

Abstract

Physical inactivity among older adults has been identified as a health crisis because of their associated increased risk of cardiovascular, autoimmune, neurocognitive, and mental health problems (Wu, 2020). While necessary, pandemic-related public health measures have exacerbated the problem of inactivity and sedentary behaviours in this population. Making an investment in safe, effective and adaptable approaches to physical activity promotion is crucial to enable community-dwelling older adults to age well in their communities. The purpose of this review is to identify current remotely-delivered strategies that best engage community-dwelling older adults to participate in physical activity during and beyond the COVID-19 Pandemic. A standardized approach was followed to complete a scoping review (Levac et al., 2010). A total of 1256 titles and abstracts, and 101 full text papers were independently screened by at least 2 reviewers using the Covidence platform, resulting in a total of 35 papers in the final review. Studies used asynchronous web-based (46%), single participant telephone-based (26%), and synchronous web-based group (28%) strategies. Effective interventions tended to include ongoing social support, availability of personalized educational content and advice, goal-setting and journaling, and attention to user-friendly technology. This study informs the design of multi-faceted remotely delivered strategies to promote physical activity for community-dwelling older adults during and beyond the COVID-19 pandemic.

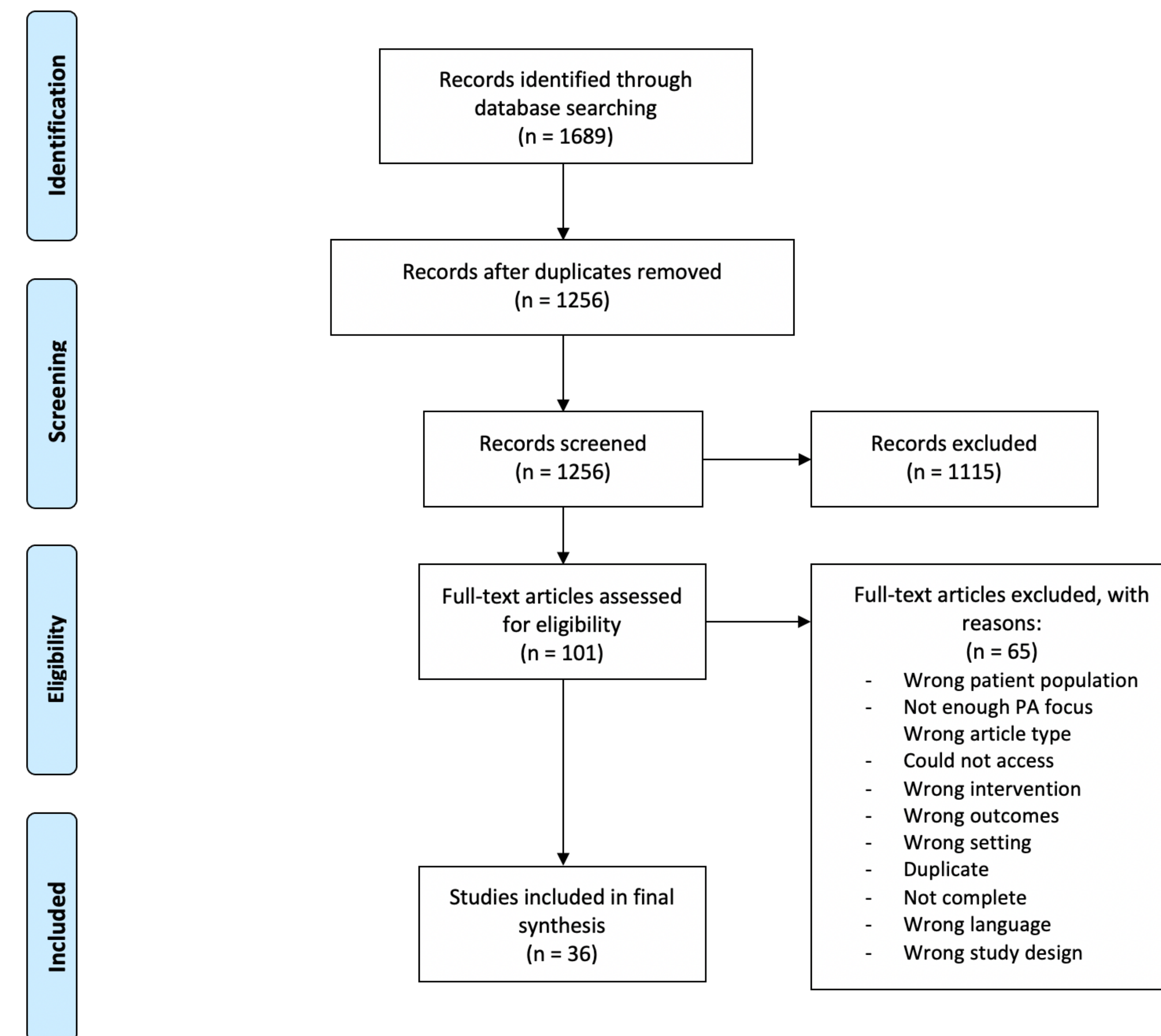
Introduction

- Most older adults note a preference to “age in place” in their own homes. **“Aging in place”** is defined as “remaining living in the community, with some level of independence, rather than in residential care” (Wiles et al., 2012). The concept of aging in place has become a focal concept for researchers and policy-makers.
- Engaging in physical activity is well-documented to **prevent and mitigate the potential impact of common chronic conditions linked to aging and improve quality of life**. Physical inactivity among older adults has been identified as a “public health crisis”
- COVID-19 has brought additional attention as to how to best keep elderly adults physically active, as social distancing protocols require remaining distant from places that keep them active. Now more than ever, **making an investment in remote physical activity interventions is crucial to enable community-dwelling older adults to age-in-place**.

Objectives

To describe the state of the literature related to **remotely delivered strategies** to promote physical activity in community-dwelling older adults.

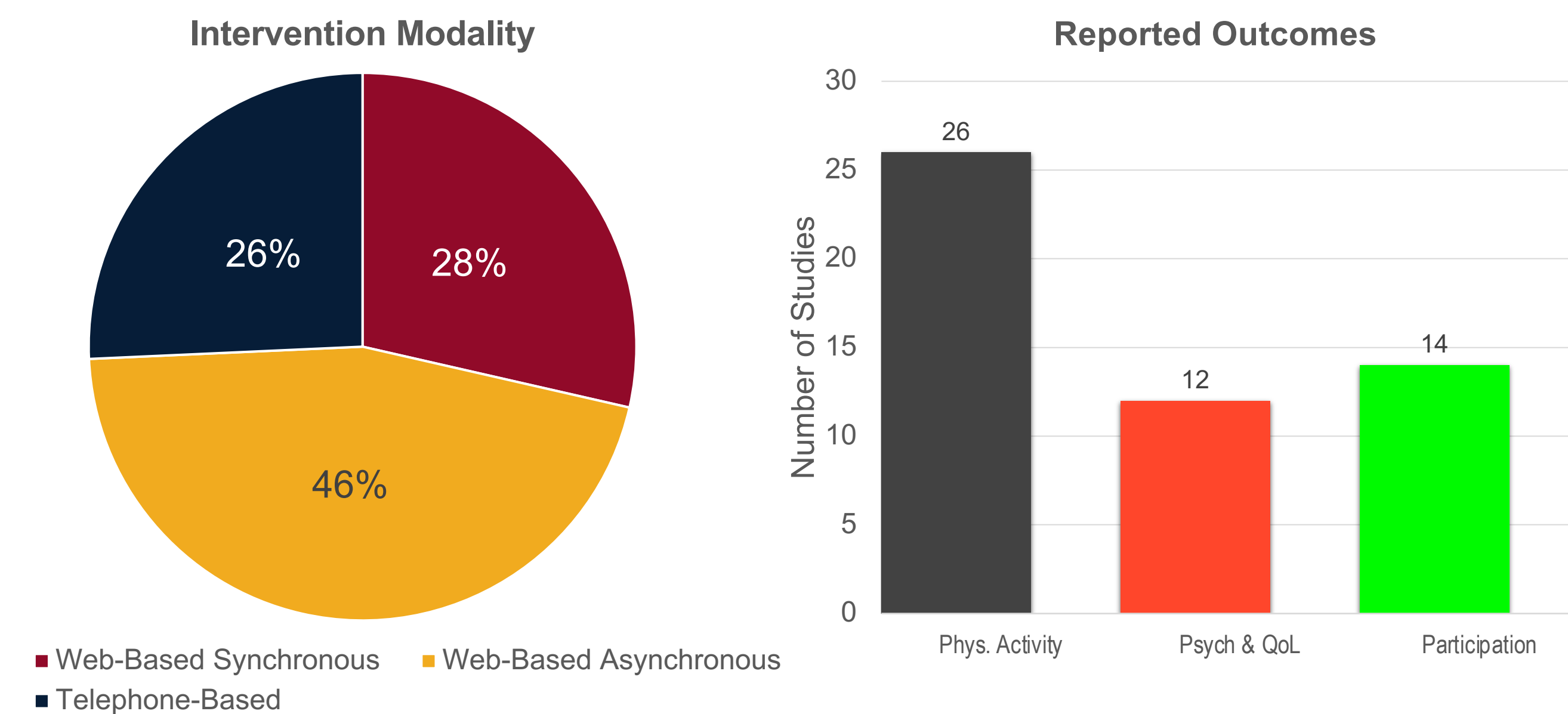
Methods



The broad research question **“What are current remotely delivered strategies to promote physical activity participation in community-dwelling older adults?”** was answered through completing a scoping review following a standardized approach. Following a data-base search of Ovid EMBASE and Ovid MEDLINE, three reviewers were involved in the screening process to correct for potential bias using the Covidence Platform. The search included literature published up until December 31st, 2020, and yielded **1256 records**. From this, a total of **35 unique articles** were included in the final data extraction and review process.

Inclusion Criteria	Exclusion Criteria
Interventions with a primary focus on remotely delivered physical activity	Not directly related to remote physical activity promotion
Concerns community dwelling adults over 50 years of age	Focus on specific clinical condition or participants in institutionalized care
Peer reviewed publications accessible electronically	Abstracts, books and book chapters, newspaper articles
Published in English	Grey Literature

Results



A majority of strategies were web-based (74%) vs telephone-based (26%); asynchronous and individual (72%) vs synchronous group-based (28%). Most interventions led to improvements in physical activity levels and functional fitness outcomes, irrespective of the mode of delivery. Intervention success seemed to be tied to: **presence of ongoing social support**, either through the presence of a counsellor or a group exercise setting as offered in **synchronous strategies**; **availability of personalized educational content and/or tailored advice**; **goal-setting modalities** and journaling behaviours, and **intervention useability**.

Discussion

- The implications of the findings from this review may be transferable to community-dwelling older adults who live in rural and remote areas, as well as older adults that present with mobility impairments which impede or limit their ability to travel to access exercise facilities.
- The provision of regular feedback, individual motivation, social support, and PA instruction appear to be important factors in encouraging participants to engage consistently with remotely delivered interventions.
- While the integration of remote interventions was evidenced to facilitate increased PA in community-dwelling older adults, it was noticed that adherence rates to PA programming in the indirect contact interventions decreased as interventions themselves ended.
- Future investigations surrounding whether sustainable integration of PA can be positively influenced by a combination of direct, personal contact, and the inclusion of motivational components, may be warranted.
- The “Oasis Senior Supportive Living Program” was designed to strengthen and sustain healthy communities of seniors by addressing important determinants of healthy aging and is an innovative solution that supports healthy aging in place (DePaul et al., 2019). This review will build upon the work initiated as a part of the original Oasis Project, and will inform the development of interventions for individuals living in NORCs within Oasis communities.

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