Advancing Accessible Air Travel Environments for Aging Canadians – A Scoping Review

Ben Koskowich[1], Maryam Attef[1], Chantal Trudel[1], Shelley Roberts[2] & Cheryl Dalziel[2]

[1] Carleton University, Canada, [2] National Research Council of Canada

SUMMARY

While there is evidence to suggest that Canadians over the age of 65 are healthier, more active, and more affluent than past generations of older adults, seniors may experience challenges in air travel due to lack of financial resources or health factors related to the natural process of aging. Such factors, coupled with transportation deficits related to Canadian geography and infrastructure may exclude seniors from engaging in communities beyond their own, whether it be for leisure, work, or health services. Carleton University and the National Research Council have developed a 3-year program to investigate this demographic in air travel with the aim of developing a first-of-its-kind air travel design framework, followed by a demonstration/ proof-of-concept project. Here we share early findings from a rapid scoping review of research focused on older adults in air travel to categorize risks, barriers and opportunities identified by previous researchers.

KEYWORDS

Aging, Older Adults, Transportation Design, Air Travel, Barriers

Background

Canada is aging. Access to air travel is therefore increasingly important as older adults face physical, cognitive, and social challenges that make leisure, work or accessing healthcare services beyond their community difficult. For an older adult, concerns about accessibility may influence their use of air travel and these concerns may be reinforced by negative experiences and outcomes based on prior air travel experiences. In 2017, the Canadian Council of Academies identified that older adults may need or prefer to travel more frequently compared to other age groups, but that a lack of inclusive transportation may undermine serving people of all ages. Almost a quarter of Canadians (~ 12M people) are expected to be aged 65 and older by 2051 (Statistics Canada, 2018). As of 2022, the disability rate among older adults was 40% (Statistics Canada, 2023). Air travel can be a taxing experience for anyone, with concerns around delays, cancellations, missed flights, rebooking, managing electronic and paper documents, confusion with airport wayfinding and flight status notifications, security procedures, baggage handling, fatigue, and discomfort. If air travel systems are designed to primarily meet the needs of younger travellers, these concerns may be compounded for older travellers even in the absence of disability. The impact of difficulties in air travel can be particularly severe in Canada due to geography, climatic conditions, and infrastructure constraints related to rail, bus, or ferry. In some northern communities these constraints mean that air travel is the only option whereby older adults may access other communities.

In response, Carleton University and the National Research Council of Canada (NRC) developed a 3-year research program focused on developing a design framework to reduce barriers in the design of air travel environments for older adults. We are gathering and synthesizing 'older adult-centred' air travel requirements through secondary and primary research methods working closely with older travellers, their care partners, and subject matter experts. This work will help us to better understand

service/system-wide requirements and recommendations to better support this demographic which will be illustrated in a framework. Ultimately, a demonstration project will reveal what an implementation of the framework might look like. The first step in developing the framework was a rapid scoping literature review where we address the question: *"What can be learned from the existing scholarly literature on older adults' experience in air travel in terms of risks, barriers, and recommendations?"* In this paper, we present our study design and the results of the review.

Method

Using the Arksey & O'Malley (2011) method for rapid scoping, we conducted a review of air travel studies published within the last decade, selecting this time frame due to the significant operational, infrastructure and technological changes that have occurred in the sector during this period. Requirements for inclusion were that the studies had to: 1) relate to the air travel experiences of older adults; 2) be published in the last 10 years; 3) state a research objective(s), research question(s) and address the question(s); and 4) describe the research methods that had been employed. This process resulted in the selection of 19 articles. The extracted data focused on: 1) risk factors discussed in the literature related to older adults travelling by air (where we categorize 'risk' as 'internal' factors related to the natural process of aging); 2) descriptions of barriers older adults face in air travel and at what stages in the journey (where we categorize 'barriers' as 'external', limiting factors related to the design of the context of air travel); and 3) 'recommendations' researchers suggested to reduce barriers. We used a narrative synthesis approach to illustrate the findings.

To ground the analysis, we drew on two frameworks which we felt could help frame design considerations within the context of aging and disability. Both frameworks put forth a systems approach to analyzing interrelationships between personal characteristics and environmental factors, relationships which may enable or disable an individual's ability to function, thrive, or achieve whatever goal is important to them within a given context. Czaja et al.'s (2019) framework presents an approach to improve our understanding of older adult considerations in design and developing designs for/ with older adults whether it be products, environments, systems, and/or services. The International Classification of Functioning, Disability and Health (ICF) (Centers for Disease Control and Prevention, 2012) outlines three levels impacting the experiences of persons with disabilities: at the level of the body or body part; moving outward to the whole person; and lastly the whole person within the context of their environment. From this we developed an adapted framework (Fig. 1) to help organize the literature on older adults in air travel within the context of disability, accessibility, inclusion, and user experience design (UXD). We then applied the categories on personal characteristics (e.g., demographics, psychographics) and environmental factors (e.g., technology, physical environment) to code data from the literature (Saldaña, 2021).
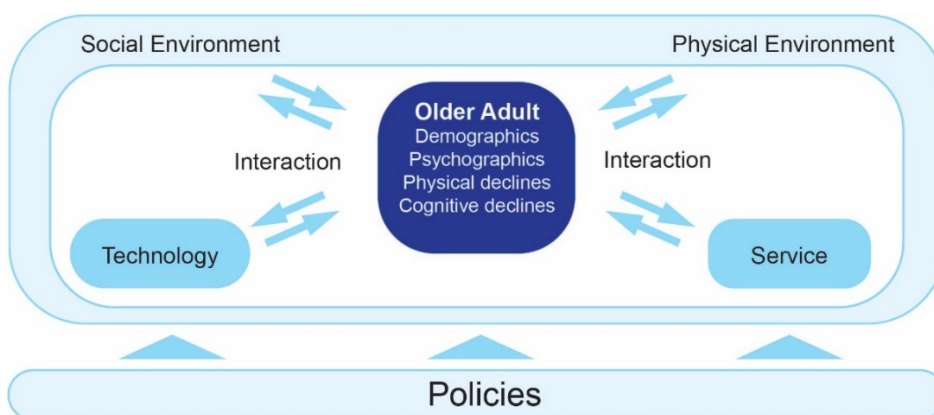

Figure 1: Adapted framework to map the literature review findings.

Findings from the Literature

Researchers discussed a variety of needs, preferences, and risk factors as well as barriers which may undermine the air travel experience of older adults at different travel stages — booking a flight, preflight activities, and on board the aircraft. Risk factors and barriers may interact creating challenges that negatively impact air travel, which present design opportunities for improvement.

Age-related Needs, Preferences and Risk Factors in Air Travel

Researchers discussed demographic risk factors (e.g., chronological age, gender, income, culture), psychographics (e.g., personality, personal opinions, perceptions of oneself, emotions, lifestyle, prior travel experience), age-related physical declines and cognitive declines. The impact of demographic factors on older adults' air travel experiences were broadly discussed in the literature. Chronological age in relation to age-related physical and cognitive declines could affect older adults' travel patterns and preferences (Graham et al., 2019; Chang & Chen 2012; Chang, 2013) with differences noted between older and younger older adult segments (Chang & Chen, 2012). Since women tend to live longer than men, gender coupled with chronological age should be considered (Davison & Ryley, 2013), since this demographic may be at higher risk of experiencing challenges in air travel (Howland et al., 2015). Within the older adult population, frequent flyers were more likely to be younger and male while non- or infrequent flyers were more likely to be older and female (Davison & Ryley, 2013). Level of income impacts an older adult's tendency to travel. Those with higher income, and especially those with income from savings and investments, are more likely to travel by air than older adults who are no longer working and lack this income (Alén, Losada, & Dominguez, 2016; Davison & Ryley, 2013; Chang, 2013). Older adults showed greater levels of price sensitivity to air travel than younger groups, choosing to travel less in response to increased ticket prices (Davison & Ryley, 2013; Chang 2013; Graham et al., 2023). Level of income may also impact an individual's ability to access technology that may support the air travel journey (Bosch & Gharaveis, 2017). One's cultural background may also have a considerable impact on air travel, influencing what older adults are concerned about when travelling and/ or how they interpret or approach service touchpoints or interact in air travel environments (McMullin et al., 2014; Kim et al., 2017).

Psychographics (e.g., personality, personal opinions, perceptions of oneself, emotions, lifestyle, prior travel experience) may influence older adults' travel experiences and the decisions they make along the journey. To avoid excess stress, older adults may choose travel options with the objective of reducing stress levels as much as possible (Graham et al., 2023). Perceptions about one's personal status may influence travel frequency, with positive perceptions of health and economic status being associated with higher travel frequencies (Alén, Losada, & Dominguez, 2016). Conversely, perceptions about external factors may also influence travel related decisions. For example, those with higher levels of concern for the environment may choose to take public transport to the airport rather than their personal vehicle (Graham et al., 2023). However, decision making is not always straightforward, and different perceptions, attitudes or concerns may conflict with one another. Someone may wish to take public transport with the environment in mind but choose to take private transportation to the airport to reduce the cognitive or physical demands of public transport, and greener options may not be suitable for those with mobility impairments (Graham et al., 2023). Lifestyle and life stage may impact an older adult's air travel tendencies. Having previous travel experience may increase their likelihood to travel (Alén, Losada, & Dominguez, 2016). Retirement may contribute to higher levels of time availability to travel (Davison & Ryley, 2013) and reasons for travelling may be more likely for leisure or visiting

friends and family, rather than business (Graham et al., 2023). Loss of a travel companion may cause an individual to travel less, and may be more common later in life (Davison & Ryley, 2013).

Poor physical health or physical decline related to aging may increase an individual's susceptibility to encountering barriers in air travel, which may inhibit their decision to travel (Davison & Ryley, 2013). The physical demands of air travel can lead to fatigue, which in turn, may have a negative impact on decision making and the ability of an individual to handle unforeseen circumstances (McMullin et al., 2014). Age-related cognitive declines, and more severe cognitive conditions such as Alzheimer's disease and dementia can have significant impacts on various facets of the air travel journey (Bosch & Gharaveis, 2017; Sadlon, 2019; McMullin et al., 2014; Liu et al., 2016). For example, cognitive declines may reduce situational awareness and the ability to anticipate what comes next in the journey (McMullin et al., 2014; Liu et al., 2016). Perceptual risk factors related to vision were also discussed in relation to barriers with online booking interfaces as well as wayfinding challenges in airports (Finn & Johnson, 2013; Bosch & Gharaveis, 2017).

Barriers Related to Aging and Air Travel

Researchers discussed a variety of barriers older adults may encounter when travelling by air. The categories which dominated the literature included: 1) technology (e.g., technological hardware, user interfaces); 2) the physical environment (e.g., signage, ambient conditions); and 3) service (e.g., transfer, wait times, queuing, communications).

Technological Barriers and Recommendations

Technological barriers were mostly identified in relation to the digital interfaces involved with booking and airline check-in. Airline reservations may be a particularly challenging part of the door-through-door air travel journey for older segments of the older adult population (Chang & Chen, 2012). When using online travel booking interfaces, older adult users may encounter a variety of accessibility barriers including the inability to resize text, cluttered and confusing interfaces, information overload, and difficulty operating menus (Finn & Johnson, 2013). These barriers may affect people with age-related declines in vision, cognition, and dexterity.

Similarly, airport check-in kiosks may cause problems for older passengers due to problems with user interface design, requiring passengers to immediately seek assistance from a person to resolve an issue (McMullin et al., 2014). Since check-in can be accomplished in different ways, different individuals and groups will have different preferred approaches (McMullin et al, 2014). In these instances, digital interfaces exist as alternatives to other modes. So, encountering technological barriers at these stages could cause older adults to avoid digital interfaces.

Researchers noted that usability problems in air travel interfaces may be improved by avoiding small fonts, allowing text to be resized, minimizing the need for scrolling, minimizing clutter, and indicating the navigation path through the interface, among other changes (Finn & Johnson, 2013). Many of the accessibility barriers identified in the literature at the time of these studies were found to be in violation of widely available web accessibility guidelines (Finn & Johnson, 2013) such as the, more current, WCAG 2.2 Standard (W3C, 2023). In this context, non-compliance to accessibility standards can create barriers for this age group.

Barriers Related to the Physical Environment and Recommendations

For the purposes of this review, the physical environment encompasses attributes and elements of both the natural and built environment that may impact air travel experience. These factors may occur at various levels and scope, with some factors influencing experience far beyond the airport terminal (e.g., the impact of geographical distance) all the way to the personal space surrounding an older passenger (e.g., aircraft seating). Geographical distance from the airport was found to be a

barrier related to traveling to the airport (Graham et al., 2023; Davison & Ryley, 2013; Ozel et al., 2016), with longer distances being associated with lower levels of satisfaction and accessibility during this part of the trip. Developing and supporting master plans that prioritize proximal, accessible regional airports may reduce challenges associated with older adults travelling long distances to airports (Davison & Ryley, 2013).

Airport Environment

The airport terminal is a highly complex environment, where many barriers may arise. Airport environments tend to elicit stress and anxiety among older adults (McMullin et al., 2014), and may stand out as an especially challenging part of the journey for those aged 65 to 74 (Chang & Chen, 2012). For example, crowding in airports can be troublesome for older adults, but its impact may be mediated by one's cultural background (Kim et al., 2017). In a comparison between Australian and Korean passengers, older Australian passengers had relatively larger "personal bubbles" than Koreans, and Australians were more likely to complain if their personal space was infringed upon during their journey (Kim et al., 2017).

Characteristics of the built environment can impact older adults' orientation and ability to find their way through the airport. Monotonous architectural composition and repetitive layouts can make airport terminals confusing and hard to navigate (Bosch & Gharaveis, 2017). Obstructions in corridors or elevators may interrupt sightlines and traffic flows becoming a prominent source of wayfinding challenges (Bosch & Gharaveis, 2017). Sufficiently bright lighting is important for wayfinding and inadequate brightness levels can present additional challenges (Bosch & Gharaveis, 2017). Wayfinding barriers may impact older adults experiencing visual or cognitive declines more than other individuals. Architectural or interior planning strategies focused on developing 'age-informed' designs may reduce barriers that undermine orientation. Such strategies may include creating familiar designs; reducing visual clutter; lowering signage as some older adults may tend to look downward; and leveraging multi-sensory environmental cues where colour, contrast, form, texture, sound and odour are strategically leveraged to assist with orientation (Bosch & Gharaveis, 2017). Technological solutions may also support older travellers find their way, taking many forms such as light beacons, Radio Frequency Identification (RFID) beacons, or adding photo-video based information as an alternative to conventional signage (Bosch & Gharaveis, 2017). However, there is no one-size-fits-all solution for communicating wayfinding information to older adults as different individuals may have different preferences for the types of information they want to see or how it is presented. It may therefore be beneficial to allow for customizability in wayfinding solutions to meet different passenger needs (Bosch & Gharaveis, 2017; Liu et al., 2016).

With regards to physical mobility in airport environments, long walking distances in airports has been identified as a barrier (McMullin et al., 2014). Age has been linked to higher rates of escalator falls, with falls more likely to involve those who are over the age of 65 and women, more than other groups (Howland et al, 2015). Carrying bags onto escalators exacerbates this problem by compromising balance, or occupying hands that could otherwise be holding a railing (Howland et al., 2015). For those whose balance and strength are already compromised by age-related declines, this scenario could lead to a fall and limit one's ability to recover equilibrium (Howland et al., 2015). Changes in airline policies may be a latent cause of this problem, since in some cases, increases in airline luggage fees and the elimination of curbside baggage handling services for security reasons has motivated more passengers to carry their bags through the airport (Howland et al., 2015). Bollards to block people from bringing baggage on escalators, planning for elevator use to accommodate such scenarios, diverting people to elevators, as well as public information campaigns on the risks of escalator falls may help mitigate this barrier (Howland et al., 2015).

Cabin Environment

Ambient conditions in the aircraft cabin such as oxygen levels, cabin pressure, humidity, noise, and space places physiological stress on older adults which may contribute to adverse experiences or outcomes. Older passengers have reported headaches, upset stomach, dizziness, rapid heart rate, dehydration, and anxiety attacks (McMullin et al., 2014). Cardiovascular diseases, neurological diseases, and trauma are among the most common ground-based and in-flight medical emergencies for those over the age of 65, which differs from younger groups, whose most common medical emergencies were gastrointestinal, respiratory, neurological, and dermatologic (Lo et al., 2021).

Older adults may experience more dramatic cardiovascular responses to low cabin pressures which may put them at greater risk of negative health events during flight (Meyer et al., 2019). Low cabin pressures also cause gas volume expansion in air-filled cavities in the body such as the middle ear or the digestive tract. This may cause ear pain and tinnitus which can exacerbate existing hearing difficulties or lead to enhanced stress in passengers with dementia (Sadlon et al., 2021). In the digestive tract, it can cause discomfort related to gastric distension and delayed gastric emptying, and contribute to gastrointestinal disease (Sadlon et al., 2021; Lo et al., 2021). This may also cause passengers to decrease their in-flight food and beverage intake, increasing the risk of dehydration (Sadlon et al., 2021; McMullin et al, 2014).

Older adults may have greater mobility challenges getting into and out of their cabin seat than younger people. They may take more time to complete this task and hold on to more areas of the seats and space around them for support while moving to or from their seat (Lijmbach et al., 2014). Mobility challenges within the cabin extend beyond seating into other activities like using the lavatory during a flight. Onboard lavatories do not currently meet the needs of older passengers, who find them too small and difficult to use (Chang & Chen, 2012; McMullin, 2014).

The cabin environment can aggravate pre-existing cognitive conditions. On-board air quality and reduced oxygen levels can increase cerebral blood flow, which may amplify symptoms of cognitive impairment ranging from disorientation, agitation, and anxiety, up to the state of delirium (Sadlon et al., 2021). Long haul flights, where passengers are exposed to these conditions for longer periods of time may lead to lingering cognitive effects like post-flight confusion (Sadlon et al., 2021). Low cabin humidity can also contribute to fluid loss and dehydration, which may impair dimensions of cognitive functioning in generally healthy passengers, and cause more severe symptoms in those with preexisting cognitive conditions (Sadlon et al., 2021). Dehydration can also impair psychomotor functioning, putting passengers with and without cognitive conditions at higher risk of falls during the flight, for instance, while walking to the lavatory. Dehydration risk can be exacerbated by choosing to drink a diuretic substance like coffee in-flight. (Sadlon et al., 2021). Noise in the cabin may exceed recommended safe levels, which may lead to distress in passengers and especially those living with dementia. Noise may also inhibit communication with others who could support them, creating additional barriers to the quality of air travel. Extended durations in the confined space of an aircraft cabin can lead to physical discomfort for any passenger, but for those living with dementia it may precipitate reactions ranging from anxiety, agitation, reduced arousal, and delirium (Sadlon et al., 2021). Additionally, air travel can disrupt daily routines, sleeping and eating patterns, which may cause lingering cognitive effects after the flight, and contribute to jet lag (Sadlon et al., 2021).

Many recommendations are made in the literature on how the onboard experiences of older adults might be improved. For example, booking flights at the right time of day may help to maintain daily routines. Booking a lounge in the airport, using the washroom prior to flying, and maintaining proper hydration are all steps that can be taken to improve in-flight experiences for persons living with dementia (Sadlon et al., 2021). To reduce the challenges that older adults may face getting into

and out of cabin seats, headrests and armrests could potentially be redesigned to provide better grip and support (Lijmbach et al., 2014). Positioning older adults with mobility challenges in aisle seats would also make accessing seats easier since the need to crawl over obstacles is reduced (Lijmbach et al., 2014). The aisle seat may also be a better location for passengers living with dementia who may need additional assistance (Sadlon et al., 2021).

Barriers and Recommendations Related to Service

The design of services is a broad category that comprises the technological, physical, social, and operational environment, and people's goals and actions within this context. Older adults may experience issues or barriers related to service and/or operations which may negatively impact their experience or deter them from travelling by air. Some of the barriers discussed in the literature related to air travel service and operations include:

- the inconvenience of handling luggage on the way to the airport (Chang, 2013);
- complex journeys involving transfers on the way to the airport (Chang, 2013).
- long wait times for queuing in airports (McMullin et al., 2014; Davison & Ryley, 2013);
- long walking distances in airports between service touchpoints (McMullin et al., 2014);
- communication issues with announcements in the airport terminal or on-board the aircraft (McMullin et al., 2014; Chang & Chen, 2012);
- lack of safety information on-board relative to older adults' expectations (Chang & Chen, 2012);
- time constraints during meal service (typically less than 30 minutes) may not accommodate the needs of older adults, especially those with dementia whose may require up to 35 minutes to eat (Sadlon et al., 2021); and
- the impact of the COVID-19 pandemic, which affected older adults' perceptions of the safety of air travel in terms of infection prevention and control (Graham et al., 2020; Graham et al., 2023).

Various recommendations were made for service interventions that might improve accessibility. Across jurisdictions, airport operators, airlines, public transport operators and other interested parties could examine working together to better coordinate services. This could involve examining the management of luggage across the system, minimizing transfers, and working to make intermodal transport journeys as seamless as possible (Chang, 2013; Graham et al., 2023). Improving staff training on age-related medical conditions could help prevent unnecessary misunderstandings and to provide better service to these passengers and their care partners (Sadlon et al., 2021). Industry-wide standards for reporting in-flight medical emergencies could help staff and medical personnel better respond to these events (Lo et al., 2021). Adaptable, customizable, or 'curated' service models could be further explored. For example, depending on passenger profiles, the level of service preferences may be different from the generally applied International Air Transport Association (IATA) level of service standards (Kim et al., 2017).

Interpreting Findings through a 'Design Synthesis' Example

Air travel experiences are influenced by the relationship and interaction of personal characteristics (e.g., risk factors related to the natural process of aging, individual preferences, influence of past experiences), and contextual factors (e.g., the role of the technological, physical, and service environment and barriers in user experience). Using an illustrative example of a specific travel stage, we offer an exploration and interpretation of a possible interrelationship among such factors, and how this might inform potential design interventions.

Design Scenario - Considerations in Navigating the Airport Terminal

Moving through and navigating the airport terminal is just one example of a critical task that older adults must do as part of the 'door-through-door' air travel journey. Key barriers that were discussed by researchers (e.g., Bosch & Gharaveis, 2017) relevant to the task of wayfinding included signage not respecting a downward gaze which some older adults may do naturally; improper lighting to support those with vision loss/ decline; airport layouts lacking familiarity; obstacles situated along navigation paths (e.g., retail kiosks in corridors); visual clutter; and ambient noise. Add to this long walking distances (McMullin et al., 2014); safety issues related to vertical circulation such as escalators and the risk of falls (Howland et al., 2015); the potential stress of crowding (Kim et al., 2017) at these choke-point locations; and the need to plan for obvious and intuitive travel paths to elevators (Bosch & Gharaveis, 2017), and one can begin to see the interconnectedness of barriers across several design dimensions. Recognizing such barriers, the age-related risk factors that need to be considered at this stage of the air travel journey involve changes to mobility (e.g., compromised strength and balance), perceptual declines related to vision (e.g., cataracts), and/or changes in cognition (e.g., dementia).

By layering such multifactorial information focused on the needs and preferences of older adults within the context of what they must do to fly into a larger framework, we can move the sector toward a more holistic, anticipatory design model. For example, using escalators and carrying bags on escalators introduces the risk of falling for older adults experiencing mobility and/or cognitive decline, yet is a prominent strategy for moving large volumes of people through airports. Although escalators may be an optimal vertical circulation strategy from an operational perspective, they present barriers to safe and efficient vertical circulation for older adults.

In our review, researchers suggested reducing such barriers by redirecting travelers to elevators. Airports may have signs asking passengers not to carry bags on escalators positioned at these touchpoints but provide no information on how to carry out the alternative so passengers with bags may just follow the crowd. Further, elevators may be difficult to find or access due to poor layout or lack of standardization, wayfinding, or language considerations, particularly for older adults experiencing low vision/ vision loss, cognitive issues, or who may not be fluent in the language being used. Further, optimal pathways in airports may not be evident or highlighted to older adults when they book their flights so they can plan. Departure and destination airports may differ, such that a passenger may board via a jetway only to find that they are faced with a set of air stairs at their destination. Elevators may also be scarce relative to a realistic assessment of the volume of older adults, families with strollers, and persons with disabilities using mobility devices who need to use them. This might lead to choke points at these locations, crowding in pathways, and longer wait times which then, in turn, present physical and cognitive risks to older passengers who may now need to hurry to avoid missing their flight. This is just one example highlighting the urgency of addressing such challenges in air travel through a multifactorial lens and seeing the centering of older adult heterogeneity as an opportunity to serve this demographic, but also, the larger population better.

Conclusions and Implications for Future Work

From the literature we reviewed, we identified and categorized a range of barriers across the door-through-door air travel journey (i.e., technological, related to the physical environment, related to services) and potential risk factors (i.e., demographic considerations, psychographics, age-related physical and cognitive declines) connected to these barriers. This has allowed us to begin strategically structuring potential design recommendations and considerations to address these concerns. For example, the identification of gender as a risk factor highlights an opportunity for research on equity and gender-based design to support older adults in air travel. In combining these

findings into a framework, we begin to see where elements of the travel journey and environment may undermine the travel experiences of older adults, the multiple factors involved, and how a transdisciplinary design approach can better support their experiences.

Although the reviewed literature included discussion on some of the different travel stages, many touchpoints we expected to see in the literature based on our prior work in this sector were not addressed (e.g., bag drop/ baggage claim, security, customs, overhead bins, etc.), highlighting potential gaps in the work that has occurred to date and should be further investigated. Further, no one research study had investigated older adult experiences in air travel from a systems perspective, which is the contribution we aim to make to the field.

The studies reviewed in this research were international in scope and have implications for other countries with aging populations. Geographical distances were identified as a barrier related to accessing the airport, which is relevant to the Canadian context which is characterized by vast geographical distances, and a lack of rail and intercity bus infrastructure in many regions. Further, cultural differences across the needs, preferences, and experiences of older travellers in Canada, coupled with Canadian geographical considerations and mobility/ transportation infrastructure highlight the importance of developing a more in-depth understanding of older adults' travel experiences within a national, regional, and local context.

To improve air travel accessibility for aging Canadians, it is therefore important to understand the air travel experiences of older Canadians. This is the next phase of our research, where we are launching a nationwide survey on the air travel experiences of older adults in Canada which was, in part, framed by this existing research. This primary research will then help us refine the older adult air travel design framework and analyse the findings against relevant Canadian policies and standards. The work will naturally evolve as we move through subsequent phases of research and design development — work which we will continue to share with the international community.

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