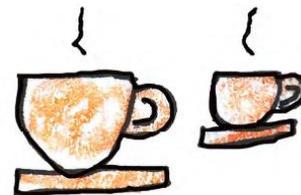
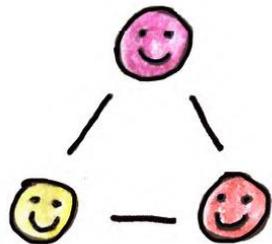


# Social connection in residents of long-term care homes: mental health impacts and strategies during COVID-19

Jennifer Bethell, The Kite Research Institute, Toronto Rehabilitation Institute

Katelynn Viau Aelick, Behavioural Supports Ontario Provincial Coordinating Office



# Acknowledgements

This work was funded by the Canadian Institutes of Health Research (CIHR) *Knowledge Synthesis: COVID-19 in Mental Health and Substance Use*

## **“The Relationship Between Social Connectedness and Mental Health for Residents of Long-term Care Homes: Knowledge Synthesis and Mobilization”**

Jennifer Bethell, Jessica Babineau, Monica Bretzlaff, Cathleen Edwards, Josie-Lee Gibson, Debbie Hewitt Colborne, Andrea Iaboni, Dee Lender, Katherine McGilton, Denise Schon, Katelynn Viau Aelick



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**CIHR IRSC**  
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Instituts de recherche en santé du Canada

# Objectives

After today's presentation, you will be able to:

- 1) Describe the different concepts of social connection
- 2) List mental health outcomes associated with social connection for people living in long-term care homes
- 3) Describe strategies that might help to build and maintain social connection for people living in long-term care homes during and beyond COVID-19

# Outline for today's talk

**Background:** Social connection is an important health issue for LTC homes

**Methods:** A scoping review on social connection in LTC homes

**Results:**

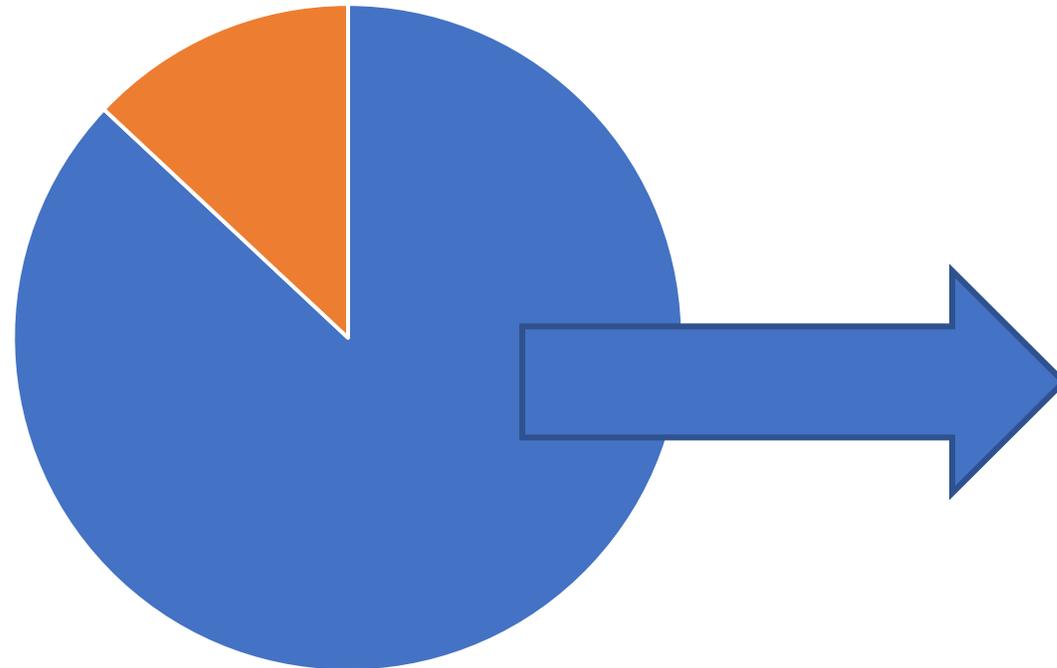
- Summary of research studies included in the review
- What mental health outcomes are associated with social connection for people living in LTC homes?
- What interventions/strategies might support social connection for people living in LTC homes in the context of infectious disease outbreaks like COVID-19?

**Discussion:** Knowledge gaps and study limitations

**Your opportunity for input:** Do you have ideas for implementing these 12 interventions/strategies?

# Webinar Registration Survey Result:

Has finding ways to stay socially connected been a concern for you during COVID-19? *(this could be for yourself or in your role supporting other people)*



**87% responded  
YES!**

# Background: Social connection is an important health issue for LTC homes

## What do we mean by social connection?<sup>1,2</sup>

- **Social network:** the number of people we have relationships with and the characteristics of those ties
- **Social support:** help given to and received from others in our social network (includes emotional and instrumental support)
- **Social engagement:** taking part in activities with others in our social network
- **Loneliness:** subjective feelings about the number or intimacy of our relationships
- **Social capital:** features that facilitate coordination and communication for mutual benefit, such as interpersonal trust, reciprocity and mutual aid

[but there are other words and some use these words in different ways]

# Background: Social connection is an important health issue for LTC homes

- Social connection is key to quality of life in LTC homes<sup>1</sup>
- Social connection is associated with better health (for everyone!)<sup>2</sup> – possibly explained by:<sup>3</sup>
  - Health-related behaviors/lifestyle (e.g., exercise, diet, alcohol and substance use)
  - Instrumental support (e.g., being taken care of you when you're not well)
  - Stress-buffering (e.g., having someone to talk to about your problems)
  - Biological mechanisms (e.g., loneliness linked to chronic inflammation)

**...but most research in this area is not from LTC homes**

REFERENCES: **1. Bradshaw SA**, Playford ED, Riazi A. Living well in care homes: a systematic review of qualitative studies. *Age and Ageing* 2012;41:429-40. | **2. Holt-Lunstad J**, Smith TB, Baker M, Harris T, Stephenson D. Loneliness and Social Isolation as Risk Factors for Mortality: A Meta-Analytic Review. *Perspect Psychol Sci.* 2015;10:227-37. | **3. National Academies of Sciences, Engineering, and Medicine**, Social Isolation and Loneliness in Older Adults, Opportunities for the Health Care System. <https://www.nap.edu/read/25663>

# Background: Social connection is an important health issue for LTC homes

Social connection has specific considerations for LTC homes, e.g.,

- **Residents:** mostly older adults, many with vision/hearing loss, cognitive impairment,<sup>1</sup> and mobility impairment which can impact social connection<sup>2</sup>
- **Families:** many provide vital social support (e.g., daily, ongoing care)<sup>3</sup>
- **Staff:** provide daily support to residents
- **Homes:** communal setting (e.g., meals, group activities)
- **Communities:** community organisations and care professionals participate the life of the home

REFERENCES: 1. Ontario Long Term Care Association, This is Long Term Care 2019 | 2. Moyle W, Kellett U, Ballantyne A, Gracia N. Dementia and Loneliness: an Australian perspective. J Clin Nurs. 2011;20(9-10):1445-53. | 3. Puurveen G, Baumbusch J, Gandhi P. From Family Involvement to Family Inclusion in Nursing Home Settings: A Critical Interpretive Synthesis. J Fam Nurs 2018;24:60-85.

# Background: Social connection is an important health issue for LTC homes

But research evidence on social connection in LTC is limited. E.g., recent reviews:

**Quan et al (2019):** 15 (loneliness) intervention studies in past 10 years / 14 of the studies excluded individuals with cognitive impairment

“there are several effective interventions to reduce loneliness among older adults living in LTC”

**Brimelow & Wollin (2017):** 15 (loneliness or social network) intervention studies since 1995 / 3 of the studies actively conducted in residents with known cognitive impairment

**Victor (2012)**

“This review failed to identify compelling evidence for the effectiveness of interventions to remediate loneliness in care home populations”

REFERENCES: **1. Quan NG**, Lohman MC, Resciniti NV, Friedman DB. A systematic review of interventions for loneliness among older adults living in long-term care facilities [published online ahead of print, 2019 Oct 11]. *Aging Ment Health*. 2019;1-11. | **2. Brimelow RE**, Wollin JA. Loneliness in old age: Interventions to curb loneliness in long-term care facilities. *Activities, Adaptation & Aging* 2017;41:301-15. | **3. Victor CR**. Loneliness in care homes: a neglected area of research? *Aging Health* 2012 8:6, 637-646

# Methods: A scoping review on social connection in LTC homes

- We started this scoping review in mid-2019<sup>1</sup>
- Our team was funded by CIHR (May 2020) through Knowledge Synthesis: COVID-19 in Mental Health and Substance Use

“this funding opportunity will support the immediate health services needs through rapid knowledge syntheses and knowledge mobilization plans for existing mental health and substance use services in the COVID-19 context”

Our scoping review questions:

- 1) What mental health outcomes are associated with social connection for people living in LTC homes?
- 2) What interventions/strategies might support social connection for people living in LTC homes in the context of infectious disease outbreaks like COVID-19?

# Methods: A scoping review on social connection in LTC homes

- We developed and executed a detailed search strategy<sup>1</sup>
  - MEDLINE(R) ALL, CINAHL (EBSCO), PsycINFO (Ovid), Scopus, Sociological Abstracts (Proquest), Embase and Embase Classic (Ovid), Emcare Nursing (Ovid) and AgeLine (EBSCO)
  - All searches conducted from databases' inception to search date (July 2019, i.e., pre-COVID)
- We included published journal articles that reported:
  - Observational or intervention (randomized and non-randomized) studies
  - A quantitative measure of social connection in a population of adult residents of LTC homes, nursing homes or care homes<sup>2</sup>
- We did not conduct any critical appraisal/assessment of study quality
- Study selection and data extraction conducted in duplicate

REFERENCES: **1. Bethell J**, Babineau J, Iaboni A, Green R, Cuaresma-Canlas R, Karunanathan R, et al. Social integration and loneliness among long term care residents: protocol for a scoping review. *BMJ Open*. 2019; 9(12): e033240. | **2. Sanford AM**, Orrell M, Tolson D, et al. An International Definition for "Nursing Home". *J Am Med Dir Assoc* 2015;16:181–4.

# Methods: A scoping review on social connection in LTC homes

We identified a subset of studies that reported:

(1) association between any measure of social connection and a mental health outcome (e.g., depression, responsive behaviours, cognition) among LTC residents

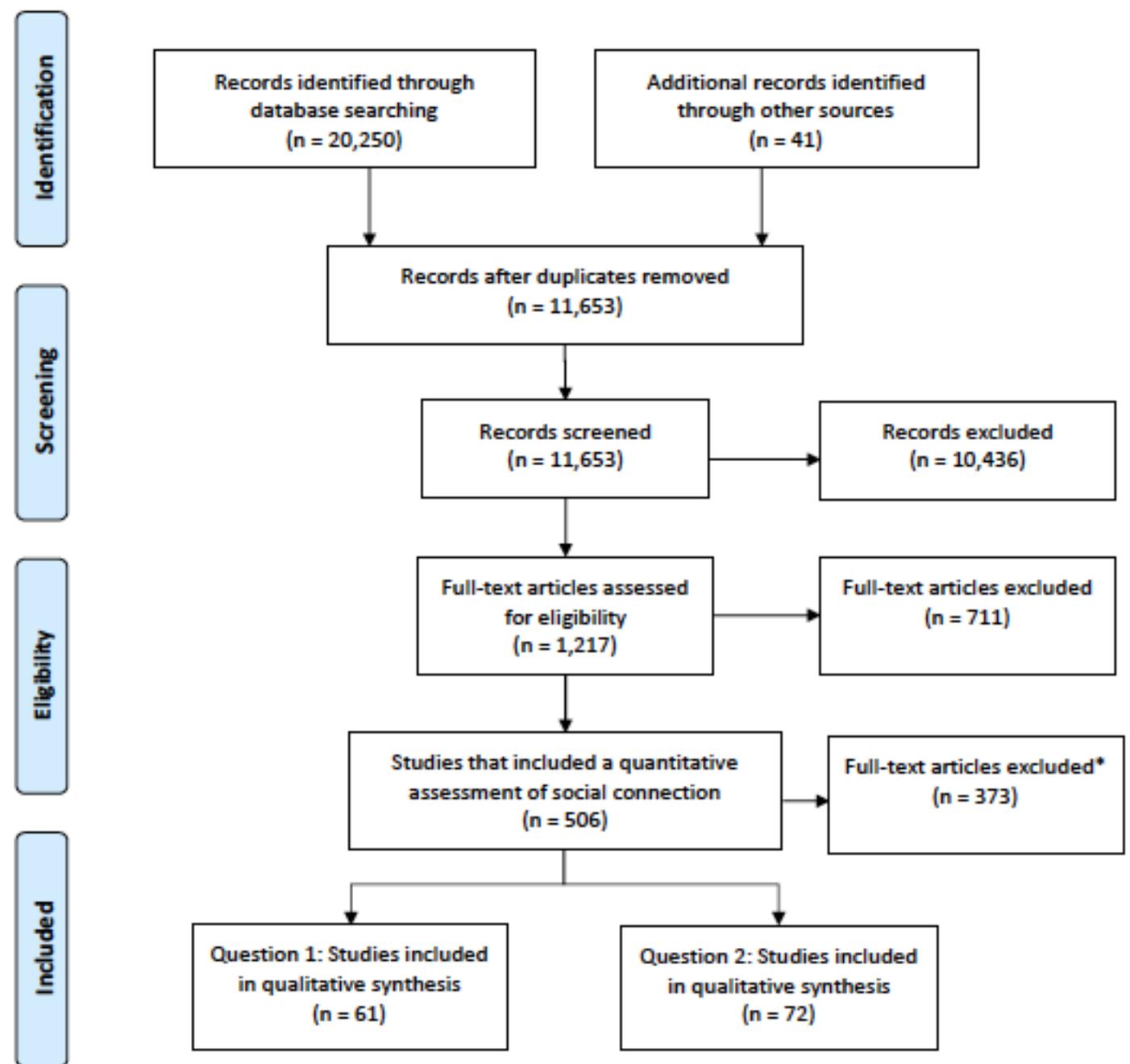
(2) association between a modifiable risk factor(s) and any measure of social connection among LTC residents

(3) the results of intervention study (randomized and non-randomized) conducted among LTC residents whereby the outcome was any measure of social connection

Question 1

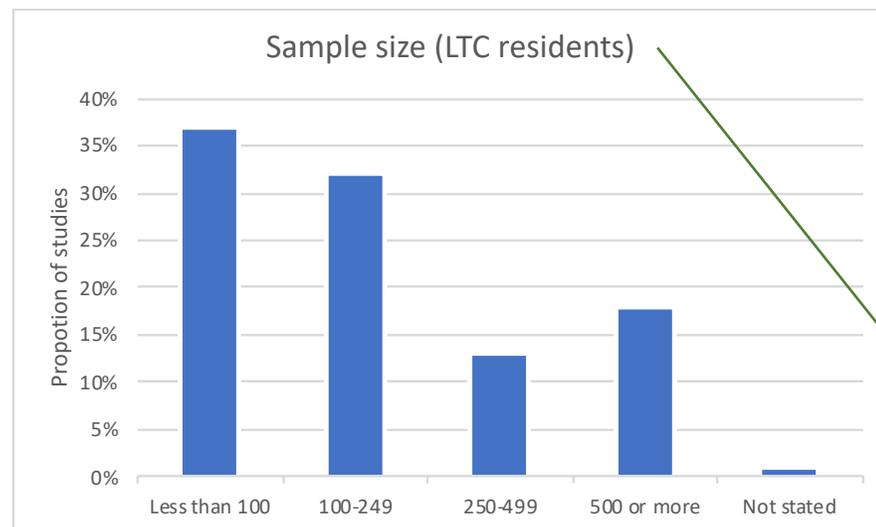
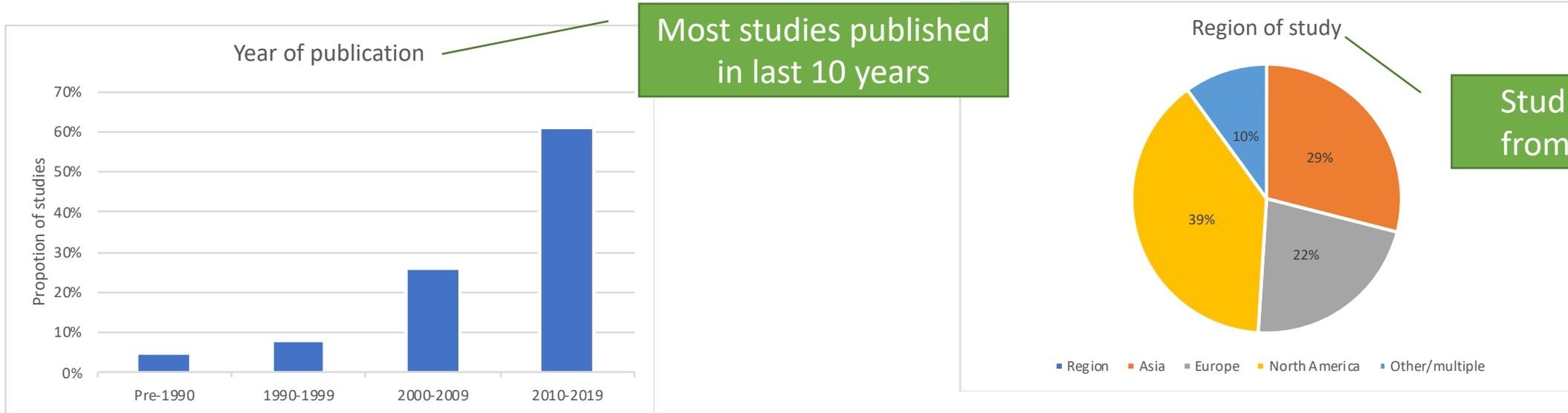
Question 2: From (2) and (3), our team identified twelve interventions/strategies as **potentially quick and relatively low-cost for LTC staff, families and residents to implement and adapt in the current COVID outbreak**

# Results: Summary of research studies included in the review



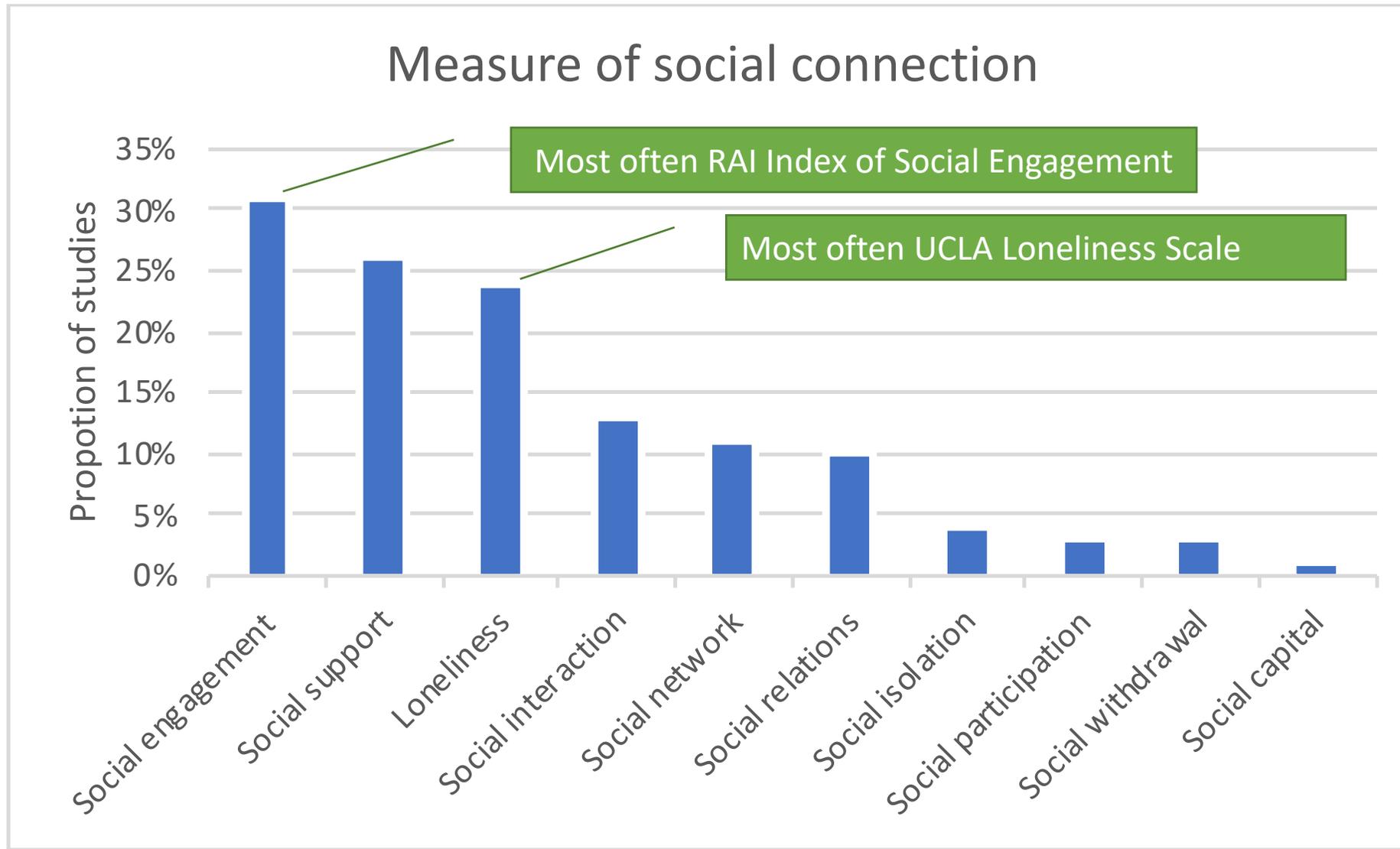
\* exclusions: social connection assessed but descriptive or psychometric studies or studies with other outcomes (e.g., physical health, quality of life), etc.

# Results: Summary of research studies included in the review



Often small studies (largest ones using health admin data)

# Results: Summary of research studies included in the review



# Results: What mental health outcomes are associated with social connection for people living in LTC homes?

Outcome	Study finding - <u>beneficial</u> impact of measure(s) of social connection reported in:
Depression	29 (of 35 studies)
Responsive behaviours	6 (of 9 studies)
Mood, affect and emotions	8 (of 8 studies)
Anxiety	2 (of 3 studies)
Cognitive decline	2 (of 2 studies)
Medication use	0 (of 3 studies)
Death anxiety	2 (of 2 studies)
Suicidal ideation	2 (of 2 studies)
Boredom	2 (of 2 studies)
Daily crying	1 (of 1 study)
Psychiatric morbidity	1 (of 1 study)

# Results: A work of art

We summarized our findings in an infographic poster designed by Ellen Snowball.

Download and request (free) printed copies (EN/FR) by mail at:

<http://encoarteam.com>

We've been sending them to LTC homes across Canada!

**Social Relationships are Important for the Mental Health of People Living in Long-Term Care Homes**

**What do we mean by social relationships?**

- Social Network**  
The people we have relationships with, like family, friends and other people in the home.
- Social Support**  
The help we get from people in our social network, including with emotional and physical needs.
- Social Engagement**  
When we take part in activities with others, like having lunch or going for a walk together.

**Why are social relationships important for the mental health of people living in long-term care homes?**

Social relationships are good for our physical health and quality of life. Not having enough quality or quantity of social relationships have also been linked to:

- Depression
- Cognitive decline
- Loneliness
- Boredom
- Sadness
- Negative mood
- Anxiety
- Responsive behaviours

**Our social networks, the time we spend together and the support we give and get from others, are all important in our lives. Some things that might help build and maintain social relationships for**

- Manage Pain
- Address vision and hearing loss
- Sleep at Night, Not During the Day
- Find Opportunities for Creative Expression, like Art, Music and Storytelling
- Exercise
- Maintain Religious and Cultural Practices
- Garden, Either Indoors or Outside
- Visit with Pets
- Use Technology to Communicate
- Laugh Together
- Reminisce About Events, People and Places
- Communicate Non-verbally

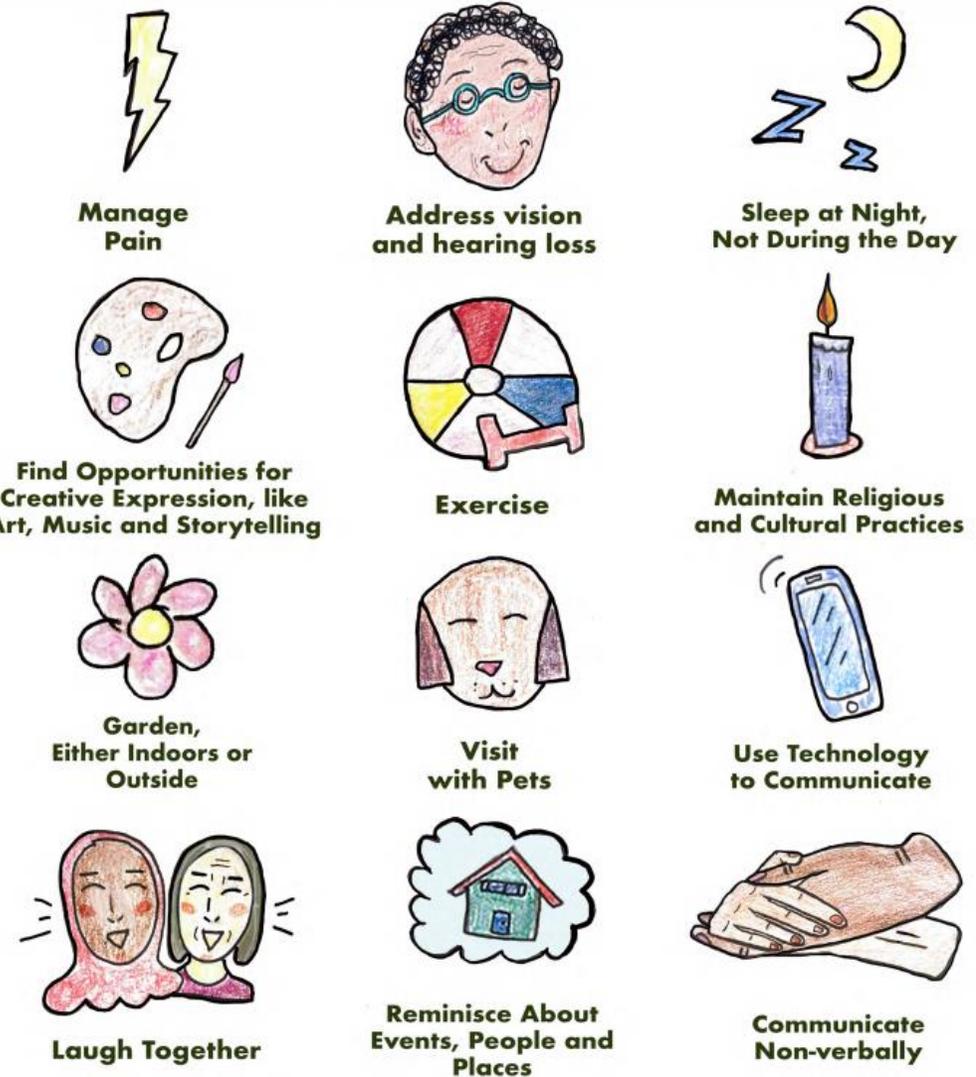
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Soutien en cas de troubles du comportement en Ontario

UHN Toronto Rehabilitation Institute  
The Kite Research Institute

OARC Ontario Association of Residential Care Councils

# Social Connection in LTC during COVID-19

- Research supplemented by Behavioural Supports Ontario (BSO) Survey: **Establishing and Maintaining Social Connections - BSO Strategies & Innovations during COVID-19**
- Practical strategies collected separated based on the 12 key themes illustrated in the infographic.



Results: What interventions/strategies might support social connection for people living in LTC homes in the context of infectious disease outbreaks like COVID-19?



### 1) Manage pain:

- Eight observational studies; three reported pain associated with less social connection.
- Five intervention studies addressing pain; four showed beneficial impact on social connection.



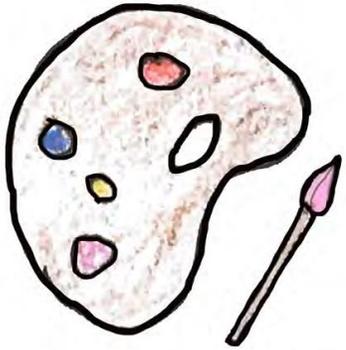
### 2) Address vision and hearing loss:

- Eight observational studies; seven showed an association between vision loss and lower social engagement and one showed for residents with cataracts, cataract surgery was associated with improvements in social interaction.
- One intervention study; treating uncorrected refractive error (getting glasses) improved social interaction.
- Fewer studies linked hearing loss to social connection.

### 3) Sleep at night, not during the day:

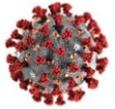
- Two observational studies; one reported sleep disturbances associated with lower social engagement.
- One intervention study; intervention increased participation in social activities.





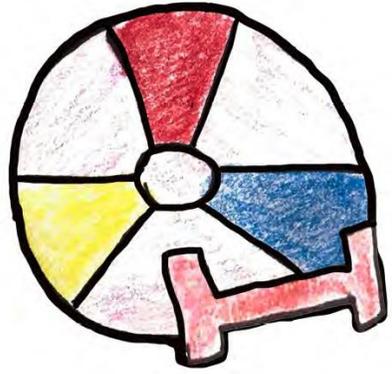
#### 4) Find opportunities for creative expression, like art, music or storytelling:

- Five intervention studies tested the impact of creative expression programs on social connection; all suggested some positive impacts.



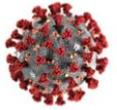
#### COVID-19 Context:

- Individualized creative activities based on the resident's personhood; including music & art.
- Individualized Activity Kits (14-day isolation period); using information from completed personhood tools to put together while person remains in hospital/community.
- **Challenges:** inability to share products; needing to dedicate limited supplies to one resident; architecture of some LTC Homes; staffing.



## 5) Exercise:

- Two observational studies; no statistically significant associations.
- Six intervention studies tested the impact of exercise programs; three reported positive impact on social connection.



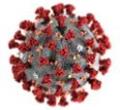
## COVID-19 Context:

- Using pre-recorded, freely available online videos to assist with instructing residents in one-on-one exercise (with supervision).
- Building “activity circuits” inside residents’ rooms, incorporating multiple tasks (e.g., bean bag toss, light exercises, folding laundry, etc.).



## 6) Maintain religious and cultural practices:

- Three observational studies; two reported religious activities/coping associated with more social engagement (one reported stratified results showing finding held both African American and white nursing home residents)



## COVID-19 Context:

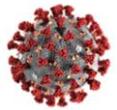
- Using telephone or videoconference to connect with religious community.
- Offering residents online or pre-recorded videos of religious observances.
- In Indigenous LTC homes, incorporating traditional wellness practices, such as residents making cedar tea as an individualized activity.





## 7) Garden, either indoors or outside:

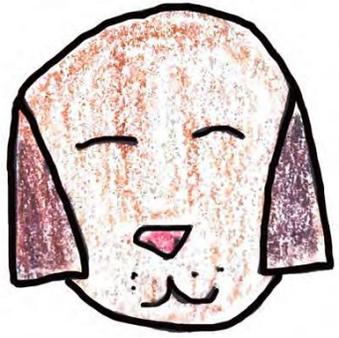
- Five intervention studies tested the effect of horticulture and indoor gardening programs;
  - three studies that compared the program to usual care found the gardening programs were associated with improvements in social connection.
  - the two studies that compared the programs with other interventions found no effect.



### COVID-19 Context:

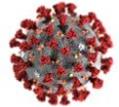
- In-Room gardening; use of real and artificial plants
- Outdoor vegetable gardening (individual activity instead of group).





## 8) Visit with pets:

- Twelve studies assessed the impact of pet interactions and animal assisted therapy on social connection; ten suggested beneficial impact on social connection.
- Two studies of robotic pets; both found decreased loneliness.



## COVID-19 Context:

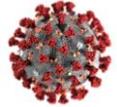
- Encouraging families to bring pets to window visits.
- Continuing community-based pet therapy programs through window visits; visits from some larger animals, like goats and horses.
- **Alternative solutions to incorporate animals:**  
robotic pets



## 9) Use technology to communicate:



- Four intervention studies;
  - two small-scale feasibility/pilot studies.
  - two quasi-experimental studies showed regular videoconferencing has beneficial effects for social connection.
  - all excluded persons with moderate or severe cognitive impairment.



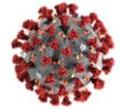
### COVID-19 Context:

- Facilitating videocalls between residents and their families and friends, mostly using tablets; weekly videoconference schedules, with allocated time (e.g., 45-minutes) for each resident.
- Creating specific email addresses for families and friends to send emails, photos and videos to residents during times where they could not visit. Email messages were printed from inside the LTC Home and delivered to the resident and, in some cases, read aloud by LTC Team Members to the resident. Photos and videos were shared via tablets. Initiating ways for residents to use tablets to respond to emails with short voice and/or video messages.
- Using projectors and projection systems to engage in interactive virtual activities.



## 10) Laugh together:

- Three intervention studies reported the impact of humour therapy; one study reported decreased emotional and social loneliness.



## COVID-19 Context:

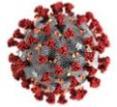
- Adding joy and humour to window visits, such as with a 'kissing booth', games (e.g., tic tac toe with dry erase markers) and parades from local organisations.
- using the spaces and activities within homes for fun and enjoyment, such as makeshift ice cream trucks, hallway 'Happy Hours' and decorated 'Tuck Shops on Wheels'.





## 11) Reminisce about people, places and events:

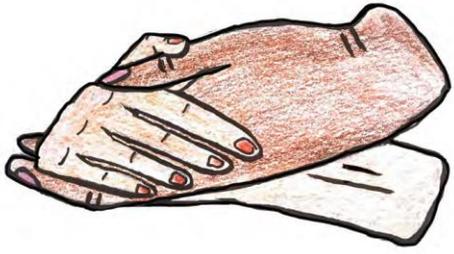
- Seven interventions studies tested reminiscence therapy or programs; six results suggesting improvement in social connection.



### COVID-19 Context:

- Involving community-based programs providing virtual programming via videoconference or telephone, such as reminiscence programs on specific topics (e.g., travel, hobbies, etc.)
- Creating personalized tools for residents; one LTC home developed a 'Talking Points Key Ring' for a resident, with laminated cards containing favorite photos, art works, sayings and conversation topics and that could spark conversations.





## 12) Communicate non-verbally:

- Five observational studies; all showed impaired communication was associated with lower social connection.

### COVID-19 Context:

- Facilitating pen pal programs whereby residents to write to one another.
- Encouraging letter mail exchange between residents and family and friends.
- Supporting 'Friendly Letter' programs, whereby individuals outside the LTC home would exchange letter with residents, sometimes in collaboration with organizations (e.g., local Alzheimer Society).

Monday, April 27<sup>th</sup>

Dear Friend,

Hello! I hope this letter finds you well. Let me introduce myself. My name is Brandon, and I am a 38-year-old male from Chatham. I have been married for almost 11 years, and have two daughters: an 8-year-old and a 4-year-old. They keep me proud, happy... but busy!! I work for a non-profit organization in Chatham, where we provide activities for young and old, such as exercise, music, art, word games and much more. I keep busy in my spare time having fun with my family, but I also enjoy golfing, fishing and listening to music.

Although we do not know each other, I wanted to reach out to you to let you know that there are so many people thinking of you at this time. I understand that you are not able to have visitors during this time, and I just wanted to send this letter in hopes that you are not feeling alone. I especially wanted to share the message that there is a lot of love and kindness in the world, and that you are special and LOVED!!

Remember to keep the memories of those dearest to you close to your heart. I hope this letter will give you peace and comfort during this difficult time.  
Stay strong and have a wonderful day!

Take care..

Brandon

Remember: We are in this together!

# Discussion: Knowledge gaps

**Most of the studies linking social connection and mental health outcomes were cross-sectional**

- Is social connection a risk factor or a consequence of mental health problems?

**Very few studies looking at differences across subpopulations (e.g., for different racial and ethnic groups, by length of time living in the home, etc.)**

- Does social connection impact residents differently?

**Intervention studies are small, typically not randomized**

- But should we expect gold standard (randomized controlled trials) in this setting?

**No studies conducted in the context of a pandemic or infectious disease outbreak**

- COVID is new but outbreaks are not; how should LTC homes prepare?

# Discussion: Study limitations

## **We reviewed social connection measures together (but they are different)**

- we need to delineate the relationships between measures of social connection<sup>1</sup> and mechanisms by which any interventions/strategies might impact social connection<sup>2</sup>

## **We did not include studies of “social” interventions (unless the outcome was a measure of social connection)**

- understanding the impact of such interventions on mental health outcomes (e.g., responsive behaviours)<sup>3</sup> would strengthen evidence on mental health impacts

## **We limited our measures of social connection to exclude “social behavior or communication” (e.g., eye contact, facial expressions, body language)**

- what is the best way to measure social connection among persons with dementia?

REFERENCES: **1. Leedahl SN**, Chapin RK, Little TD. Multilevel examination of facility characteristics, social integration, and health for older adults living in nursing homes. *J Gerontol B Psychol Sci Soc Sci.* 2015;70(1):111-122. | **2. O’Rourke HM**, Collins L, Sidani S. Interventions to address social connectedness and loneliness for older adults: a scoping review. *BMC Geriatrics* 2018;18:214. | **3. Cohen-Mansfield J**, Marx MS, Dakheel-Ali M, Thein K. The use and utility of specific nonpharmacological interventions for behavioral symptoms in dementia: an exploratory study. *Am J Geriatr Psychiatry.* 2015 Feb;23(2):160-70.

# Summing up...

## **What did we already know?**

- Social connection is important to quality of life in LTC homes
- Social connection is associated with better health (but most of this research does not come from LTC homes)
- Social connection has distinct considerations for LTC homes

## **What does our study add?**

- We summarized published research and showed social connection is associated with worse mental health for LTC residents
- We identified 12 strategies from published research that might help LTC staff, families and residents build and maintain social connection for LTC residents right now (during COVID-19) and to help plan for future disease outbreaks

# Next steps

- Impact of social connection on physical health outcomes
- Summary of evidence for other strategies (i.e., home-level factors such as design and care models, other interventions)

# Thank you!

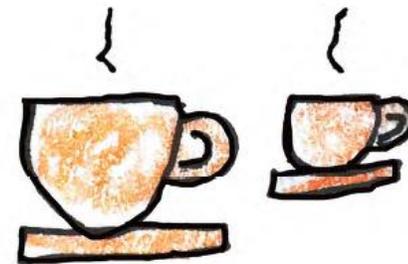
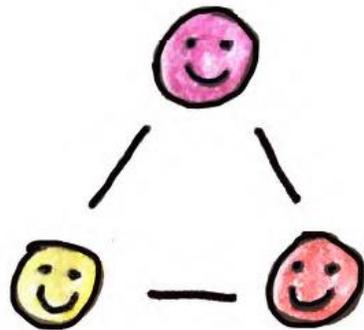
Our thanks to Ellen Snowball, Kaitlyn Lem, Omar Farhat, Jenny Jing, Souraiya Kassam and David Jagroop for their assistance selecting the studies and charting the data.

The BSO Provincial Coordinating Office also wishes to acknowledge all the homes that made time to share what they've been able to implement in their LTC Homes to support social connection.

**Your opportunity for input:** Do you have ideas for implementing these 12 interventions/strategies in LTC homes?

We are compiling creative ideas for implementing these 12 interventions/ strategies. **Please help us by sharing your ideas:**

- **Reply** to the poll questions at the end of this presentation
- **Email** [Jennifer.bethell@uhn.ca](mailto:Jennifer.bethell@uhn.ca) or [Katelynn.Viau@nbrhc.on.ca](mailto:Katelynn.Viau@nbrhc.on.ca)
- **Tweet!** @EncoaRteam or @BSOProvOffice



Thank you!