Ottawa, Canada


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**Abstract**

**Background.** The COVID-19 pandemic led to abrupt occupational disruption for all people. However, some populations, like older adults, were disproportionately impacted particularly in the earlier waves. **Purpose.** The purpose of this study was to explore and understand how the occupational participation of community-dwelling older adults was experienced during the COVID-19 pandemic, using the Canadian Model of Occupational Participation (CanMOP) to contextualize findings. **Method.** Sixty-seven older adults participated in semi-structured interviews from September 2020 to May 2021, 37 of which also participated in a follow-up interview one-year later. **Findings.** Using reflexive thematic analysis, four themes were generated: 1) Experiences of loss are complex and layered for older adults, 2) Technology as a medium for occupational participation, 3) Risk perception influences return to occupation, and 4) Age-related challenges for older adults resuming volunteer work. **Conclusion.** Increasing frequency and severity of influenza pandemics and other disasters, are a global concern, and OTs can use their skillsets to foster participation and expand occupational possibilities for older adults. The CanMOP was a helpful tool to understand the nuances underlying the participation of older adults in this context.

**Keywords:** Canadian Model of Occupational Participation, Disaster Risk Reduction, Occupational Possibilities, Occupational Disruption

## Introduction

The focus of occupational therapists (OTs) is to support participation in meaningful occupations – from everyday to extraordinary activities that people want, need or have to do to live their lives (Laliberte Rudman et al., 2022). More frequent and severe disasters, such as influenza pandemics, can disrupt occupational participation for all people, as seen during the COVID-19 pandemic (United Nations Office for Disaster Risk Reduction [UNDRR], 2021). However, some groups of people experience more disproportionate impacts than others; for example, during the earlier waves of the COVID-19 pandemic, older adults were at greater risk for fatality and other health complications than other age demographics (Centers for Disease Control and Prevention [CDC], 2023). Reduced social supports (formal and informal), isolation, and limited income further challenged the quality of life of older adults during this time (Mental Health Commission of Canada, 2021). Understanding the influence of the COVID-19 pandemic on the occupational participation of older adults can help to inform how OTs can support the well-being of this population for future pandemics.

Scholarly literature indicates that older adulthood is often marked by occupational disruption – changes to patterns of participation in daily occupations (Whiteford, 2000). Examples of factors that may lead to disruption include, retirement from the workforce, navigating chronic health conditions, social losses, and responsibilities like caregiving (Nizzero et al., 2017; Walker & McNamara, 2013). Studies have reported that during the COVID-19 pandemic, older adults experienced challenges accessing online activities, grappled with emotional distress, and experienced changes in mood and sense of belonging within their communities (Carlsson et al., 2022; Fristedt et al., 2022; Rotenberg et al., 2021; Vesnaver et al., 2023). Public health restrictions implemented during the pandemic, like physical distancing, are being described as a paradox in relation to older adults; intended protection from illness also led to negative implications for health and well-being stemming from social isolation, for example (Tyrrell & Williams, 2020).

While all people had to navigate changes to daily routines due to public health restrictions, older adults also faced additional challenges like ageism – the stereotyping, prejudice, and discrimination of individuals based on age – which embeds itself implicitly into institutions and often goes unchallenged (Braithwaite, 2002; Butler, 1969; Lagacé et al., 2024). Studies have reported that ageism towards older adults intensified and there was a rise in intergenerational tension during the pandemic; for example, the view that restrictive public health measures, such as lockdowns, benefited older adults at the expense of younger people (Ayalon et al., 2021; Fraser et al., 2020; Levy et al., 2022).

Ageism can lead to experiences of stigma, exclusion and isolation, and restricts occupational possibilities (Laliberte Rudman, 2015) – "*ways and types of doing that come to be viewed as ideal and possible with a specific socio-historical context, and that come to be promoted and made available within that context*" (Laliberte Rudman, 2010, p.55). The rise in intergenerational tensions stemming from ageism was found to contribute to hostility and hindered the social participation of older adults in society (Ayalon et al., 2021; Levy et al., 2022; Swift & Chasteen, 2021). Through their training, OTs are well situated to identify and understand how social factors, like ageism, may influence occupational participation (Egan & Restall, 2022).

The *Canadian Model of Occupational Participation* (CanMOP) is a guiding model which holds the concept of occupational participation as its central focus (Egan & Restall, 2022). Occupational participation is "*having access to, initiating, and sustaining valued occupations within meaningful relationships and contexts*" (Egan & Restall, 2022, p.76). Exploration of purpose and meaning rests on the assumption that people participate in occupations to meet needs for safety, survival, autonomy, competency, and relationships (Egan & Restall, 2022). The occupational possibilities giving rise to participation are further shaped by the environment's dynamic macro, meso, and micro factors.

The purpose of this study was to explore and understand how the occupational participation of community-dwelling older adults was experienced during the COVID-19 pandemic. The objective was to

describe older adults' experiences of participation during the pandemic using the CanMOP to situate our understanding of occupational participation. Our findings add to the growing literature on older adults' experiences of the COVID-19 pandemic using OT theory, and provide useful insights for OTs who work with older adults.

## Methods

This study is embedded within a larger research program exploring how older adults experienced the pandemic and subsequent public health restrictions in Canada. For the research program, data were collected at two time-points via semi-structured interviews. This paper uses data from the broader research program for a secondary analysis in which a narrative approach was used to understand how the pandemic influenced the occupational participation of community-dwelling older adults living in Canada (Riessman, 2008) The University of Ottawa research ethics committee (H-04-22-7965) approved use of the data for secondary analysis on April 21, 2022. In the section below, we describe the overall process for data collection and identify how data was analyzed for this paper.

### Data Collection

While older adulthood does not begin at a universally agreed upon age, the World Health Organization (WHO) indicates older adults are people aged 60 years and older (WHO, 2020). We used this as a guide for the inclusion criteria which were as follows: aged 60 years and older, living in a community setting in Canada, and able to communicate in French or English. Recruitment was achieved through purposive and snowball sampling; the research team circulated recruitment posters via email through team members' personal and professional networks, and asked participants to do the same with people in their social circles. The research team attempted to achieve maximum variation of sociodemographic characteristics to capture diverse perspectives; potential participants contacted and were screened by the principal investigator (T.O.).

Data from two time-points during the pandemic were collected to capture diverse experiences. Initial interviews were completed with n=67 older adults from September 2020 to May 2021. Approximately one year later, from January 2022 to August 2022, n=37 older adults from the same sample also completed a follow-up interview. The time lapse between the two interviews was intended to allow the research team to capture evolving experiences. Interviews were conducted via telephone by multiple team members (T.O., S.O., C.J., M.L., L. B-H.) and lasted 30-60 minutes. Participants provided informed consent to audio-record the interviews.

For both interviews, the same interviewers asked open-ended questions covering various topics relevant to the broader research program, for example, social connection, daily activities, and health and well-being. Interviews were transcribed verbatim by the research team. Reflections about the interview process and high-level analysis of the data led to iterative changes to the interview guides which improved question clarity during the data collection process. Table 4 shows some examples of questions used in the interviews to solicit narratives from participants relevant to this particular secondary analysis of data from the broader research program.

Table 4

*Examples of Semi-Structured Interview Questions, Prompts, and Probes Posed to Participants for Both Interviews*

| **Questions posed to participants** |
| --- |
| • Can you describe your daily life and the activities that you took part in before the pandemic? Or since last we spoke?<br>• Are there any activities that you are missing during the pandemic with restrictions in place? If so, can you tell us something about it, what do you miss?<br>  ○ Who did, or do, you do these activities with?<br>  ○ What do these activities mean to you?<br>  ○ If you can't do this activity, what would you need to be able to start doing it again?<br>• Are there any new activities that you've started doing during the pandemic? Or since last we spoke? |
| **Prompts and probes used to clarify discussions as needed** |
| • Tell me more about that?<br>• Can you please explain that further?<br>• Can you give an example? |

**Data Analysis**

All interviews conducted were analyzed regardless of whether participants completed an initial interview only or both an initial and follow-up interview. Reflexive Thematic Analysis was completed to develop an understanding of older adults' experiences as expressed through stories told (Braun & Clarke, 2022). Our process moving through the phases of reflexive TA, are displayed in a schematic in Figure 2.

Phases 1 and 2, familiarization and coding, were completed separately for each data set (initial and follow-up interview). In phase 1, three authors (S.O., C.J., T.O.) familiarized themselves with the data by re-reading the transcripts. In phase 2, the same authors inductively developed a coding grid and tested it on three transcripts before continuing to code independently. NVivo[12] software facilitated coding (QSR International Pty Ltd., 2020).

From the main codebook, two codes 'Occupations' and 'Factors influencing occupational participation' from both interviews captured content used for theme generation in this study. The third, fourth, and fifth phases, which involve generating, reviewing, and defining and naming themes were completed by the first author (S.O.) in an iterative process using data from both data sets. The development of themes was influenced by CanMOP (Egan & Restall, 2022). The first author used the two essential components of the model (1 – the purpose and meaning associated with participation, and 2 – occupational possibilities afforded by the participants unique context) to support theme generation. Themes were mapped onto CanMOP, and are displayed in a thematic map in the results section. Team members reviewed and revised the themes until consensus was achieved. In the sixth and final phase – writing up – the first author was responsible for drafting the initial manuscript, which team members then reviewed and provided comments/suggestions.

The research team includes an older adult community member with work experience in emergency preparedness in a public health setting, a private industry expert in advocating for older adults, as well as doctoral candidates (including the first author), and professors who conduct research related to older adults, spanning multiple disciplines including law, health science, communications, and business. The principal investigator of the broader study (T.O.) has a research program focused on disaster resilience, specifically among high-risk populations. The first author (S.O.) is an occupational therapist with five years of clinical experience working with older adults in an acute care setting. This interdisciplinary

collaboration allowed for thorough reflexivity throughout data collection and analysis, achieved through memoing and team meetings while discussing findings.

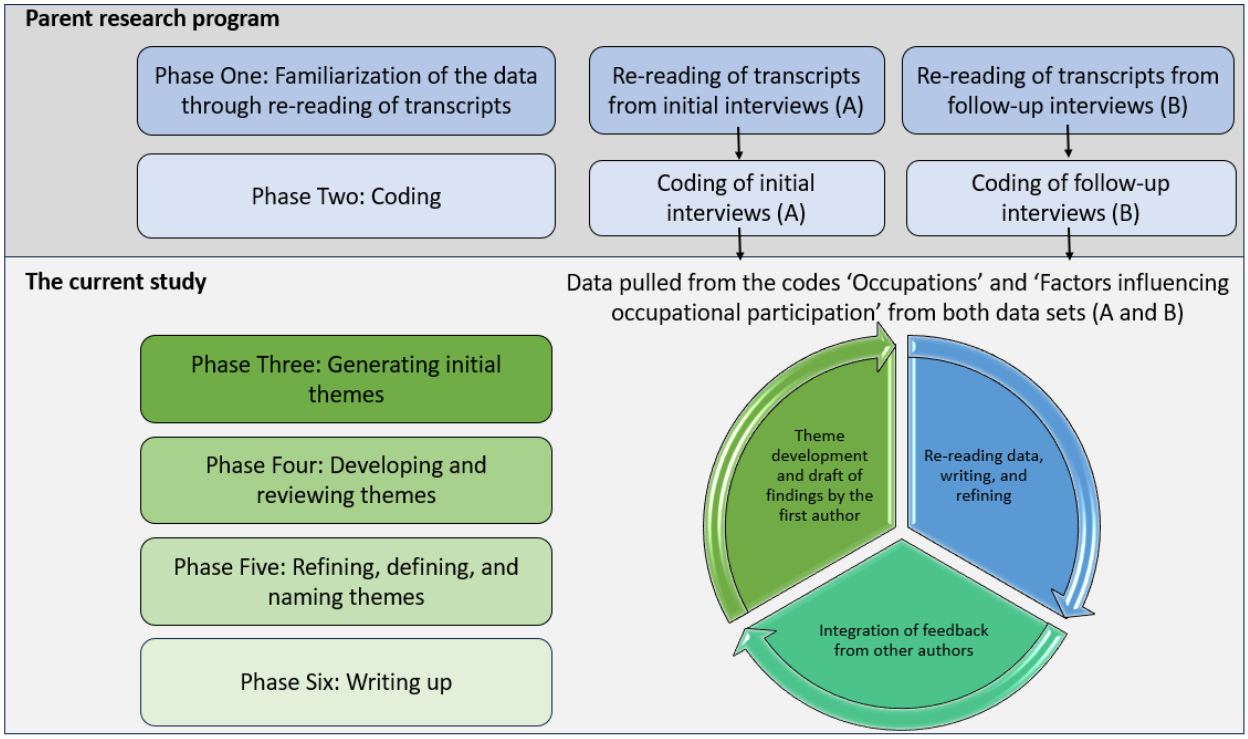


Figure 2

*Schematic of the Data Analysis Process Using the Iterative Phases of Reflexive Thematic Analysis Described by Braun & Clarke (2022)*

## Findings

The occupational participation of community-dwelling older adults in Canada during the COVID-19 pandemic was explored. A total of n=67 older adults participated in the initial interview (denoted as 'A'), with n=37 participants from the same sample also completing a follow-up interview ('B'). Most participants conducted interviews in English, lived in a household with others in Ontario and identified as female, heterosexual, white, and living without a disability (Table 5). Most participants were under the age of 79, with the majority in the 70-79 age bracket for both interviews.

Table 5

*Demographic Characteristics of the Sample were Identified Via Open-Ended Questions (Not Pre-Defined Categories) and Organized by Initial and Follow-Up Interviews (Denoted A and B, Respectively)*

| | **A** | **B** |
|---|---|---|
| Sample size | 67 | 37 |
| Preferred language | | |
| English | 59 | 36 |
| French | 8 | 1 |
| Age | | |
| 60-69 | 22 | 13 |
| 70-79 | 36 | 21 |
| 80-89 | 8 | 2 |
| 90+ | 1 | 1 |
| Gender | | |
| Female | 47 | 26 |
| Male | 20 | 11 |
| Other | 0 | 0 |
| Sexual orientation | | |
| Heterosexual | 62 | 36 |
| 2SLGBTQ2I+ | 3 | 1 |
| No answer or not disclosed | 2 | 0 |
| Canadian province of residence | | |
| Ontario | 50 | 31 |

| | | |
|---|---|---|
| Alberta | 6 | 4 |
| British Columbia | 3 | 1 |
| Quebec | 1 | 0 |
| Nova Scotia | 1 | 1 |
| No answer or not disclosed | 6 | 0 |
| Household make-up | | |
| Living with others | 46 | 28 |
| Living alone | 18 | 9 |
| No answer or not disclosed | 3 | 0 |
| Racial background | | |
| White | 57 | 33 |
| Black | 3 | 1 |
| Asian | 2 | 1 |
| Brown | 1 | 1 |
| No answer or not disclosed | 4 | 1 |
| Functional limitation identified | | |
| No | 57 | 32 |
| Yes | 6 | 3 |
| No answer or not disclosed | 4 | 2 |

Using CanMOP to situate our understanding of occupational participation, we generated four themes with the two essential components of the model in mind (1 – meaning and purpose and 2 – occupational possibilities). We discuss the themes are below and present corresponding participant

quotations (denoted using a numerical pseudonym) from both data sets (A and B). The themes are displayed visually in a thematic map, contextualized using the CanMOP (Figure 3).

**Theme 1. Experiences of Loss are Complex and Layered for Older Adults**

Many participants described leading vibrant, active lives prior to the pandemic. For example, through their experiences as volunteers in the community, balancing work with grandparent duties, participating in social clubs, engaging in physical activities, and participating in hobbies – from baking to attending the local theatre. As one participant described, the meaning associated with these activities was, *"Well, [they mean] everything, that's my life." (P23 A)*. In the early days of the pandemic, restrictions abruptly ended many activities, altering daily routines and rituals. Participants described these changes as affecting their mood and motivation, namely they experienced more boredom and restlessness. In the following quotation, one participant highlights how the pandemic influenced her creativity.

> *I have a grandson coming, I can't get into a project for him. I'm excited for this event like you wouldn't believe, but I have no - all my creativity has dried up. (P17 A)*

Not being able to do desired activities with others was articulated as a loss. Being deprived of relatedness in occupation was challenging for many participants who described joy and pleasure in the 'doing' of occupations with others, and the comfort of shared experiences. For some, loss of relatedness in occupation impacted their ability to cope with evolving pandemic restrictions.

> *That's the single biggest impact – that you're not able to share any pleasures. You can certainly share misery over the phone, but there is nobody there to put an arm around you or to say 'Come on over and we'll have a coffee' or 'Let's go for a walk.' The coping mechanisms that I have had have basically been taken away from me. (P37 A)*

The loss was also discussed in relation to aging and retirement, adding another layer of complexity to their experiences. Some participants highlighted how restrictions led to a sense of 'lost' time, referencing the loss of years of their lives perceived as active and healthy.

> *I'm in good health and everything, but how many years are we going to be able to travel and do lots of these things we want to do? And I feel kind of jipped a bit that I've lost a year and a half of travels. […] I really do feel like I've lost a year and a half out of the happy part of my life. (P42 A)*

Participants who identified themselves as 'retired' from the workforce discussed how their perceptions of life during retirement had changed. During a time of life that can be marked by more free time and choice, participants highlighted how restrictions disrupted retirement ideals and led to a lack of spontaneity.

> *Retirement has always been, for me, kind of a three-phase life experience, the first phase is go-go and second phase is slow-go and third phase is no-go. And with the pandemic, both my wife and I have experienced a slamming of the breaks where we were in the go-go phase and now it's been no-go. So, we kind of skipped over the slow-go completely. And that just is probably been the biggest impact. (P40 A)*

Collective experiences of loss appeared to stem from sudden changes to activities and routines that were disrupted by public health restrictions. Implications for mood, motivation, creativity, and relatedness, along with perceptions of 'lost time' and disrupted retirement ideals. In our analysis, we situated these layered experiences of loss with the purpose and meaning participants ascribed to their occupations, which can be seen in Figure 3.

**Theme 2. Technology as a Medium for Occupational Participation**

When in-person contact was restricted during the pandemic, many people turned to technology to access and participate in occupations. The use of technology was described for passive activities like watching television, videos, and streaming, and for active activities, like engaging in social groups, purchasing goods and services, and online learning opportunities. Related to accessibility, few participants described challenges with accessing the physical technology needed for digital participation, and this is likely a reflection of the sociodemographic characteristics of our sample. However, participants did highlight challenges they observed for the older adult demographic generally in gaining access to and having support to manage technology.

> *…the other thing too is the cost of technology. I mean what I have to pay every month here just to keep up – because I do everything online now. I'm so happy about that and I have so much delivered to the door and I just think it's all a wonderful age for us as seniors but only if we're adept at using it all. And mostly, a lot of seniors […] they don't have access to that. I think there's a lack of empathy for seniors who aren't up on [technology use]. (P60 B)*

For participants in this study, there was a range of experiences related to using technology as a medium for participation, from rejecting it to embracing it. The meaning and purpose of each unique activity seemed to dictate where participants fell on the continuum of technology use (rather than generalized to all activities). A few examples are provided below.

In this first example, we found that for certain individuals—such as musicians who perform in bands or sing in choirs—skill enhancement motivated their participation. As highlighted in the quotation below, technology was not seen as a satisfactory substitute for in-person engagement for these participants.

> *A big thing for me is I am a musician of sorts and we have been unable to get together to work up any new programs or do recordings […] it's impossible to do it without fair expense online because of the delays involved in the transmission […] and you don't notice it when you're talking*

*with someone, but if you try and play music together at a distance it doesn't work. There's no synchronization. So that's probably one of the biggest downers for me. (P52 A)*

Others identified social connection as their primary motivation for participation through technology. These participants often referred to technology use as 'better than nothing' but not adequately supporting their need for social connection. "*It's really hard to not see people's expressions, to actually talk to them when you know you're seeing someone on [a virtual platform]. I mean, it's better than nothing, but […] it's just frustrating" (P45 A).*

Participants, like those quoted above (P52 A and P45 A), who were dissatisfied with participation via technology often expressed a desire to resume in-person activities as soon as possible. Their remarks hinted at technology use as transient and insufficient for sustaining their long-term needs for those activities.

*I would like to get back to the regular routine of meeting up with everybody on a regular basis, being able to go and play Mahjong, because it was mostly a social thing. I think there are people who do something like play, and it's partly social, but there are people who are passionate about playing the game. And we're not; it's more of just a social thing. (P13 A)*

While the previous examples center on occupation, individual factors also shaped participants' attitudes toward technology. Some described their readiness to adopt technology in terms of openness or motivation to explore new ways of 'doing.' Those who embraced technology explained how it created opportunities for participation that would have been impossible otherwise in the pandemic context. The two quotations below contrast different experiences of the spectrum of adopting technology use for participation.

*My [piano] teacher started to teach after two or three months [into the pandemic], […] and I just never really embraced learning online. Now I'm ready to, but I just can't seem to get my motivation mustered up (P44 A)*

*If not for [virtual platform], I don't know what I would have done. I've taken courses. I've done [participation in the social group], […] all my bridge is online. […] It's not real, but it's better than the alternative. (P45 B)*

All participants in this sample had experience with technology use, whether through active or passive participation. Their stance on embracing or rejecting technology as a medium for participation varied. Some linked their attitude toward technology to specific activities, while others related it to personal factors, like openness, willingness, or motivation to embrace and learn how to participate digitally. The implications for less 'tech savvy' older adults were a concern as they could lead to lack of digital participation.

In Figure 3, we highlight this theme within occupational possibilities, noting that for some participants technology created new possibilities for participation while for others this was not the case. However, we also acknowledge that whether technology use was viewed as an acceptable alternative was strongly tied to the meaning and purpose participants ascribed to their occupations, for example, as meeting the need for relatedness or building competence with regards to a particular skill.

**Theme 3. Risk Perception Influences Return to Occupation**

With the easing of public health restrictions, individuals gained greater flexibility in selecting the what, when, where, and with whom of occupation. While many expressed a desire to 'return to normal' and resume their pre-pandemic routines, we discovered a complexity of factors influencing their perception of the risks associated with a return to participation. These factors, which ranged from micro to macro levels, shaped their views on the safety of returning to activities.

Risk factors at the micro level were described in terms of personal comfort level, subjective health status, and knowledge related to COVID-19. Many participants described making their assessment of risk based on their own perceptions and also in relation to people within their households and those they may come into contact with. In the community, many expressed greater comfort

engaging with people- and in organizations that shared similar rules or behavioural norms, *"Like going to the gym, if people are following the rules and the gym is following the rules, then I feel safe." (P6 A)*

> *I am 75, nearly 76 years old, and I do understand the statistics, and in my time of life I consider the risk to me versus the risk associated with doing the things that I want to do for the next few years of my life, is one I'm willing to take. (P41 B)*

> *You have to be deliberate and cautious and think about [what] the risk tolerance of my friends will be. For instance, some have compromised immune systems or other life circumstances that might affect their risk tolerance. (P3 A)*.

Media messaging around older adults also shaped participants' risk perceptions and decision-making around return to occupations. Specifically, emphasis on the vulnerability of older adults during the pandemic was highlighted and shaped behaviour. One participant indicated, "*I'm reminded constantly that I'm very vulnerable [through media news stories], and that […] I'm in the vulnerable population, and if I get it, I'll probably die. So that certainly has an impact on my behaviour" (P49 A).*

Other participants remarked how emphasis on the vulnerability of older adults played a role in conversations with family and friends, and the opinions they received from these important people in their lives. Some participants highlighted concerns about the potential impact on their autonomy around decision-making and return to occupation. For example, opinions from important others could influence the perceived accessibility of occupations regardless of the public health restrictions in place.

> *The other thing that I want to stress, even though we're older and it's COVID, I still safely want to maintain our independence as much as possible. I don't want to rely on people if I don't need to and at the beginning of this, I think we were all kind of scrambling and people were not even letting us go [grocery shopping], never mind if we wanted to or not. (P60 A)*

It was noted by many participants that news stories often intended to be compassionate sometimes failed to fully consider how restrictions impacted older adults, leading to ageism. For example, one participant pointed out that the adverse effects of public health restrictions on older adults were not receiving sufficient attention, "*I think there is a lot of ageism [in the media], I mean well-meaning maybe, but still, I don't think it is good for older people to be so stuck in their homes." (P4 A)*

Navigating risk perception was intricate, as evidenced by insights from participants in this sample. They emphasized a multitude of factors shaping their decision-making around return to occupations put on hold during the pandemic. Notably, ageism and the portrayal of older adults as vulnerable in media discourse also played a role. In Figure 3, this theme was placed within occupational possibilities to highlight how risk perception could shape occupational participation.

**Theme 4. Age-related Challenges for Older Adults Resuming Volunteer Work**

Many participants in our sample described participating in volunteer work in their communities prior to the pandemic. These activities abruptly stopped when initial pandemic-related restrictions were imposed. As restrictions gradually eased and organizations began to reopen, some participants navigated temporary policies based on age which restricted their return to volunteer work. The quotations below illustrate instances where participants experienced age-related challenges in attempting to resume in-person volunteer.

> *Another volunteer job I did before [the pandemic], was both my husband and I, we volunteered at [a community centre] [...] Of course, that all stopped, and when they started taking back volunteers, they wouldn't take anyone over the age of 65, so we couldn't go back. (P39 A)*

> *"There were times when [my volunteer work] stopped last year. They didn't allow anyone over 70 to come and volunteer so that probably stopped for, I would say maybe three or four months, and*

*then I think they found that they needed their volunteers back. So that's when we got to do it." (P45 B)*

These temporary policies were described as well-intentioned – protecting older adults from illness – but contributed to experiences of loss, which were highlighted in theme 1, "*[Volunteering] made me feel so good. I miss contributing to things. I miss accomplishing things" (P42 A)*. Some participants shared how they adapted to continue contributing to their communities. For instance, in the quotation below, a participant explains how they shifted to volunteering in a different capacity. However, this adaptation led to reduced in-person contact, which did not necessarily offer the same level of satisfaction.

*"I didn't really mind that that was the rule [that people aged 65 and over couldn't go back to volunteer in-person]. I could understand it, and now they allow us to deliver because we're driving around in a car and just putting the boxes in front of the person's house or apartment building and waiting for them to come and get it. […] I used to say 'I don't want to just drive around, I want to really be with people' so this is a different experience, you don't really get to talk to people, you just wave at them. I think I prefer one-on-one contact when I'm with people." (P39 A)*

Volunteer work was a prominent example of a meaningful occupation impacted by pandemic restrictions. However, returning to this occupation was challenging for some participants due to age-related barriers. In Figure 3, we situated this theme within occupational possibilities to highlight challenges in the accessibility of this occupation. While alternative options were available in some instances, they didn't always provide the same level of satisfaction, particularly for people whose purpose and meaning associated with participation was strongly tied to social connection.

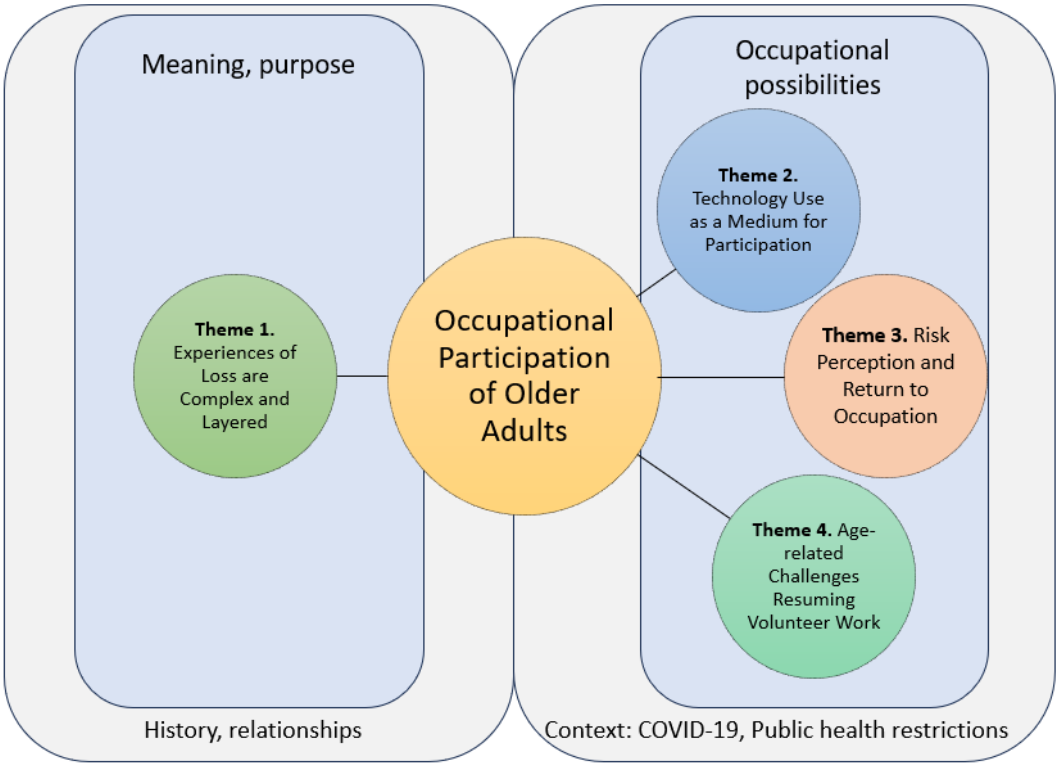


Figure 3

*Thematic Map Using CanMOP (Egan & Restall, 2022) to Contextualize the Occupational Participation of Older adults and Generated Themes*

## Discussion

In this study we aimed to explore and understand the occupational participation of community-dwelling older adults during the COVID-19 pandemic. Our findings indicate older adults had complex and layered experiences of loss during the pandemic due to abrupt changes to daily routines. All participants had some exposure to technology as a medium for participation but there was a spectrum of experiences, from embracing to rejecting it. Upon the easing of public health restrictions, a multitude of factors were

indicated in participants' assessment of risk and return to occupations. Some participants who identified as volunteers encountered temporary age-related challenges in resuming this work.

Experiences of loss and occupational disruption during the pandemic are well documented. In this study, we described changes in mood, motivation, and creativity that coincided with loss. Similar Canadian studies on community-dwelling older adults conducted by Rotenberg et al. (2021) and Vesnaver et al. (2023) described similar changes that accompanied experiences of loss due to pandemic-related disruptions. However, these experiences are not unique to Canadian older adults, as researchers reported similar findings in countries like The Netherlands and Sweden, for example (Fristedt et al., 2022; Verhage et al., 2021). Unique to older adults were experiences of loss in relation to age. Participants in this study indicated perceptions of 'lost time' or years of life where they felt they were in good health and able to participate in occupations they wanted to do, along with disrupted retirement ideals and a lack of spontaneity. Rotenberg et al. (2021) highlight how older adults felt 'more aware' of their age during the pandemic and this was linked to the framing of the older adult demographic as high-risk during this time. Disrupted retirement ideals and spontaneity have been associated with changes to social and leisure activities during the pandemic (Koskinen & Leinonen, 2022; Sweeney & Zorotovich, 2021). This is concerning because these activities are important for fostering health and well-being as people age (United Nations [UN], 2020).

Loss of relatedness or social connection through occupational participation also contributed to feelings of loss for participants in this study. Participation through technology use, for example, was not always satisfactory for people who sought social connection. Similarly, older adults who described adapted volunteer work that was limited to options with minimal social contact did not always find this satisfactory if the purpose was to connect with others. Carlsson et al. (2022), highlight similar findings of older adults in Sweden who experienced a disrupted sense of belonging and loss of social connectivity. Rotenberg et al, (2021) also highlight how the quality of connection through technology was limited but

still met some social needs of older adults. Many people turned to digital technology during the pandemic to meet needs like social connection. For older adults, social connectivity fostered through engagement in activities has been linked to maintaining cognitive function, supporting emotional well-being, and overall quality of life (Kelly et al., 2017; UN, 2020).

When it came to occupational participation through technology use, participants highlighted qualities beyond social connection which influenced whether they viewed it as an adequate alternative to in-person engagement. For example, for people focused on skill-building or developing competence related to music – like playing an instrument or singing with a group – they highlighted limitations with respect to technology use. These findings speak to reasons why older adults may be reluctant to adopt or sustain technology use for participation beyond well-documented challenges like technological accessibility and proficiency. Digital disengagement has been cited as concern for older adults, where they use but later abandon technology use for a variety of reasons (Olphert & Damodaran, 2013). With continued advancements and widespread use of technology, research indicates that older adults in particular may benefit from technology to optimize independence, social participation, and accessibility as they age (Fang et al., 2018; Gellis et al., 2012).

When pandemic restrictions were lifted or reduced, people were faced with decision-making about their risk perceptions and resuming previous in-person occupations. A unique consideration for older adults was the framing of risk and vulnerability which permeated media messages - and conversations with important others, like family and friends- and then influenced their behaviour. Emphasis on vulnerability was also apparent with temporary age-related restrictions limiting accessibility of volunteer work for older adults. Narratives of 'vulnerability' within public COVID-19 discourse have been described as having detrimental effects by reinforcing negative stereotypes of older adults and fueling intergenerational friction based on perceived acceptable age-based behaviour (Ayalon et al., 2021; Fraser et al., 2020; Swift & Chasteen, 2021). Policies emphasizing the protection older adults have been

described a paradox, for example, measures aimed at protecting older adults from COVID-19 illness and mortality have led to increased isolation and a decline in health (Lagacé et al., 2024; Rotenberg et al., 2021). This led to increased concerns about the autonomy of older adults within the pandemic context (Fuente et al., 2023; Rotenberg et al., 2021; Verhage et al., 2021). Viewing the COVID-19 pandemic through a disaster lens, it is essential to consider the ways in which social and colonial determinants of health intersect -and give rise to risk and 'vulnerability'- rather than considering only one factor, like age (O'Sullivan & Phillips, 2019).

The findings from this study move beyond simply indicating that occupational participation was affected for older adults during the COVID-19 pandemic and delve deeper into *how* participation was influenced – for example, through technology use and risk perception. This nuanced exploration, facilitated by CanMOP (Egan & Restall, 2022), was a strength of this study. By understanding how the occupational participation of older adults was shaped by the pandemic, we can better inform and expand the role of OTs when similar events occur in the future. Shedding light on the purpose and meaning associated with occupational participation is essential to illuminate why technology, for example, may or may not be viewed as a satisfactory alternative to in-person engagement. While societal influences, like the framing of older adults in the media or organizational policies can shape occupational possibilities. Abrupt disruptions to daily routines can lead to experiences of loss. Knowing this, OTs can use their skillsets to foster participation and expand occupational possibilities for older adults in this context.

**Future Directions**

Future research should explore how the occupational participation of older adults could be enhanced when future pandemics occur and subsequent public health measures are put in place. Involving older adults as stakeholders in this process may help to ensured a balanced perspective of what they identify as their needs and what assets they have to support their own resilience in this context.

Further, future research should also consider the experiences of OTs who collaborated with older adults during the COVID-19 pandemic to better understand facilitators and barriers to effectively supporting this population. This will be crucial given the escalating frequency and severity of disasters like influenza pandemics worldwide, and the continued rise of population aging.

### Limitations

Several limitations are important to note for this study and how the findings are interpreted. The interview data across the two time-points were not explored using a longitudinal approach as the experiences captured did not reveal substantial differences in occupational participation, and this is likely due to the prolonged duration of the pandemic, surpassing initial expectations. The study sample had a limited representation of individuals over the age of 79 and lacked diversity in terms of race and gender. Further, related to technology use, participants in this study did not highlight challenges with accessibility – despite pointing to challenges for older adults generally – and this is likely indicative of the sociodemographic characteristics of the participants. A greater understanding of people who experienced compounding social vulnerabilities, such as gendered impacts and lower socioeconomic status, may provide further insights into the influence of pandemic-related restrictions, ageism, and other forms of discrimination on occupational participation.

## Conclusion

Occupational participation is essential for the health and well-being of people. In old age, participation in meaningful occupations has been linked to optimizing multi-dimensional aspects of functioning and quality of life. The COVID-19 pandemic led to occupational disruption, and older adults indicated unique experiences and a sense of loss linked to age. Broad social factors like the framing of older adults in the media and age-related restrictions challenged older adults' participation during the pandemic. While technology use created occupational possibilities for some, it was not always adopted

as a satisfactory alternative. The findings from this study underscore the importance of illuminating the meaning and purpose associated with participation in unique activities. The CanMOP was a helpful tool to understand the nuances underlying the participation of older adults in the pandemic context. Occupational therapists who work with older adults may benefit from these findings given the ongoing concerns about the frequency of future influenza pandemics, and other disasters.

**Key Messages**

- The occupational participation of community-dwelling older adults was disrupted during the COVID-19 pandemic and participants described unique experiences linked to age.
- The CanMOP was used as a tool to explore occupational participation of older adults and lead to a nuanced understanding of how meaning and purpose is linked to participation, particularly technology use.
- Social influences, like the framing of old adults as vulnerable through the media and age-related restrictions challenged occupational participation during the pandemic.

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# Chapter 8. Article 3

**Risk and Agency of Older Adults: A Problematization of Disaster Risk Reduction Guiding Documents**

**Authors' names and affiliations**

Samantha A Oostlander MSc(OT), OT Reg. (Ont.)[ab], Kanika Sarwal BHSc[c], Tracey L O'Sullivan PhD[ab]

[a] Interdisciplinary School of Health Sciences, Faculty of Health Sciences, University of Ottawa, Canada

[b] LIFE Research Institute, University of Ottawa, Canada

[c] Public Health Sciences, Faculty of Health, University of Waterloo

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**Abstract**

Language shapes how we view and act towards others and it holds its power through discourse. Discourse within guiding documents in disaster and emergency management is influential for how we view risk and diverse members of society. In disaster contexts, discourse about older adults tends to emphasize deficits and needs, and this is often seen through media and government communications. This can perpetuate ageism and undermine resilience. In disaster risk management, guidance documents aim to support decision- and policy makers to mitigate risk and enhance resilience for all people. We used a problematization approach to identify and examine assumptions about older adults that appear in guiding documents related to disaster and emergency management, relevant to the Canadian context. Specifically, we analyzed 10 guiding documents in disaster and emergency management using the typology of assumptions described by Alvesson and Sandberg (2011) and described tensions between assumptions and the overarching goal to reduce risk and enhance resilience. We found that under the overarching framing of vulnerability, more agency and resilience were afforded to those who fit preconceived notions of 'young', 'able' older adults. We found the protection of older adults in disasters was framed as a moral discourse, which has implications for their inclusion and participation as partners in DRR. Yet, whole-of-society collaboration that includes older adults is recognized as essential to enhance individual- and climate resilience through a systems lens. Moving forward, an asset-based orientation should be incorporated in the creation and review of guidance documents. Viewing older adults in light of their assets can support meaningful inclusion in this context and may have downstream influences on interventions like social protections.

**Keywords:** Disaster risk reduction; Disaster risk management; Disaster risk communication; Vulnerability; Resilience

## Introduction

Language is powerful and shapes how we view and act towards other people. Language holds its power through discourse, described as 'language-in-action' or representations that come together to paint a particular picture of an event (Blommaert, 2005; Burr, 2015). It is through discourse that some groups of people are more likely to be painted in light of their vulnerabilities, needs, or deficits, while others are cast in light of their strengths and assets. Older adults are an example of a population which tends to be framed using negative stereotypes, like the term 'vulnerable', and in Western colonial societies this remains a persistent issue (Ng et al., 2015).

The implications for negative stereotyping are that it leads to poorer health outcomes for older adults and has cascading impacts on public perceptions and broader policy development (Lamont et al., 2015; O'Sullivan & Phillips, 2019). In disaster contexts, an emphasis solely on deficits and needs reinforces perceptions of passivity or weakness, and this can be seen in the media framing of older adults in these context (Oostlander et al., 2021; O'Sullivan & Phillips, 2019). The COVID-19 pandemic is an example of a disaster where vulnerability and losses of older adults were emphasized in public discourse through media and government communications (Lagacé et al., 2024).

Media and government communications are important channels for disaster risk communication – the exchange of information about risk – between government and the public (Fakhruddin et al., 2020). The information disseminated to the public about risk has historically been driven at the government level in a top-down process, and this tends to be the default method for relaying risk communication (Stewart, 2024). Although, other methods for communication that are more engaging, like dialogue and co-creation with communities are increasingly emphasized (Stewart, 2024). Engaging community members as partners in disaster contexts corresponds with a whole-of-society approach where every person and sector of society has a role to play to reduce disaster risk and enhance resilience (Federal Emergency

Management Agency [FEMA], 2011). To advance progress towards this approach, guidance documents in disaster and emergency management are important sources of information to support decision-making (Zimmermann & Keiler, 2015).

Guidance documents (which may include frameworks, guides, or models) collate expert knowledge to address disaster risks for diverse environments and settings, and provide suggested targets, priorities, or recommendations for action (Zimmermann & Keiler, 2015). They are different from planning documents which tend to be targeted to specific adverse events in a local context (Alexander, 2005). Guidance documents contain valuable information at a broader level which can be adapted by policy- and decision-makers to local contexts (Zimmermann & Keiler, 2015). Importantly, these documents do not have a mechanism for compliance, for example, to recommendations for action. Rather they serve to synthesize available information and inform 'best practices' for advancing progress in this field of work (Jillson et al., 2019). Guidance documents are often widely accessible and written in lay language, making them easy to understand for a variety of audiences (Jillson et al., 2019).

The *Sendai Framework for Disaster Risk Reduction, 2015-2030*, is an example of an influential guidance document in disaster and emergency management. Produced by the United Nations Office for Disaster Risk Reduction (UNDRR), this text was the outcome of stakeholder consultations and negotiations, and describes global priorities and strategies for reducing disaster risk and preventing new risk from emerging (UNDRR, 2015). Canada is one of many countries that endorses the *Sendai Framework* and developed a complementary national strategy with tailored priority areas to demonstrate the importance of moving this work forward within its own national context (Public Safety Canada, 2019). The United Nations and World Health Organization are examples of international organizations who are key sources for influential texts, in addition to national governments, the private sector, and humanitarian agencies.

Regardless of no compliance component, these texts carry influence that permeates international, national, and local contexts. Therefore, the lenses with which these documents are written can shape how people view risk and the participation of diverse partners in disaster and emergency management. Older adults are an example of a population labelled as a high-risk in disaster contexts to indicate they are more likely to experience disproportionately negative impacts, compared to the general public (Enarson & Walsh, 2007; O'Sullivan & Phillips, 2019). This label is helpful for professionals in the field to understand where greater allocation of resources may be needed (Enarson & Walsh, 2007). However, narratives of vulnerability which tend to dominate media discourse about older adults during disasters emphasize needs and reliance on services - rather than reflecting their strengths and contributions (Lagacé et al., 2024; Oostlander et al., 2021). This can reinforce perceptions of older adults as dependent on others rather than as active contributors.

The purpose of this study was to identify and examine assumptions about older adults that appear in guiding documents related to disaster and emergency management, relevant to the Canadian context. The central function of disaster risk management (DRM) is to implement strategies and policies that reduce disaster risk, preventing new risk from emerging, and enhance the resilience of all people (UNDRR, 2015). We undertook a problematization approach to understand assumptions underlying risk and agency, giving rise to the framing of older adults as partners in disaster contexts. We propose a path forward for conceptualizing older adults in this context.

## Methods

To examine assumptions made about older adults in disaster and emergency management guidance documents, we used a problematization approach which involves "*identifying and challenging the assumptions underlying existing theories*" (Alvesson & Sandberg, 2011, p.247). We chose problematization over other qualitative document analysis methods to move beyond a descriptive

account of the contents of the documents. Critical discourse analysis through problematization involves questioning taken-for-granted 'truths' which can lead to the development of more interesting and novel research questions for inquiry compared to traditional approaches, such as gap-spotting in the literature (Alvesson & Sandberg, 2011; Sandberg & Alvesson, 2011). The problematization process is inherently iterative, reflexive and creative, and involves the following process: 1) Identify a domain of literature, 2) Identify and articulate assumptions underlying the domain, 3) Evaluate assumptions, 4) Develop alternative assumptions, 5) Relate assumptions to relevant audiences, and 6) Evaluate alternative assumptions (Alvesson & Sandberg, 2011). We followed the general approach used by Egan et al. (2020) as a guide, where they reported on tensions underlying assumptions and intended goals of the documents analyzed. In this study, we articulate tensions underlying assumptions about older adults and the overarching goal within DRM to reduce and prevent disaster risk, and enhance resilience (UNDRR, 2015).

A problematization approach encourages in-depth understanding of key texts rather than broad analysis of all relevant literature on a particular topic (Alvesson & Sandberg, 2011). We used grey literature to source relevant texts; grey literature includes broad resources which are not published in academic journals, but are valuable to policy and decision-makers because they contain relevant policy- and research-related information (Godin et al., 2015). We selected organizations known to produce key texts relevant to older adults in disaster and emergency contexts, and to Canadian discourse. University librarians were consulted and supported the search strategy which included the following terms: Emergency, Disaster, Pandemic, All hazards, Older Adult, Senior, Elderly, Aging, High-risk populations, Framework, Plan, Model.

In November 2023, we searched the United Nations Prevention web, World Health Organization, Canadian Red Cross, National Institute on Ageing, and Government of Canada. We included texts from global sources because of their influential nature in informing what is viewed as 'best practice' or ideal,

because these in turn influence national strategies and approaches. Our search was supplemented by exploring databases, including Google and the Canadian Public Documents Collection for texts.

To determine which documents to include for analysis, we followed guidance described by Alvesson and Sandberg (2011) to include recent, respected, and influential texts for analysis. We included documents written for both national (Canada) and international audiences targeting decision and policy makers. Texts were published by a range of relevant partners to gather diverse perspectives, such as international governing bodies, national government organizations, private sector agencies, and older adult associations. We excluded texts providing practical advice (i.e. pocket guides) as these documents are typically informed by higher-level policy, planning, and framework texts.

The grey literature search and decisions of which documents to include for analysis were subjectively informed by our experiences and knowledge of the field of disaster and emergency management. Authors S.O. and K.S. are graduate students in interdisciplinary health sciences and public health, respectively. The first author (S.O.) is a clinician with experience working with older adults in acute care and is conducting their dissertation research on older adults in disaster contexts. T.O. is a Full Professor whose research program over two decades has focused on disaster resilience among high-risk populations. Our previous work has informed national guidance related to public health approaches to disasters and emergencies.

Our initial aim was to include recent texts for analysis, however grey literature pertaining to disaster and emergency management has historically taken extended time to produce, therefore we included documents published in the last 20 years (2003-2023). A final sample of 10 key texts were included in this study (see Table 6), nine of which were extracted from the five organization specific websites searched, and one from the additional grey literature search. Importantly, not all documents were subjected to the same level of data extraction for analysis. Documents which focused the entire text

toward older adults in disasters and emergencies underwent full extraction using guiding questions as outlined in Table 7. Documents which referenced older adults in limited sections of the text underwent more targeted extraction using the same questions.

Table 6

*Selected Guiding Documents in Disaster and Emergency Management for Analysis*

| Document | Purpose | Scope | Level of Extraction |
|---|---|---|---|
| Government of Canada. (2023). *Canada's National Adaptation Strategy: Building resilient communities and a strong economy.* https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/national-adaptation-strategy.html | Guides action in Canada to better adapt to and prepare for the impacts of climate change | National | Targeted |
| United Nations. (2022). *The UN decade of healthy aging 2021-2030 in a climate-changing world.* https://www.paho.org/en/documents/decade-healthy-ageing-2021-2030-climate-changing-world | Makes connections between climate change, healthy aging, and older people | International | Full |

| | | | |
|---|---|---|---|
| United Nations Office for Disaster Risk Reduction. (2021). *Increasing global resilience to systemic risk: Emerging lessons from the COVID-19 pandemic*. https://www.undrr.org/media/72865/download | Outlines the importance of applying a systemic risk lens to help prevent escalation and reduce the impact of future pandemics | International | Targeted |
| National Seniors Council. (2020). *Seniors well-being in Canada: Building on lessons learned from the COVID-19 pandemic.* https://www.canada.ca/content/dam/canada/employment-social-development/national-seniors-council/programs/publications-reports/Seniors-well-being-COVID19-pandemic-report-EN.pdf | Describes actions the federal government can take to support the health and well-being of seniors | National | Full |
| Canadian Red Cross and National Institute on Ageing. (2020). *Closing the Gaps: Advancing Emergency Preparedness, Response and Recovery for Older Adults*. https://static1.squarespace.com/static/5c2fa7b03917eed9b5a436d8/t/5fd2410d9db3cd0795e984ed/1607614734474/CRC_WhitePaper_EN.pdf | Provides evidence-informed recommendations to improve emergency preparedness, response, and recovery for older adults | National | Full |

| | | | |
|---|---|---|---|
| Pan-Canadian Public Health Network. (2018). *Canadian pandemic influenza preparedness: Planning guidance for the health sector.* https://www.canada.ca/content/dam/phac-aspc/migration/phac-aspc/cpip-pclcpi/assets/pdf/report-rapport-02-2018-eng.pdf | Outlines how jurisdictions will work together to ensure a coordinated and consistent health sector approach to pandemic preparedness and response. Provides planning and guidance for the health sector for pan-Canadian preparedness and response. | National | Targeted |
| United Nations Office for Disaster Risk Reduction. (2015). *Sendai Framework for Disaster Risk Reduction 2015-2030.* https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030 | Global guiding framework focused on reducing disaster risk and promoting resilience | International | Targeted |
| World Health Organization. (2008). *Older people in emergencies: Considerations for action and policy development.* https://extranet.who.int/agefriendlyworld/wp-content/uploads/2014/06/WHO-Older-Persons-in- | Highlights factors that affect older people in emergencies, proposes a strategy to raise awareness about older people in emergencies, and recommends policies and practices to address these considerations | International | Full |

| | | | |
|---|---|---|---|
| Emergencies-Considerations-for-Action-and-Policy-Development-English.pdf | | | |
| Public Health Agency of Canada. (2008). *Building a global framework to address the needs and contributions of older people in emergencies.* https://www.canada.ca/content/dam/phac-aspc/migration/phac-aspc/seniors-aines/alt-formats/pdf/publications/pro/emergency-urgence/global-mondial/global-eng.pdf | Identifies priorities for influencing changes to emergency preparedness policies and practices to better integrate seniors' contributions and needs in crisis situations | National | Full |
| HelpAge International. (2003). *Older people in disasters and humanitarian crises: Guidelines for best practice.* https://www.helpage.org/silo/files/older-people-in-disasters-and-humanitairan-crises-guidelines-for-best-practice.pdf | Aims to help relief agencies meet the special needs of older people in emergencies | International | Full |

Table 7

*Guiding Questions for Data Extraction of the Selected Guiding Disaster and Emergency Management Documents*

| **Guiding Questions for Data Extraction and Analysis** |
| --- |
| • How are older adults described?<br>  o What words are used to refer to older adults?<br>  o What are the boundaries around older adulthood? (I.e. chronological age, qualities ascribed)<br>• How is the aging process understood?<br>  o What words are used to reflect the aging process?<br>• How is the agency of older adults described?<br>  o Are older adults framed as active or passive citizens?<br>• Are the needs of older adults addressed?<br>  o If so, what needs are identified and described?<br>  o How are these needs understood in relation to disasters?<br>  o Who is meant to address these needs?<br>• Are the assets (i.e. contributions, strengths, and resources) of older adults identified and/or discussed?<br>  o If so, what assets are described and how? |

    - How are these assets framed in relation to disasters?
- How is the disaster preparedness of older adults understood?
    - Is there a role for older adults? If so, how are these roles described?
- How are adaptation and coping understood in the context of disaster response and recovery?
    - How are older adults framed in relation to response and recovery efforts?
- How is the resilience of older adults framed?
- What is the relationship between the roles of older adults and that of other partners traditionally involved in disaster contexts?
- If there are recommendations put forward, are they asset-oriented? Deficit-oriented? Both?
    - Do the recommendations consider the agency of older adults in addition to risk?
- If the entire document is not centered around older adults, in what sections are older adults described?
- How is population aging understood in relation to disaster contexts?
    - How are these issues understood both individually and relation to each other?

Two authors (S.O. and K.S.) completed data extraction. The first author (S.O.) used the extracted data to compile a list of assumptions according to five types described by Alvesson & Sandberg (2011). Importantly, these assumptions are not mutually exclusive:

- In-house assumptions which are centered within a particular school of thought;
- Root metaphor assumptions which are broad images of the subject matter that are widely accepted;
- Paradigm assumptions which are ontological, epistemological, and methodological assumptions or 'correct' ways of knowing about the subject matter;
- Ideology or political-, moral-, and gender-related assumptions;
- Field assumptions which are shared views of the subject matter across different schools of thought or disciplines.

The second author (K.S.) reviewed the list of assumptions and provided feedback. In an iterative process the first author returned to the data three times to develop a critical analysis of the assumptions and identify tensions within the texts. All authors iteratively revised assumptions and tensions until consensus was reached.

## Findings

We identified and examined assumptions made about older adults in guiding documents related to disaster and emergency management, relevant to the Canadian context. We analyzed a sample of 10 texts, 5 of which were produced by international organizations, and the other 5 by organizations within Canada, including the federal government. In the following section, we describe assumptions and tensions within these texts (listed in Table 6). While described in detail here, we provide a summary of the findings in Table 8 for reference.

**In-House Assumptions**

First, we examined texts for in-house assumptions, which are implicit beliefs accepted as unproblematic within a particular school of thought (Alvesson & Sandberg, 2011). Explicitly, older adults are framed as a vulnerable population in disaster contexts. We identified two in-house assumptions stemming from perceived vulnerability, 1) older adults as less resilient because of a lack of capacity to cope and adapt with age-related decline, and 2) older adults as resilient, in spite of vulnerability. These in-house assumptions (which appear contradictory) were often present in the same texts.

Older adults were explicitly framed as vulnerable throughout the analyzed texts; "*older people are commonly accepted as being a vulnerable or potentially vulnerable group" (HelpAge, 2003, p.1).* Vulnerability was attributed to many factors; at an individual level the aging process was associated with greater risk for health conditions and physical breakdown of the body, limited mobility and independence, and less capacity to meet basic needs. Social determinants of health were associated with vulnerability, and this was acknowledged through the increased risk experienced by older women, Indigenous elders, older adults living in rural and remote communities, socially isolated older adults, and those experiencing financial insecurity. Finally, vulnerability was linked to historic and systemic exclusion of older adults in disaster planning, response, and recovery practices, acknowledging the role of systemic exclusion and marginalization in creating vulnerability. *"There is evidence that older people's vulnerability reflects inadequate emergency planning" (WHO, 2008, p.14)*.

Under the umbrella of vulnerability, we identified assumptions made about the capacity and resilience of older adults in disaster contexts. The first assumption stems from definitions of vulnerability used in the texts which indicate a reduced ability to cope and adapt, for example, *"Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt" (Government of Canada, 2023, p.56)*; and "…*ageing refers to a progressive*

*loss of adaptability so that the individual becomes increasingly less capable of coping with life challenges" (WHO, 2008, p.5).* Given the way vulnerability is defined and how resilience is generally understood as a process of adaptation and transformation to support well-being (Folke, 2016), reference to a lack of capacity to cope and adapt to stressors led us to infer that older adults are not resilient -or are less resilient than other age demographics. Essentially vulnerability is primarily linked to advancing years, rather than functional needs.

A second assumption was that despite vulnerability, older adults are active contributors and responders in disaster contexts. *"Older persons are not just victims. They are also responding. They are health workers, carers and among many essential service providers" (UNDRR, 2021, p.20).* When more active framing of older adults was used, there was acknowledgment that older adults are not a homogenous population in terms of capacity or capability. *"There exists a diverse continuum of capacity for older adults, from reduced capacity due to physical and cognitive impairments, […] to active, engaged members of their communities" (Canadian Red Cross & National Institute on Ageing, 2020, p.8)*. Older adults were framed as having more agency in this discourse and this permeated recommendations for the future. For example, strengthening narratives of older adults as change agents and keepers of knowledge.

> *Strengthen the narrative of older people as agents of change, community leaders and influences on climate action, beyond a narrative focused on their needs and vulnerability. Many older people are engaged in climate actions at local, national and global levels, alongside younger people. (UN, 2022, p.7)*

> *Consider older people, particularly indigenous elders, as keepers of knowledge that is vital for climate change actions, ecosystem and biodiversity restoration and management and living healthily and sustainably within planetary boundaries. (UN, 2022, p.7)*

When framing of older adults is oriented towards their contributions (compared to why they are vulnerable), the concept of resilience is also broadened, and framed as something that can be '*strengthened', 'built',* and *'empowered'* in older adulthood. Resilience as a dynamic state and a quality to be fostered appears contradictory to some definitions of vulnerability that link old age to lack of ability to cope and adapt. In some texts we found acknowledgement that vulnerability and resilience are states which co-exist, and adaptation and resilience are possible despite vulnerabilities which may arise with age. *"At the same time, it is important to observe that the older population as a whole is neither helpless nor dependent. Most older people are capable of coping and adapting, despite increasing poor health and frailty as they age" (WHO, 2008, p.3)*.

Despite many factors which contribute to vulnerability in disaster contexts, definitions centered around age-related functional decline situate older adults as passive, with limited capacity for resilience. When contributions are emphasized, a broader spectrum of capacity and capability among older adults is recognized. There are tensions underlying the identified assumptions around reconciling older adults as a population with both needs and assets – as both vulnerable and resilient in disaster contexts. For example, there appears to be both a *push* to recognize older adults as having needs which require special consideration from service providers, as well as a *pull* to acknowledge that older adults do not require special services but rather equitable access to available services.

**Root Metaphor Assumptions**

In our analysis, we looked at root metaphor assumptions, which are widely held images of the subject matter (Alvesson & Sandberg, 2011). Under the umbrella of vulnerability, the overarching root metaphor for older adults in disaster contexts is a progressive loss of capacity and capability with age. However, in the texts there were distinctions made between two intragenerational classifications of older adults. Specifically, we found there were different assumptions made about older adults characterized as

'young old' versus 'old old'. 'Young' older adults were described as people who were chronologically on the younger end of the older adult spectrum; they were framed as active, capable, independent, and able to self-manage preparations for and response to disasters. In contrast, the 'old' older adults were implied as people who fall on the chronologically older end of the spectrum; they were framed as passive, frail, disabled, and dependent on others for care and for managing in a disaster.

> *What is clearly required, however, is a more targeted inclusion of the elderly in all aspects of programme of planning and implementation, with the aim of helping young elderly to be more self-supporting and promoting better community care initiatives for the very old. (WHO, 2008, p.4).*

The distinctions made between these two groups of older adults appear to be linked to both ageism and ableism, namely that 'young' older adults are assumed to have greater capacity to prepare for-, respond to-, and recover from disasters compared to 'old' older adults. The distinction appears to be primarily based on age. This connects to the in-house assumptions we identified, linking advancing age with greater vulnerability and perceptions that this means reduced capacity for resilience.

Repeated calls for the collection and analysis of disaggregated data highlight a tension within the texts, that there is a lack of data to support assumptions distinguishing these two groups of older adults. Collection of disaggregated data is highlighted considering historic social invisibility and subsequent exclusion in disaster and emergency contexts. *"…emergency preparedness data needs to be disaggregated by age and gender to provide a more accurate picture of those who are the most vulnerable, service and programme needs, and the effectiveness of interventions" (PHAC, 2008, p.9).* Developing better understanding of why some older adults experience greater disaster impacts than others coincides with a shift toward acknowledging systemic contributors of vulnerability.

**Paradigm Assumptions**

Next, we looked at paradigmatic assumptions, which refer to 'correct' ways of knowing subject matter, or ontological, epistemological, and methodological assumptions (Alvesson & Sandberg, 2011). The first assumption we identified was to effectively address the disproportionately negative impacts older adults experience in disaster contexts, implications for population aging and climate change must be addressed in relation to each other. This was framed as a path forward for achieving healthy aging, longevity, and a healthy planet. "*Healthy ageing and healthy longevity (9) for most people – now and in the future – will not be possible without a healthy planet" (UN, 2022, p.3)*.

The rise of population aging and climate change were framed as systemic, interconnected issues in the texts analyzed. There was emphasis on using a systems lens given the complexity of these intersecting concerns. Systems thinking is increasingly applied to complex population and public health issues because it places importance on examining multiple interacting components – which are dynamic, non-linear, and create new patterns (Peters, 2014).

> *"Nationally determined contributions", in which countries set the actions they will take in a 5-year cycle to reduce their greenhouse gas emissions to reach the goals of the Paris agreement (33), should include reference to ageing populations, older people and systems to foster healthy ageing. (UN, 2022, p. 6)*

> *Traditional approaches for dealing with conventional risks are not adequate for systemic risks because they have limited capacity to account for the high uncertainty, system complexity, and chaos in the event of unforeseen and unavoidable disruptions. (UNDRR, 2021, p.41)*

The second assumption was centered around *who* should address these interconnected concerns. A whole-of-society approach was recommended across many of the texts, and this included a role for older adults. Engaging older adults in strategies, policies, and programs that impact them was suggested to lead to more effective use of resources, thereby enhancing resilience. Inclusion of older adults situates

them as 'experts', and the people who are best positioned to voice their perspectives on the issues impacting them. Inclusion of older adults was framed as a 'lesson learned' from historic exclusion in this field which led to practices that did not align with the reality of older adults.

> *Older people's visibility and inclusion in times of crisis must be enhanced. Seniors need to be involved as participants in all stages of emergency management and their needs and contributions fully and deliberately incorporated. (PHAC, 2008, p.40)*

> *Lack of consultation with older people also may lead to mistaken assumptions about the assistance they need or want. (WHO, 2008, p.22)*

Underlying tensions identified in the texts point to what meaningful inclusion of older adults may look like. Namely, for meaningful inclusion to occur, stereotypical and negatively held views of aging and older adults must be more explicitly challenged. This includes acknowledging what society can learn from the years of experience, knowledge, skills, and resiliency older adults have acquired over their life course. *"Learn from the resiliency of many seniors during the pandemic by evaluating how and why many seniors were able to remain active and healthy throughout the pandemic. Use and apply these learnings to better prepare for "next time"" (National Seniors Council, 2020, p.15)*. It also requires that ageism, as a pervasive form of discrimination, is addressed and challenged. In the texts analyzed, we found some references to ageism as a form of discrimination that should be addressed, but few accounts of how it connects to disaster impacts.

> *…governments have articulated a new vision for healthy ageing in Canada that values and supports the contribution of older people; celebrates diversity, refutes ageism, and reduces inequities… (Government of Canada, 2008, p.37)*

> *Older people are particularly susceptible to some of the physical and mental health impacts of climate change, such as exposure to extreme heat and other extreme weather events, especially those requiring urgent evacuation […] The role of ageism in these disproportionate impacts of climate change has not been well studied. (UN, 2022, p.8)*

**Ideological Assumptions**

We then examined texts for ideological assumptions, which are political, moral and gender norms about the subject matter (Alvesson & Sandberg, 2011). Within the texts analyzed, the salient ideological assumption was older adults need to be- and are worthy of- being protected in disaster contexts. This assumption has two facets, a) the need for protection, and b) worthiness of protection. The former frames older adults as needing protection, which is tied to presumed vulnerability, *"…the particular vulnerability of older people in the face of emergencies and their need for humanitarian assistance and protection…" (PHAC, 2008, p. 6).*

The assertion is the source of protection is external and comes from more powerful others, inferring older adults cannot adequately protect themselves. However, in another vein, shifting the responsibility for protection to others also acknowledges that wider systems and structures contribute to disproportionate impacts experienced by older adults. Therefore, solutions require the influence of these greater structures to help address and rectify disaster impacts. *"…older people's safety in emergencies depends on more and larger factors than health services. Economic and social marginalization, protection from abuse and exploitation, social welfare and intergenerational support are chronic issues vital to older people's well being" (WHO, 2008, p.3).*

The second facet of this assumption is that older adults are worthy and deserving of protection from others - and societies *should* protect older adults. The responsibility for protection is framed through

moral discourse as a human rights issue; protection then becomes associated with duty and nobility of the others providing protection.

> *The Council believes Canada has a moral and ethical responsibility to ensure seniors can optimize their well-being throughout the life course, even during a pandemic. We believe we can achieve this by adopting a human rights framework that enshrines the rights of older persons to a high quality of life. (National Seniors' Council, 2020, p.8)*

Protection of older adults in disaster contexts was emphasized in the recommendations section of many of the texts analyzed, but tensions are present around what constitutes protection. We found the boundaries of protection are not well articulated. For example, some texts express protection related to violence (i.e. physical, mental, emotional), *"Older people find they need protection against theft, dispossession, physical and sexual abuse (HelpAge, 2003, p.7)*. Other texts articulate protection in the sense of preserving access to care, support, and services, *"… expand workers' knowledge of obstacles that keep older people from accessing care (disability, reduced mobility, invisibility and exclusion from planning). Such protection and health issues also can be routinely addressed in field-level planning and coordination…" (WHO, 2008, p.25).* Finally, protection is also used as a blanket statement related to climate change and disaster impacts generally in other texts. *"Older people must be protected from climate-related threats" (UN, 2022, p.3).* Missing from this discourse were details related to when, how, and who decides that protections should or should not be put in place; essentially triggers for protection are largely absent.

The implications for using 'protection' loosely are – framed as a recommendation – it has the potential to infringe on the autonomy and self-determination of older adults. Protection as an intervention may fail to recognize the diverse spectrum of capabilities and assets older adults possess, and how they can, and do contribute to managing risk for themselves and their communities. Aligning the vulnerability of older adults with the assets they contribute was framed in one text as a "*a double*

*protection dilemma" (PHAC, 2008, p.40)* indicating lack of clarity around how to navigate protection as an intervention. In the analyzed texts, restrictions emphasized for older adults during the COVID-19 pandemic were framed as an example of this dilemma; lack of protection may fail to support optimal health and well-being, but measures that are overly restrictive can infringe on autonomy to self-manage.

**Field Assumptions**

Finally, we indicate below field assumptions which are broad beliefs that may be held both within and across schools of thought, disciplines, and paradigms (Alvesson & Sandberg, 2011). The overarching field assumption is that older adulthood is synonymous with vulnerability. In Western colonial societies, negative stereotypes such as the label *'vulnerable'* directed towards older adults are a persistent problem contributing to systemic ageism (Braithwaite, 2002; Ng et al., 2015). Negative perceptions of older adults can lead to experiences of social invisibility and exclusion (Menezes et al., 2023). This is a concern because the rise of population aging, coupled with more severe and frequent disasters stemming from climate change, poses a threat to human health and sustainable development worldwide (Intergovernmental Panel on Climate Change [IPCC], 2023). Ageism as a form of social exclusion can undermine efforts to mitigate risk and enhance resilience for older adults (D'cruz & Banerjee, 2020; Swift et al., 2017).

We provide a summary of the assumptions and tensions in Table 8 for reference.

Table 8

*Assumptions and Tensions Underlying the Domain of Literature Analyzed*

| **Types of Assumptions** (Alvesson & Sandberg, 2011) | **Assumptions Found in Our Analysis** | **Tensions Noted** |
|---|---|---|
| **In-house**: Assumptions about older adults accepted as unproblematic within disaster and emergency management | • Older adults as less resilient because of lack of capacity to cope and adapt with age-related decline<br>• Older adults as resilient despite vulnerability | • Reconciling older adults as having needs and assets, and as both vulnerable and resilient |
| **Root metaphor**: Broad images of older adults that are widely accepted | • Loss of capacity and capability with age is linked to intragenerational categories of older adults, 'young' older adults versus 'old' older adults | • Lack of disaggregated data by age to provide a clearer indication of risk |
| **Paradigm**: Ontological, epistemological, and methodological assumptions; | • Population aging and climate change should be addressed in relation to each other<br>• In the context of a whole-of-society approach, older adults should be engaged in | • Meaningful inclusion of older adults requires explicit challenging of stereotypical and negatively held views of aging and older adults |

| | | |
|---|---|---|
| "correct" ways of knowing about the role of older adults in disasters | strategies, policies, and programs that impact them | |
| **Ideological**: Political, moral, and gender related assumptions about older adults in disasters | • Older adults need to be- and are worthy of- being protected in disaster contexts | • The boundaries of protection are not well articulated |
| **Field**: Broad beliefs about older adults which may be held both within and across schools of thought, disciplines, and paradigms | • Older adulthood is synonymous with vulnerability | • Emphasis on the vulnerability of older adults contributes to ageism and can undermine efforts to reduce disaster risk and enhance resilience |

## Discussion

In this study we identified and examined assumptions about older adults in relation to their risk and agency in disaster and emergency management guiding documents, relevant to the Canadian context. Our findings have implications for governments, policy-makers, and humanitarian organizations responsible for both upstream prevention and planning, and service provision when disasters and emergencies occur.

In the documents we analyzed, older adults are framed explicitly under an umbrella of vulnerability which assumes an inherent decline in a person's ability to prepare for-, respond to-, and recover from disasters, as they age. 'Young' older adults were afforded more agency in this context than 'old' older adults, and this has implications for how resilience is viewed. While these categories superficially appear to be based on chronological age, they are tied to a perceived decline in capability and capacity that comes with age. Importantly, these categories do not appear to consider the multi-dimensional aspects of both resilience and vulnerability, such as the physical, cognitive, emotional, and spiritual self in addition to environmental and systemic factors which influence these states. Gilleard and Higgs (2010) discussed categorization of 'young' and 'old' older adults in relation to the third and fourth age, where the former is marked by a reluctance to identify as 'old' or 'aged' and the latter as marked by the stripping of social and cultural capital in the forms of agency, autonomy, choice, and pleasure. The third age culture is praised, while people in the fourth age are discredited (Lagacé & Firzly, 2017).

As partners in disaster contexts, older adults are framed as vulnerable and requiring protection, yet they are also active contributors and are resilient, despite vulnerabilities. The assumptions and tensions we identified evoked questions, such as:

- How do we know when to support the self-management of older adults to enable capacity building and foster resilience?

- What does meaningful participation of older adults look like in disaster contexts?
- What constitutes protection of older adults in a disaster context? How do we know when to activate triggers for the protection of older adults? And what are those triggers?
- How can the relational autonomy and self-determination of older adults be supported in disaster contexts?

Social protections are important mechanisms to support the health and well-being of people, for example, through reducing poverty and food insecurity and promoting social capital (Bonilla García & Gruat, 2003). In disaster contexts, social protections can support the recovery and resilience of communities (Bonilla García & Gruat, 2003). The COVID-19 pandemic sparked public debate over the risks and benefits of prolonged social protections on economic and financial health of communities and countries (Gerard et al., 2020). For older adults in particular, protective measures were framed as well-intentioned – coming from a place of compassion and concern – but also led to extreme social isolation and human rights concerns (D'cruz & Banerjee, 2020; Derrer-Merk et al., 2022). In disaster contexts, social tensions – coupled with an emphasis on the vulnerabilities of older adults – can make age-related stereotyping and ageism appear acceptable on the basis of compassion (Lagacé et al., 2024).

When the heterogeneity of a population is not acknowledged and, is instead painted with broad brushstrokes like 'vulnerable', it paves the way for the implementation of controlling behaviours which can coincide with a loss of agency and autonomy (Lagacé et al., 2024). From our findings, the protection of older adults was framed within a morale discourse, something that *ought* to be done *to* older adults by more powerful others. Morale judgements can be a powerful tool to achieve desired behaviour (Rosati, 2020). In the context of the COVID-19 pandemic, understanding moral motivations for compliance (or non-compliance) with public health measures can inform future planning (Chan, 2021). Morale discourse related to the protection of older adults is evident in scholarly literature, where mitigating unintended

consequences of the pandemic is framed as a 'duty' or sign of respect towards this population (Voinea et al., 2022).

In this study we noted how protection and self-management in disaster contexts were framed as a dichotomy. Self-management is a concept which often refers to the responsibility of individuals to engage in health-promoting behaviours (Lorig & Holman, 2003). This term is commonly used in health care and public health in relation to health education and promotion to foster the management of chronic disease (Lorig & Holman, 2003). Self-management within the field of DRR is not well-described but has been linked to concepts like resilience (Jon & Purcell, 2018). Lorig and Holman (2003) suggest five core self-management skills such as, problem-solving, decision-making, use of resources, relationship between an individual and care provider, and taking action. These skills have relevance for people to engage in health-promoting behaviours in disaster contexts as well. For example, where people integrate information from disaster and emergency management professionals, care providers, and other relevant professionals to make decisions and take action to prepare for-, respond to-, and recover from disasters.

The challenge with a focus on self-management is that it is rooted in a deficit lens where the focus is on the accountability of individuals to fix problems. Accountability solely at the individual level fails to acknowledge systemic drivers of exclusion, and has the potential to lead to lifestyle drift, whereby the responsibility for addressing complex social issues shifts from an institutional to individual level and simplistic behavioural interventions are emphasized (Carey et al., 2017). In one of our previous studies, sole emphasis on promotion of 72-hour emergency readiness kits (supplies that allow people to sustain themselves for the first 72 hours after an event) was used as an example of lifestyle drift for high-risk populations, because it fails to consider systemic inequities (Bournival et al., 2022). Yet, too much power in the hands of others has the potential to strip autonomy from older adults and overemphasize the role of social protections. There is a delicate balance between protection and empowering self-management.

Integrating the perspectives of older adults through inclusive engagement can help identify where this balance lies.

From our analysis, we also identified some assumptions which present progressive views. For example, population aging and climate change framed as interconnected, systemic areas of concern. Climate change is altering our planet through changes to air and water quality, degrading biodiversity, and more frequent and severe disasters (IPCC, 2023). All these changes have further consequences for disease burden which tends to increase with age (IPCC, 2023; Whitmee et al., 2015). The interconnected nature of these concerns implies a need for complex, systems level solutions which include multi-sectoral and transdisciplinary collaboration.

Emphasis on systems thinking and transdisciplinary are not new in population and public health. In the field of disaster and emergency management there is greater emphasis towards participatory, whole-of-society collaboration (FEMA, 2011; Leischow et al., 2008; Olson et al., 2020). From our findings, we identified an assumption that the inclusion of older adults will lead to more culturally relevant policies and practices to support their resilience, as well as climate resilience. This represents a progressive assumption because it acknowledges the need for interconnectivity and inclusivity. Inclusion of older adults aligns with the *'nothing about me without me'* principle which emphasizes the importance of including the perspectives of diverse peoples – particularly people who have historically been excluded – in the creation of policies and practices that directly impact them (Delbanco et al., 2001). What is less clear is how professionals in this field will meaningfully engage older adults, and other partners, moving forward.

**A Path Forward: Taking an Asset-Based Approach to the Creation and Review of Guidance Documents**

It is essential to challenge assumptions about active participation of older adults being limited to those who fit preconceived notions of younger, ableist aging, if progress is to be made towards a whole-

of-society approach. This may help to diversify what it means for older adults to be prepared for-, respond to-, and recover from disasters. It may also help to shift the focus from participation versus protection to, instead, fostering autonomy and self-determination of older adults.

We argue that application of an asset lens to the creation and review of guidance documents can help to paint a cohesive picture of older adults in light of their strengths, resources, and life experiences, in addition to needs. Asset-based approaches align with a push to drive change from co-leadership with communities (Garven, McLean, & Pattoni, 2016; Morgan & Ziglio, 2007). The global COVID-19 pandemic is highlighted as an opportunity to further promote an asset orientation to advocate for stronger engagement of older adults and build intergenerational solidarity, which are essential for challenging ageism (Swinford et al., 2020). This is essential, because so long as persistent and negative views about aging and older adults go unchallenged, meaningful participation will remain limited (Harbison, 2015). This will lead to the continued exclusion of older adults, and in a cyclical nature perpetuate negative stereotyping and perceived vulnerability.

For inclusive engagement to be meaningful, awareness of underlying power relations must be acknowledged and structural barriers to inclusion must be challenged (Hall et al., 2019; Hore et al., 2020). In relation to older adults this includes bringing greater awareness to the pervasive nature of ageism and how it can undermine inclusion and resilience (D'cruz & Banerjee, 2020; Swift et al., 2017). A helpful first step is to explicitly link ageism as a contributor to vulnerability and draw connections to the experiences of older adults in disaster contexts, within these documents.

Inclusive engagement activities require political will, investment, and power sharing (Bournival et al., 2022; Hore et al., 2020). Co-leadership with communities, through citizen science – the participation of non-specialists in the development of knowledge – for example, is increasingly recognized as essential for disaster risk reduction (Hicks et al., 2019). Citizen engagement has the potential to improve disaster

risk communication and disaster resilience by harnessing multidimensional understandings of risk (Hicks et al., 2019). Equitable partnerships between community members, like older adults, and professionals in field of disaster in emergency management are essential for fostering participation and empowerment (Garven, McLean, & Pattoni, 2016). This should extend beyond collection and analysis of data, to include participation in the creation and review of guidance documents in this field.

One challenge with incorporating an asset-based approach is traditional 'predict and prevent' approach within disaster and emergency management (O'Sullivan et al., 2014; Tyler & Moench, 2012). For example, professionals in this field may wonder how needs would be identified if assets became the focus. Yet, research indicates that discussions focused on capabilities leads to identification of both assets and needs, rather than needs alone (O'Sullivan et al., 2014). This has the potential to go beyond acknowledging heterogeneity to also consider how older adults can play a role in developing complex solutions.

Further challenges to adopt an asset orientation and foster inclusive engagement of older adults include insufficient resources and knowledge gaps between academia and practice (Oostlander et al., 2020). For example, the skillset of disaster and emergency management professionals tends to be oriented to disseminating information to the public, rather than facilitating community participation (Stewart, 2024). Lack of know-how and resources to support fruitful community participation is a concern because limited consultation and inadequate follow through can damage relationships between government and community (Bournival et al., 2022). Finally, there are limited evaluation measures for disaster risk communication strategies, and this may act as a barrier to documenting whether an asset-based approach supports resilience (Stewart, 2024).

**Limitations and Future Directions**

We included 10 documents for our analysis; the texts were limited to grey literature and were primarily relevant to the Canadian context. Our selection of documents has implications for the interpretation and generalizability of findings. Further, texts included were oriented to Western knowledge systems and organizations. Future research could examine documents from Indigenous sources to consider how risk and agency may be framed from other cultural perspectives. Future research could also explore how applying an asset-based lens to the creation and review of guidance documents helps to shape discourse about older adults in disaster contexts. Further, it would be interesting to see how participatory approaches which engage older adults in the process for developing these texts shapes interventions like social protections and self-management in disaster contexts.

## Conclusion

The lens with which guidance documents in disaster and emergency management are written has implications for how we view and treat diverse members of our society. Older adults tend to be framed in light of needs, rather than assets and contributions. A whole-of-society approach to reduce disaster risk and support the resilience of older adults should include meaningful participation of older adults themselves. However, this is likely hindered by intersecting ageism and ableism, which affords more agency to younger and able-bodied groups of older adults. To avoid discourse that perpetuates ageism and undermines resilience, an asset-based orientation should be incorporated in the creation and review these texts. Viewing older adults in light of their assets can help to support meaningful inclusion in this context and support downstream interventions, like social protections. Long-standing challenges, such as investment, know-how, and lack of evaluation methods represent practical challenges to moving this work forward. However, co-leadership with communities is an upstream investment that can further progress a whole-of-society approach to reduce disaster risk and enhance resilience for older adults. This is essential given that disasters are increasing in frequency and severity due to climate change and older

adults are the fastest growing demographic globally. Inclusive engagement of older adults should be viewed as an essential investment to for DRR moving forward.

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# Chapter 9. Discussion

Through my dissertation research, I aimed to explore how resilience can be supported for older adults in disaster contexts. Within the field of emergency and disaster management, the focus on older adults has shifted from exclusion and invisibility, to an emphasis on addressing vulnerabilities and needs (Gibson & Hayunga, 2006; Phraknoi et al., 2023). The problem with focusing on needs alone is that priorities are then centered on withstanding disruption to maintain or return to baseline function, rather than adapting and transforming to 'build back better' (Morgan & Ziglio, 2007; UNDRR, 2015). Disaster resilience requires whole-of-society collaboration, and this is indicated as a priority area in the *Canadian Emergency Management Strategy* (Public Safety Canada, 2019). There is a vested interest in supporting the resilience of older adults because they rely on health and social services to support wellness as they age, and they are the fastest growing demographic globally, which will increase the demand on these systems (WHO, 2022).

I begin this chapter by briefly summarizing the main findings from the three articles comprising my dissertation research, answering my overarching research question, and presenting a conceptual model to integrate findings. I then discuss these findings in relation to relevant literature and selected theories underpinning this research. A recommendations section follows, and I conclude with strengths, limitations, and suggested directions for future research.

## Summary of Main Findings

In Study 1, we described assets across socio-ecological levels that supported the resilience of older adults during the pandemic, and documented how older adults used their assets to adapt in this context. The assets we identified are displayed in an asset map (Figure 1). While we focused on what participants identified as assets to support their own resilience, a salient finding was their desire to contribute to their communities. In our findings we highlight how age-related policies restricted older adults from

contributing to their communities. Self- and societal perceptions of vulnerability and older adulthood influenced risk perception and occupational participation in this context. The meaning associated with loss during this time was complex, for example loss of relatedness through participation and disrupted retirement ideals. While all people were restricted during the COVID-19 pandemic, scholars revealed ways in which ageist attitudes and stereotypes towards older adults permeated public discourse and policies during this time, which added complexity to their experiences (Ayalon et al., 2021; Lagacé et al., 2024; Levy et al., 2022).

Much of the focus on older adults has centered on losses, and critiques highlight an overemphasis on vulnerability in the pandemic context (Lagacé et al., 2024). Specifically, over-simplication of age as a risk factor for COVID-19 intensified ageism in public discourse and heightened intergenerational tensions, which cast older adults as burdens on society (Ayalon et al., 2021; Levy et al., 2022). Findings from Study 1, Article 1 add to the growing body of knowledge about the COVID-19 pandemic with an emphasis on the assets of older adults for resilience. Other studies conducted during the pandemic with older adults identified similar assets, like creating a sense of structure, having a positive mindset, using technology to stay connected to others, and time for reflection (Fuller & Huseth-Zosel, 2020; Garnett et al., 2023). These assets likely have utility across all disaster phases (prevention, preparedness, response, and recovery) but opportunities must be present for older adults to put them into action. This can influence not only their individual resilience, but also that of their communities.

I also make connections between findings from Study 1, Article 2 and OTs who support older adults. Occupational therapists are uniquely positioned to identify and understand how occupational participation is disrupted in disaster contexts, and explore opportunities for adaptation and coping with older adults. Macro and meso level factors are taken into consideration by OTs, for example, discrimination – like ageism – and subsequent emphasis on the importance of public health restrictions for older adults in the community. By recognizing the underlying meaning and purpose associated with participation and

contextual influences, OTs can help to expand occupational possibilities in disasters context (Egan & Restall, 2022).

Beyond an individual level, OTs have an important role to play to foster DRR for collectives. One avenue in which this could occur is through collaboration with public health agencies. Public health is primarily concerned with health promotion and disease prevention. However, Moll et al. (2013) advocate for the value of merging an occupational perspective with public health to advance the understanding that engagement supports health and well-being. An occupational perspective in public health, situated within disaster contexts, may create channels through which OTs can become further involved in DRR efforts. This aligns with a growing awareness that OTs can make important contributions to help support the sustainability of health systems, for example, by keeping people out of hospital (Craik et al., 2024). In their role they can support both climate-resilient health systems, and the resilience of their individual patients (CDC, 2019; Berry et al., 2022).

In Study 2, we broadened our focus beyond the COVID-19 pandemic to further explore discourse surrounding older adults as partners in disaster contexts at the community level. Through a problematization approach, we documented assumptions about older adults and corresponding tensions related to DRR. Generally, in the analyzed texts we noted there is recognition that older adults have assets and make valuable contributions to their communities. The asset map we created in Study 1 was helpful to understand how the strengths of older adults were framed across these documents. However, despite an awareness of the (potential) contributions older adults can make, there were tensions in understanding how to foster both participation and protection in disaster contexts. To move this work forward, we discussed how including older adults in- and using an asset orientation for the creation and review of guidance documents is essential, in addition to addressing ageism and language that undermines resilience. Findings from Study 2 represent a timely contribution to the literature given that many organizations will look to update their planning and preparedness documentation post-COVID-19, and

reconsider how to support multi-level population resilience (Ontario Agency for Health Protection and Promotion, 2022).

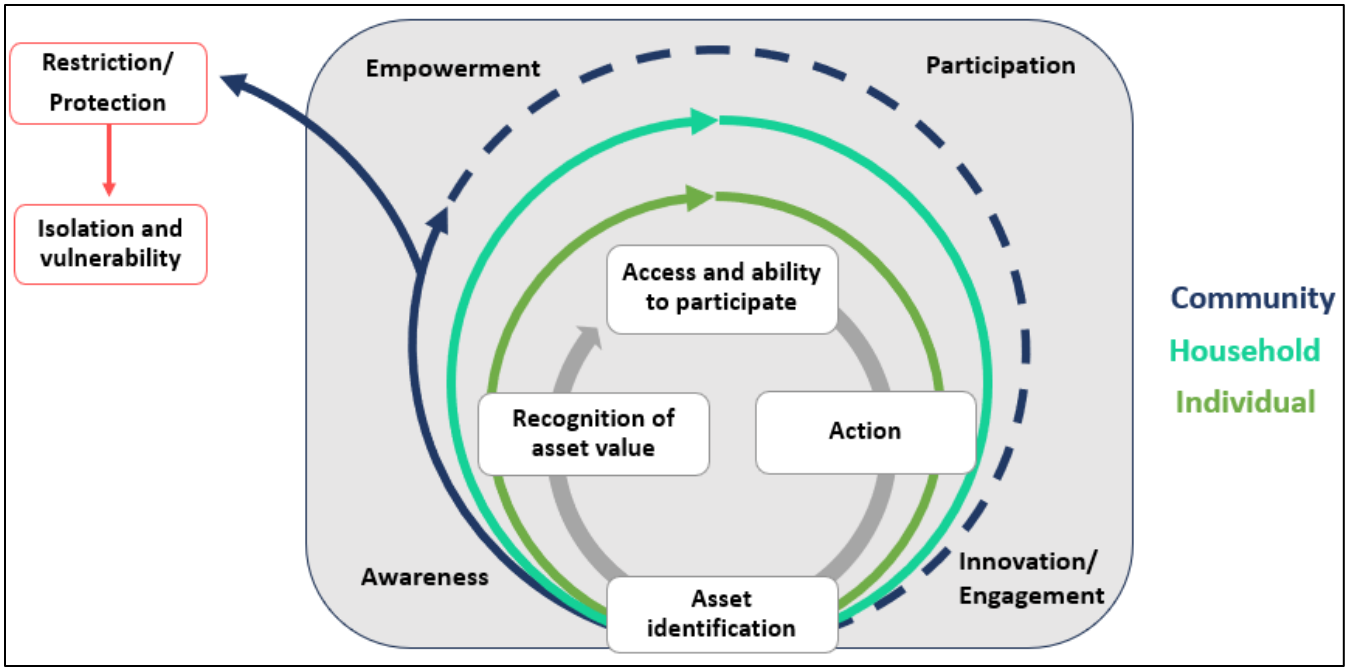
Integrating findings from all three articles, I expanded my understanding of the process for asset literacy of older adults in disaster contexts. Asset literacy refers to individual and collective awareness of- and the capacity to use assets to enhance resilience; through an awareness of assets, people are empowered to participate and engage in strategies to support themselves (O'Sullivan et al., 2014, 2018). In Study 1, we documented the process for asset literacy primarily at the individual and household level to support participants' resilience. Our research aligns with other studies of older adults' resilience during the COVID-19 pandemic, which acknowledges that – at an individual level – older adults adapted and were resilient in spite of the restrictions and heightened ageism (Garnett et al., 2023; Igarashi et al., 2021). However, work can be done at the community level to enhance collective asset literacy related to older adults and enhance participation.

Study 2 provides contextual information for why the participation of older adults may have been disrupted at the community level. Namely, that protection rather than participation appears to be favoured for this population, particularly for older adults of advanced age and who may experience a functional decline in capability and capacity. Protections that restrict older adults may disrupt the process for asset literacy and resilience. Restriction -framed as a way of protecting older adults- situates them as passive and dependent rather than active partners in DRR. A downstream implication for restriction is social isolation, which is a known contributor to vulnerability (Howard et al., 2018). In this way, it is possible that the perceived societal need to protect older adults may perpetuate vulnerability, rather than enhance their resilience.

In Figure 4, we visually display the process for asset literacy of older adults at multiple levels, individual, household, and community. To facilitate asset literacy, awareness, empowerment,

participation, and innovation/engagement are essential levers to enhance resilience and are displayed outside the three concentric rings, but they influence each level (O'Sullivan et al., 2018). At the community level, we use a dotted line to indicate that participants identified- and were aware of- assets they wanted to contribute to their communities, but did not necessarily feel empowered to do so, thereby disrupting the process for asset literacy. Instead, restriction may be favoured to protect older adults in this context, and this may lead to isolation and enhanced vulnerability.

Figure 4 builds on the process for asset literacy described by O'Sullivan et al. (2018) (Appendix D) by displaying how this process may be impacted at different levels for older adults. It can be used by professionals in the field of DRR, older adults themselves, and advocates for older adults to understand mechanisms which may foster or hinder asset literacy. Overall, we found that resilience can be supported for older adults in disaster contexts, however, it is essential to advance efforts at the community level to further expand collective asset literacy and enhance resilience. Collective awareness of- and value recognition for the assets of older adults fosters opportunities for their participation in the community, as valued and active partners in DRR. Conversely, asset awareness and recognition that is limited or only afforded to certain groups of older adults may reinforce ageism and ableism and perpetuate vulnerability. In the section below, I further discuss the importance of striking a balance between participation and protection of older adults in disaster contexts.




*Adapted from O'Sullivan et al. (2018)

Figure 4

*Multi-level Process for Asset Literacy of Community-Dwelling Older Adults in Disaster Contexts*

## Using an Asset-Based Approach to Redress the Balance Between Protectionism and Participation

To further enhance the resilience of older adults, more work needs to be done to create and sustain opportunities for their inclusion and participation in disaster contexts. Social inclusion is a concept which emphasizes that all citizens should be afforded opportunities and resources to participate as full members of society, including those who may be considered high-risk (Taliep, Bulbulia, & Ismail, 2022). This helps to ensure people have agency in decisions that will impact them; this strengthens asset literacy, and further supports disaster resilience (Taliep, Bulbulia, & Ismail, 2022). However, instead of

empowering the participation of older adults as active partners in DRR, protectionism is often favoured, as observed during the COVID-19 pandemic (Derrer-Merk et al., 2022).

Social protections are important mechanisms that enhance the security and well-being of all people; they are defined as "*interventions to (i) assist individuals, households, and communities to better manage risk, and (ii) to provide support to the critically poor"* (Holzmann & Jorgensen, 2001, p. 530). Emphasis on the "*critically poor*" is framed in light of high-risk populations who are less likely to have the resources to adequately manage risks that stem from factors like unemployment, illness, and disasters (Holzmann & Jorgensen, 2001). When disasters occur, protections are used to address disruptions that threaten the well-being of people (Drolet, 2020). High-risk populations, like older adults, are emphasized as people who should have greater access to the benefits that social protections afford – for example, prioritization for COVID-19 vaccination – and this is framed as a way to reduce vulnerability and enhance resilience (Abdoul-Azize & El Gamil, 2021; Drolet, 2020; Holzmann & Jorgensen, 2001).

Protections for disease control have long been critiqued in relation to human rights. Seminal work by Mann et al (1994) highlights that rather than justifying "*limiting the rights of few for the good of many*", public health should strive to achieve a balance between health and human rights objectives, particularly if they are in perceived conflict with each other. In relation to the 1981 HIV/AIDS pandemic, prevention efforts to reduce the spread of HIV progressed from a focus on quarantine and isolation, to strategies to prevent discrimination of persons infected with HIV to better optimize health (Fee & Parry, 2008; Mann et al., 1994). In the context of the COVID-19 pandemic, social protections were framed as a tool to support the resilience of people impacted by restrictions (Abdoul-Azize & El Gamil, 2021). But what happens when protections themselves are restrictive and lead to unintended negative consequences?

Protections aimed at reducing the risk of virus transmission through measures like quarantine and isolation were common – particularly in the earlier waves of the COVID-19 pandemic – and were

emphasized for older adults (D'cruz & Banerjee, 2020; Mykhalovskiy et al., 2020). Coinciding with the COVID-19 pandemic, Ayalon et al (2021) argue there was an outbreak of ageism, which made measures emphasized for older adults appear justifiable under the guise of compassion. From a human rights perspective, critiques centered around the lack of consideration for unintended consequences, like social isolation, and the need to consider long-term impacts and evaluation strategies moving forward (D'cruz & Banerjee, 2020; Drolet, 2020). A suggested strategy is to include community voices in the creation of social protections, like pandemic measures, which are primarily driven at the government level (Holzmann & Jorgensen, 2001; Drolet, 2020). However, to ensure social inclusion is meaningful, structural barriers to participation, like ageism, must also be challenged (Hall et al., 2019)

While protections aim to support the health and well-being of people, I would argue that protection does not need to be synonymous with restriction. For example, isolation stemming from protections is not only detrimental to the health and well-being of people, but is also a known contributor to vulnerability across diverse disaster contexts (Howard et al., 2018). Limiting certain populations, like older adults, from contributing to society seems counterintuitive given that empowering, encouraging, and designing opportunities for participation expands asset literacy and contributes to disaster resilience (O'Sullivan et al., 2018). Moving forward, it is essential to employ an asset-based approach in dialogue about social protection and participation, to further enhance resilience in disaster contexts.

The drivers of adaptive capacity (collaboration, empowerment, and innovation) described in *The EnRiCH Framework* (O'Sullivan et al., 2014) can guide efforts to redress this balance. Taking stalk of older adults' assets in disaster and emergency management is an upstream investment that can then be leveraged when a disaster occurs to support rapid response efforts (McKnight, 2010; O'Sullivan et al., 2014). Partnerships between the Canadian government and Indigenous communities are examples of collaboration, empowerment, and innovation driving change related to the climate crisis. Indigenous Elders play an integral role in their communities to lead conservation efforts using traditional knowledge

of their lands to restore biodiversity, thereby enhancing the resilience of the environment, animals, and humans (Government of Canada, 2023).

'Older environmental activism' is a term used to describe the roles older adults take on in relation to climate change, sustainability, and conservation (Pillemer et al., 2022). Grassroots movements to drive change in this domain increasingly rely on the work of volunteers, and there is growing awareness of older adults as an untapped resource (Chen et al., 2022; Dennis & Stock, 2019). There are many benefits of civic engagement in climate-related work. For older adults themselves, active and purposeful social engagement can support physical, emotional, and spiritual health through connection to nature -and provide satisfaction associated with making a positive contribution (Bushway et al., 2011; Chen et al., 2022; Pillemer et al., 2016). Additionally, intergenerational connection through this type of work can help mitigate ageism towards older adults, particularly if it is based on principles of reciprocity, whereby older adults and younger demographics acknowledge each others' assets in working towards a common goal (Apriceno & Levy, 2023). Intergenerational contact through volunteerism can help enhance societal awareness of older adults as a population that is active and engaged (Bushway et al., 2011).

Barriers to the civic engagement of older adults in this domain include self-perceived lack of knowledge, lack of awareness of opportunities, and opportunities that are not accessible or do not meet the preferences of older adult volunteers (Pillemer et al., 2016). Creating and sustaining opportunities for participation requires organizational-level supports to recognize the assets older adults have, support their learning, and ensure accessible and adaptable opportunities (Tang et al., 2009). Flexibility and value recognition are two examples of strategies organizations can use to enhance the entry of older adults into environmental volunteerism, but further structural and institutional solutions are needed (Tang et al., 2009).

There is a need to draw on diverse partners who may not readily be involved in DRR but who collaborate with, and support older adults. This is important because diverse views can help dismantle dominant constructions of older adults as homogenously vulnerable. For example, there is a growing awareness of the importance of emergency preparedness within the healthcare sector, and health care professionals as trusted sources of information on preparedness for their patients (Glauberman et al., 2023). In a study conducted by Shih et al (2018), they identified communication, connectedness, and individual planning (i.e. for health needs like medication management) as gaps for the disaster preparedness of older adults. These are areas in which OTs already work, and the knowledge they have of community resources can be extended to support disaster preparedness and planning activities for this population (Scaffa et al., 2011). It is possible that many OTs work with their patients to mitigate disaster impacts without realizing it in their everyday roles. More knowledge, leadership, and advocacy in the occupational therapy profession is needed to raise the profile of OTs related to work in this field (Craik et al., 2024).

There is a growing need for professionals outside of traditional DRR roles to contribute their skills to mitigate climate change impacts, and this is particularly valuable for supporting high-risk populations, like older adults (Howard et al., 2018). Collaboration across diverse partners is the essence of a whole-of-society approach, where everyone has a role to play to foster climate resilience (FEMA, 2011; Public Safety Canada, 2019; UNDRR, 2015). Moving forward it is essential to include the voices of older adults, and diverse partners who support them, to strike a more optimal balance between protection and participation in disaster contexts. A community that is supportive and empowers participation of its citizens can motivate people to use their strengths to support themselves, their households, and their communities (O'Sullivan et al., 2018). This is essential to foster disaster resilience.

## Recommendations

In the section below, I provide recommendations (Table 9) aimed at advancing the resilience of older adults in disaster contexts. These recommendations are multi-level, targeting organizations and corresponding professionals who are already readily involved in DRR, in addition to those who may not be as readily involved (like OTs and corresponding occupational therapy organizations, and older adults). These recommendations aim to enhance whole-of-society collaboration to enhance the resilience of older adults in disasters, which has cascading implications for climate resilience. These recommendations align with priority areas in the *Canadian Emergency Management Strategy* (Public Safety Canada, 2019).

Table 9

*Recommendations to Advance the Resilience of Older Adults in Disaster Contexts*

| **Target Audience** | **Recommendations** |
|---|---|
| **Organizations and corresponding professionals readily involved in DRR** | 1. Invest in- and take an asset-based approach to include older adults in DRR activities, policies, and practices to enhance resilience<br>1.1 Challenge ageism, ableism, and other forms of discriminative barriers for older adults<br>1.2 Frame public communications using an asset-orientation and avoid deficit-oriented labels<br>2. Support opportunities for the participation of older adults<br>2.1 Support community organizations that aim to create accessible and inclusive spaces for older adults to participate<br>3. Recognize the value of including diverse partners in DRR activities to enhance resilience by creating opportunities for participation |

| | |
|---|---|
| **Occupational therapy organizations and occupational therapists** | 4. Professional occupational therapy organizations and academic institutions could take a leadership role to:<br>4.1 Develop professional practice resources and education for OTs about their roles as they relate to DRR and climate change.<br>4.2 Develop connections with older adult organizations and advocacy groups to further understand how to best support older adults in disaster contexts<br>5. Occupational Therapists can be encouraged to participate in education and training opportunities to understand how occupational possibilities may be impacted for older adults in disaster contexts |
| **Older adults** | 6. Include older adults in discussions about how to best support their resilience in disaster contexts, while ensuring needed supports are met<br>7. Older adults can continue to advocate for their inclusion and valued contributions in disaster activities to enhance climate resilience |

## Strengths, Limitations, and Areas for Future Research

There are many strengths of this dissertation, but also limitations important to acknowledge and frame the context of how our findings are interpreted. Study 1 included an interdisciplinary team comprised of researchers, trainees, a community member, and a private industry expert who brought diverse experiences to the data collection and analysis processes. Triangulation of research team member interpretations, reflexive journalling, and an audit trail documenting decision-making were used as strategies throughout this study to support the rigour of our findings (Braun & Clarke, 2022). From a social constructionist perspective, quality control (i.e., via trustworthiness) ensures findings are grounded in the data, rather than ensuring they produce an 'accurate' representation of the data (Aguinaldo, 2015).

The large sample size in Study 1 was both a strength and a limitation. Multiple participant perspectives added to the richness of the data about pandemic experiences. From a narrative approach, collecting extensive data helps provide a multi-layered understanding of people's experiences, but is often completed through small sample sizes to ensure sufficient detail is captured (Creswell & Poth, 2018). Despite the large sample size, we believe we achieved sufficient detail of participant experiences by completing two rounds of interviews in which audio-recordings and field notes were collected and analyzed. We did experienced attrition between data collection interviews which may be attributed to pandemic fatigue, loss of contact, and in at least one case, participant death. Further, despite the large sample size there was limited diversity, for example, in terms of race and ethnicity. Finally, the pandemic context necessitated doing interviews via the telephone which can be limiting in terms of lack of visual cues and nonverbal communication. A final limitation, relevant to Study 1b, is that OTs were not included as participants in this research. Gathering the perspectives of OTs who worked with older adults during the pandemic would add valuable insights to this research.

Related to Study 2, we used a problematization approach which emphasizes in-depth analysis of a smaller number of key texts from a domain (Alvesson & Sandberg, 2011). Determining which texts to include as key sources was primarily a subjective process stemming from the experience of the research team. Other research teams might select alternative sources based on their own knowledge and expertise, which would limit replicability of this work.

From my dissertation research, there are multiple areas of consideration for future research. I suggest three areas below.

1. Advancing research related to asset literacy and resilience for older adults
    - There is a growing interest in the field of disaster and emergency management, and public health emergency preparedness, in performance measurement related to resilience (Khan et

al., 2019). Asset literacy is a concept that can help to further shape understanding of adaptive capacity and resilience. Future research could develop and test asset indicators in scales measuring resilience for older adults.

2. Exploring the perspectives of OTs across diverse practice settings in relation to DRR
    - Future research could explore the perspectives of OTs in how they see themselves as partners in DRR. This would help to support education and advocacy efforts which are named as two of the six domains for how OTs can promote the health of individuals and populations, as well as sustainable and resilient health systems (Craik et al., 2024).
3. Solicit the feedback of older adults in the review and creation of guiding documents in DRR, and document the process for inclusion
    - To further progress the development of guiding documents in DRR, future research could include focus groups, or other participatory methods, to solicit feedback from older adults related to language use, and mechanisms for protection and participation. This could also include documenting the process of inclusion of older adults in these activities, rather than focusing on outcomes alone. Documenting the process for participation could then act as a framework for researchers and policy-makers to access and use in their own contexts with older adults.

# Chapter 10. Conclusion

For years, discourse related to DRR has repeatedly highlighted how disasters are increasing in frequency and severity, and this is one of the many impacts stemming from climate change (IPCC, 2023). With growing awareness of disaster complexity, the 21st century has been marked by an emphasis on whole-of-society collaboration where every sector of society, and every person, has a role to play to mitigate disaster risks and impacts, and enhance resilience (FEMA, 2011; Olson et al., 2020; UNDRR, 2015). This dissertation research adds to the literature on disaster resilience among community-dwelling older adults, conceptualized as a high-risk population in DRR. Specifically, the purpose of this research was to understand how the resilience of older adults can be supported in disaster contexts.

Our findings highlight assets older adults used to adapt and support their resilience during the COVID-19 pandemic. Using an OT lens, public health restrictions during the COVID-19 pandemic coupled with discourse centered around vulnerability limited both real and perceived occupational possibilities for older adults, adding layers of complexity to their experiences of loss in this context. Limitations restricting older adults from participation, in favour of protection, undermine efforts to support resilience and can perpetuate vulnerability. Participation and empowerment at the community level are essential for asset literacy and resilience, with mutual benefits for older adults and their communities.

Moving forward, older adults must be included as partners in DRR to provide greater oversight on the balance between participation and protection in disaster contexts. To ensure inclusion of older adults is meaningful, it must be complimented with strategies to mitigate discrimination and perceptions of vulnerability. Involving diverse partners, like OTs, who take a person-centered, strength-based orientation to working with older adults, can help to dismantle dominant constructions of vulnerability. Meaningful roles for older adults and OTs in DRR align with the movement towards a whole-of-society approach to mitigate disaster risk and enhance resilience. Identifying and leveraging the assets of older adults in

disaster contexts is essential given mounting global pressures to address climate change impacts to enhance human health and sustainable development.

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# Appendix A. Ethics Approval

14/04/2023

Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

## CERTIFICAT D'APPROBATION ÉTHIQUE | CERTIFICATE OF ETHICS APPROVAL

| | |
|---|---|
| **Numéro du dossier / Ethics File Number** | H-04-22-7965 |
| **Titre du projet / Project Title** | Exploring the Adaptive Capacity and Resilience of Older Adults' During the COVID-19 Pandemic |
| **Type de projet / Project Type** | Thèse de doctorat / Doctoral thesis |
| **Statut du projet / Project Status** | Renouvelé / Renewed |
| **Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)** | 21/04/2022 |
| **Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)** | 20/04/2024 |

### Équipe de recherche / Research Team

| Chercheur / Researcher | Affiliation | Role |
|---|---|---|
| Samantha OOSTLANDER | École interdisciplinaire des sciences de la santé / Interdisciplinary School of Health Sciences | Chercheur Principal / Principal Investigator |
| Tracey O'SULLIVAN | École interdisciplinaire des sciences de la santé / Interdisciplinary School of Health Sciences | Superviseur / Supervisor |

# Appendix B. Interview Guides for Study 1

## Initial Interview Guide for Interviews Conducted September 2020-May 2021

(denoted as 'T1' in Study 1a and 'A' in Study 1b)

**Semi-Structured Interview Protocol**

- The researcher asks a number of questions, qualitative research has an "open" character.
- The researcher keeps an eye on the time, but is free to talk longer than the guideline indicates.
- The goal is to answer the "why?" behind all individual questions. However, we prefer not to ask the why question literally, because this CAN cause rational and defensive answers.

**Introduction**

- Start informally and reassure before proceeding to the "formal" meeting.
- Explanation of the research:
    - Topics that will be discussed: your daily activities, relationships with others, caregiving, physical and mental health, physical activity, and the news reporting about the virus and your personal view on the entire situation.
- Request permission (vocally on tape) - privacy and anonymity
- Collect background information: place of residence, age, living situation, work, partner. Ask about gender and sexual orientation, race and disability
    - Can you briefly introduce yourself?

**Social Activities**

I would like to start by talking with you about whether and how your daily life changed during the COVID-19 pandemic, when restrictions were introduced. Please

- Can you describe your daily life and the activities /hobbies that you took part in before the pandemic?
    - What activities /things did you do? what activities did you participate in?
        - Outdoors / indoors?
    - What do these activities mean to you? What is important about this?
    - With whom did you do these activities?
- Are there any of these activities you have mentioned that you are currently not able to do anymore because of the pandemic?
    - How do you feel about not being able to do this now?
    - Are there any activities that you are missing (or did miss) during the pandemic restrictions? If so, can you tell us something about it. What do you miss?
    - What would you need to be able to do this activity? [online, via someone else]

- Are there (new) activities / things that you have started to do since the pandemic measures were introduced?
    - Going deeper into the various activities; where / how / with whom does the activity take place?
    - What would you need to continue doing these activities?
    - What is the main motivation for you to do these activities / things?
    - Are there perhaps also activities or things that you are not doing yet but would like to do right now (because of the pandemic or another reason)?
        - How would you like to do this?

**Work Activities**
(If no discussion in the previous section about work)

In addition to your social activities, I would like to ask you about your work – including employment and volunteer activities. Please

- Describe what types of work/volunteer activities you did before the COVID-19 pandemic?
- How have these activities been impacted by the pandemic, if at all?
- What do these activities mean to you? What is important about this?
- With whom did you do these activities?
- Are there (new) work or volunteer activities things that you have started to do since the COVID-19 pandemic started?
    - Going deeper into the various activities; where / how / with whom does the activity take place?
    - What would you need to continue doing these activities?

**Social contacts and connectedness**
Much has changed because of the pandemic measures. That is why I want to talk to you about the influence of the (new) measures on your contact with others.

- How would you describe your contact with others before the COVID-19 pandemic and restrictive measures?
    - How did you maintain this contact? [physical visit, online, telephone, in person]
    - Who were the most important contacts in your daily life?
- How would you describe your contact with others now (since the pandemic)?
    - How do you feel about this? (what do you like about it? What do you like less about it?)
    - How do you maintain this contact? [physical visit, online, telephone]
    - Who are currently the most important people you have contact with in your (daily) life?

    - Has the COVID-19 pandemic changed anything in your relationships with those under your care (if any)? If so, how?

- What is the significance of the contact that you have with others at this moment? What does it mean to you?
    - Who / what is important to you about the contact now?
    - Who / what do you find less important about the contact now?
- What are your main wishes regarding the contact with others at the moment?
    - Would you like to change anything? If so, who / what would you need to change this? What solutions could you think of in this way?

**Your well-being**

We are also curious about what concerns you as a person, and what is important to you.

- What gives you pleasure in life?
- How would you describe yourself as a person?
- Can you tell me what is important to you in your life?
    - Which things are important for you to have a happy / satisfied life? What makes (would make) you a happy / satisfied person?
    - When looking at your own life, how happy / satisfied are you now?
    - Has this changed since the COVID-19 pandemic started?

- What are your thoughts about your own health during the COVID-19 pandemic?
- Positive or negative ideas / thoughts?

- Have you felt worried or scared at any time during the current pandemic?
    - If yes, what have you been scared or worried about?
    - If yes, have you expressed your worries to anyone? To whom?
    - If not: why not?

- Have you reached out for help during the pandemic?
    - If so, to whom and for what purpose?
    - If not: why not?

- Do you feel that the governmental authorities encroached on your rights when responding to the pandemic?

    - If yes, which of the following rights do you feel were compromised?
      __ right to life
      __ right to security
      __ freedom of movement
      __ freedom of religion
      __ right to privacy

    - Please provide more details about the circumstances that lead you to conclude that your rights were compromised.

**Vitality and health**

The pandemic measures can also affect your daily movement and physical health.

- Has the current situation affected your ability to stay physically heathy and fit?
- Has your nutrition and physical fitness changed, if at all?
- Have there been any changes to your patterns of buying groceries or other items you need? If yes, please describe.
- Can you tell me what you have been doing to stay physically healthy / fit since the pandemic started? Has this changed over the time period of the pandemic?
    - Are these new activities?
    - If yes, how did you get into these activities? [word of mouth, tv, internet, own idea, etc.]
        - Where do you carry out these activities?
        - What do you need to carry out the activities?
        - How often do you do this on average per week?
    - What is the main motivation for you to stay fit?
    - If no physical activities: go to next question.
- How do these physical activities differ from your daily exercise / activities before the pandemic?
    - Does the amount of daily exercise match?
    - What would you need to get the same amount of daily exercise indoors?
- Have you noticed a change in your physical health since the pandemic started?

**Perceptions of the communications about COVID-19 / Media**

Finally, I would like to talk a little bit about the COVID-19 pandemic media / government reporting and news.

- Can you tell me how you follow the reports about COVID-19?
    - Media, social media, TV, news, etc.?
- Can you tell me how you personally experience the news about the pandemic?
    - Continue on positive or negative terminology; examples? Certain media channels?
- If we zoom in on the news about COVID-19 and the older population, how do you experience the reports / news?
    - What words come to mind when you think of these reports?
    - How do you think older adults are seen / portrayed in these messages?
        - Addressing the definition of older people as a "vulnerable target group"

**Final positive question:**

Finally, can you tell me the first thing you did when the pandemic restrictions in your area were first lifted? …. If second wave – what is the first thing you will do when the pandemic restrictions are lifted?

**Closing**

1. Do you have any questions or comments for me at the moment?
2. Repeating purpose, anonymity, etc.
3. Thank you very much for your participation and time.
4. Leave contact details if there is anything, additions

**Probes**
I don't quite understand that. Can you please explain that?
Can you please explain that? Explain further?
How does that work / how does that work exactly?
Can you tell more about it there / here?
Can you give an example?
Based on what experiences do you say that?
What do you mean exactly?
Can you describe what you mean?

With the probes it is important to consider the following:
- Expectations from family relationships are sometimes taken for granted and therefore not reported
- Social desirability; also because of shame culture, taboo, afraid of gossip
- Use of simple language

Silence: 5 seconds, take a moment to think about an answer
Repetition of the question.
If there really is no answer, why is this question so difficult? Can't answer?

Back to the question: thank you for sharing this, but I would still go back / to another aspect…
Thanks that is an interesting / useful addition. Not that we have discussed this aspect, I would like to…

## Follow-Up Interview Guide for Interviews Conducted January-August 2022

(denoted as 'T2' in Study 1a and 'B' in Study 1b)

**Introduction**

- Start informally and reacquaint with the participant before proceeding to the questions.
- Explanation of the research protocol – how we have completed the 1st round of interviews and are now doing the follow-up interviews with each participant.
- Review consent form verbally on the recording – and obtain verbal consent before proceeding to the interview questions.

**Demographic information:**

- The first question is to confirm your living situation – has anything changed in your living situation since we last spoke?

**Social Activities**

Last time we spoke you mentioned that you are doing {list} activities on a regular basis.

- Have your activities changed at all?
- Are you still doing them with the same people or on your own?
- Has anything changed in the past 6 months?

- Are there any activities you are currently not able to do anymore because of the pandemic?
    - How do you feel about not being able to do this now?
    - Are there any activities that you are missing (or did miss) during the pandemic restrictions? If so, can you tell us something about it. What do you miss?
    - What would you need to be able to do this activity? [online, via someone else]
- Are there any activities you have started to do since the 3rd wave of the pandemic?
    - How are you feeling about these activities?

**Work Activities**

In the last interview, we spoke about your work or volunteer activities. You mentioned you were doing {specify the type of work}.

- Has anything changed with the type of work you are doing or volunteer activities?

- Are there (new) work or volunteer activities things that you have started to do since the third wave of the pandemic?

**Social contacts and connectedness**

Last time we talked about your social connections and relationships with others.

- How would you describe your contact with others over the past 6 months?
    - How have you been maintaining this contact? [physical visit, online, telephone, in person]

    - Who were the most important contacts in your daily life?
    - How are you feeling about this?
    - Has the COVID-19 pandemic changed anything in your relationships?
- What are your main wishes regarding the contact with others at the moment?
    - Would you like to change anything? If so, who / what would you need to change this? What solutions could you think of in this way?

**Your well-being**

In the last interview we asked about your well-being and whether you are feeling happy or satisfied with your life.

- Are you feeling happy or satisfied now?
- Has your well-being changed over the past 6 months?
- Have you felt worried or scared at any time during the third wave of the pandemic?
    - If yes, what have you been scared or worried about?
    - If yes, have you expressed your worries to anyone? To whom?
    - If not: why not?

- Have you reached out for help during the pandemic?
    - If so, to whom and for what purpose?
    - If not: why not?

- Knowing the different restrictions governmental authorities have implemented over the past year, do you feel your rights have been encroached on with the response to the pandemic?
    - If yes, which of the following rights do you feel were compromised?
      __ right to life
      __ right to security
      __ freedom of movement
      __ freedom of religion
      __ right to privacy

**Vitality and health**

We talked about your health in the previous interview – nutrition, physical activity, how you were buying groceries etc.

- Have there been any changes to your patterns of buying groceries, your nutritional habits, or your physical activity in the past 6 months?
- Have you noticed a change in your physical health since the second or third wave of the pandemic?

**Vaccine**

- Have you received the COVID-19 vaccine? If so, when?
- Which one did you receive?

- How was that experience for you?
- Has anything changed in how you view the pandemic, since you received your vaccine?
- Has your vaccination changed anything you are doing with respect to activities, or interactions with other people?

**Perceptions of the communications about COVID-19 / Media**

In the last interview we asked about your experience of the media surrounding COVID-19.

- Has anything changed for you in how you access information about the pandemic or your patterns of accessing media?
- How do you think older adults have been portrayed in the media recently?

**Pandemic Recovery**

What needs to change?
What do you hope will happen?
What do you expect will happen?

**Final active question:**

- Finally, can you tell me the first thing you will do when the pandemic restrictions are fully lifted in your area?

**Closing**

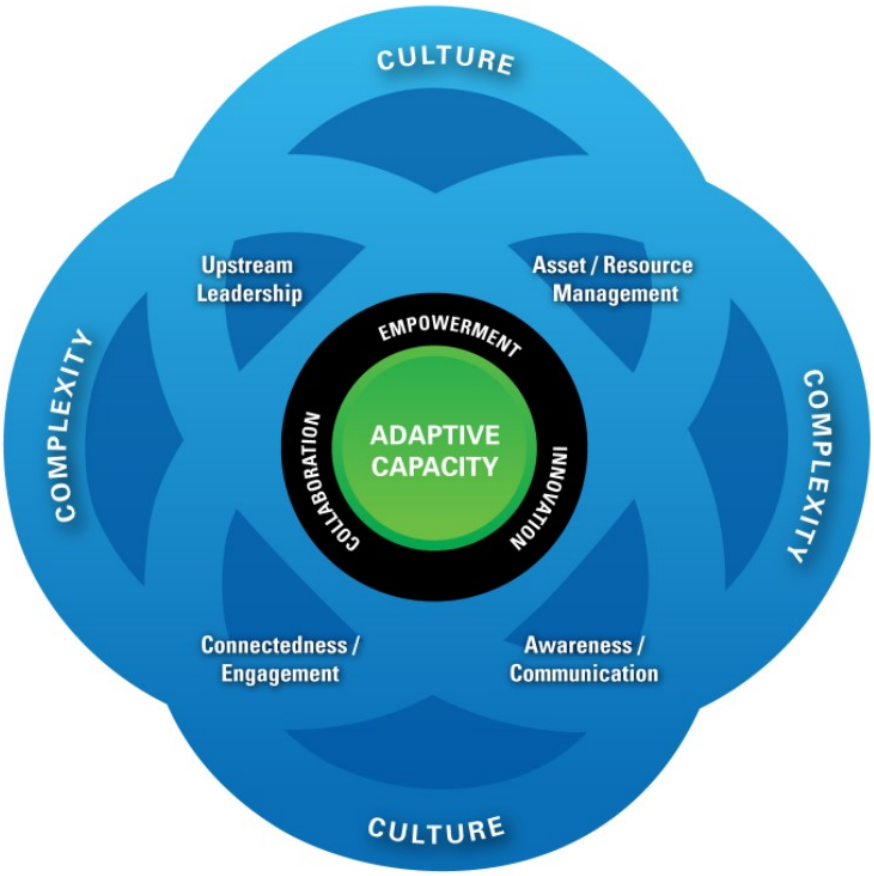
Given how long the pandemic has lasted, with all the waves, our team is interested in interviewing participants one more time after the restrictions have eased.

- Would you mind if I contact you again to invite you to do a third interview in about 4 months?

**Sample Probes**

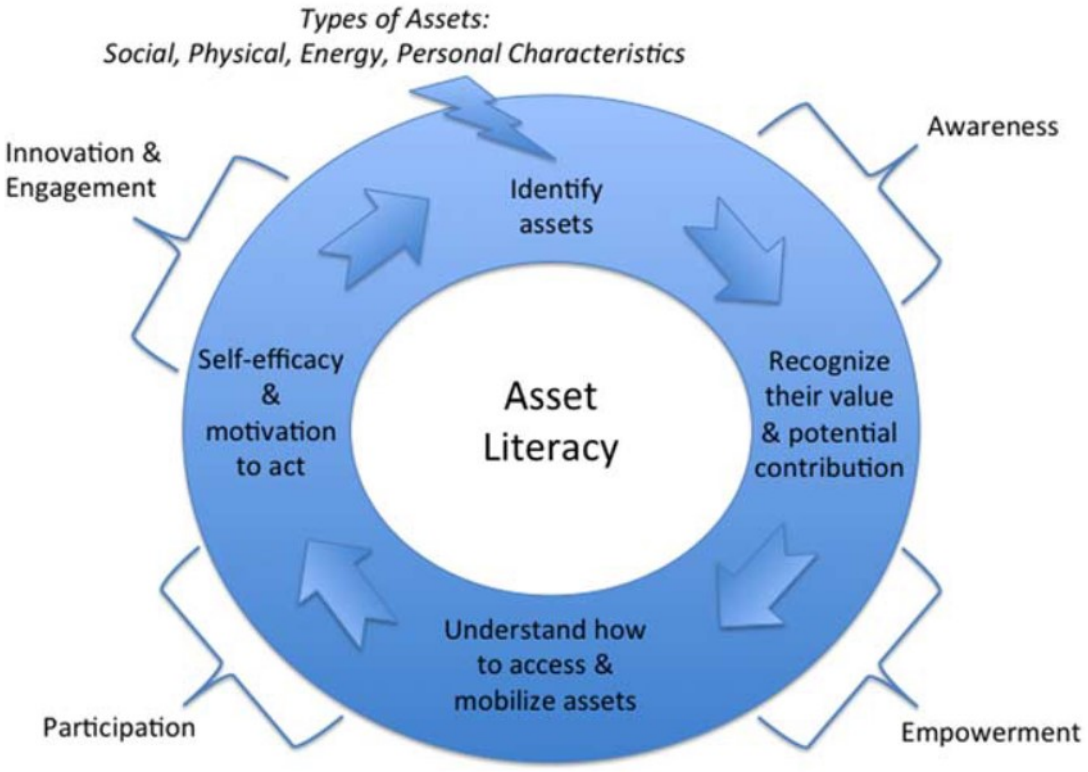
I don't quite understand that. Can you please explain that?
Can you please explain that? Explain further?
How does that work / how does that work exactly?
Can you tell more about it there / here?
Can you give an example?
Based on what experiences do you say that?
What do you mean exactly?
Can you describe what you mean?

# Appendix C. The EnRiCH Community Resilience Framework for High-Risk Populations




The EnRiCH Community Resilience Framework for High-Risk Populations by O'Sullivan, T. L., Kuziemsky, C. E., Corneil, W., Lemyre, L., & Franco, Z. (2014). Copyright [2014] by Tracey O'Sullivan. Reprinted with permission.

# Appendix D. Conceptual Model of Asset Literacy to Support Household Resilience




O'Sullivan, T. L., Fahim, C., & Gagnon, E. (2018). Asset Literacy Following Stroke: Implications for Disaster Resilience. *Disaster medicine and public health preparedness*, 12(3), 312–320. https://doi.org/10.1017/dmp.2017.66