Let us Talk about Social Connections and Aging

Dr. Parminder Raina
Scientific Director
McMaster Institute for Research on Aging
Professor
Department of Health, Evidence & Impact & Canada Research Chair
Lead PI
Canadian Longitudinal Study on Aging

Canadian Longitudinal Study on Aging (CLSA)

MIRA and LABARGE CENTRE
#AgingReimagined

Age-Friendly Niagara Region
February 13, 2019
“Population aging is unquestionably the most important demographic force of the first half of the twenty-first century”.

(Schoeni FR, Ofstedal MB. “Key Themes in research on the Demography aging” Demography, 47, 2010: S5-S15)
The Bridge of Life

The Chances of Death by Karl Pearson (1897)
Healthy Aging or Anti-Aging?
THIS BABY COULD LIVE TO BE 142 YEARS OLD

Dispatches From the Frontiers of Longevity

HOW OLD CAN WE LIVE TO BE?

That remains to be seen, but if a promising drug does to humans what it does to mice—a big if—the answer is 142. Mice have a median survival time of 27 MONTHS, but with treatment, the longest-living mouse hit 48 MONTHS, a life 1.77 TIMES LONGER. The median human lifespan is 80 YEARS—so if the oldest person lived 1.77 times longer, he or she would reach 142.
Healthy Aging or Anti-Aging?
The three basic rules of anti-aging medicine:

- Don’t get sick
- Don’t get old
- Don’t die

“Bridge the gap to Immortality” by taking good care of your physical and mental self, you will be around to avail yourself of the latest biotechnological advancements to further optimize your life and achieve that triple-digit lifespan.
### Historical increases of life expectancy

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3?</th>
</tr>
</thead>
<tbody>
<tr>
<td>early urban</td>
<td>sanitation-nutrition</td>
<td>regeneration</td>
</tr>
</tbody>
</table>

#### Graph Details
- **X-axis:** Time (1550 to 2050)
- **Y-axis:** Life-expectancy in years
- **Countries:**
  - England
  - Norway
  - New Zealand
  - Iceland
  - Netherlands
  - Sweden
  - Japan

#### Notes
- Phase 1: Early urban
- Phase 2: Sanitation-nutrition
- Phase 3?: Regeneration

#### Question Mark
- The graph shows a question mark indicating the uncertainty about the future trend in Phase 3?
Fries Potential Scenarios

Present Morbidity

Morbidity

Death

55 y

76 y

Life Extension

Shift to the Right

Compression of Morbidity

55 y

80 y

81 y

60 y

78 y

65 y

55 y
Do You View Aging Like This...
Or Like This…

REMEMBER THE TWENTY EXTRA YEARS YOU ADDED TO YOUR LIFE THROUGH CLEAN, HEALTHY LIVING? - WELL, THESE ARE THEM.
The Secrets of Long Life and Social Connection

OKINAWA, JAPAN
Squatting effortlessly on a slippery embankment, 87-year-old Kame Ogido inspect a pinch of seaweed, part of a low-calorie, plant-based diet that may help give Okinawans an average life expectancy of 82 years, among the longest in the world. These seniors, and elders in Italy and California, show how to live longer, healthier lives.

BRIGHTER WORLD | mcmaster.ca
Blue Zone is a concept used to identify a demographic and/or a geographic area of the world where people live measurably longer lives, as discovered by researcher Dan Buettner.

Okinawa, Japan    Sardinia, Italy    Loma Linda, US    Nicoya, Costa Rica    Icaria, Greece

- Family
- Social Engagement
- Less Smoking
- Semi-Vegetarianism
- Legumes
- Constant Moderate Physical Activity
<table>
<thead>
<tr>
<th>AGE</th>
<th>MALES</th>
<th>BOTH SEXES</th>
<th>FEMALES</th>
</tr>
</thead>
<tbody>
<tr>
<td>80+</td>
<td>229898</td>
<td>670192</td>
<td>440294</td>
</tr>
<tr>
<td>75-79</td>
<td>255599</td>
<td>622194</td>
<td>366595</td>
</tr>
<tr>
<td>70-74</td>
<td>364298</td>
<td>833991</td>
<td>469693</td>
</tr>
<tr>
<td>65-69</td>
<td>497996</td>
<td>1084588</td>
<td>586592</td>
</tr>
<tr>
<td>60-64</td>
<td>578596</td>
<td>1190087</td>
<td>611491</td>
</tr>
<tr>
<td>55-59</td>
<td>618096</td>
<td>1238387</td>
<td>620291</td>
</tr>
<tr>
<td>50-54</td>
<td>673295</td>
<td>1339986</td>
<td>666691</td>
</tr>
<tr>
<td>45-49</td>
<td>844194</td>
<td>1674182</td>
<td>829988</td>
</tr>
<tr>
<td>40-44</td>
<td>1076892</td>
<td>2138777</td>
<td>1061885</td>
</tr>
<tr>
<td>35-39</td>
<td>1173491</td>
<td>2344675</td>
<td>1171184</td>
</tr>
<tr>
<td>30-34</td>
<td>1311991</td>
<td>2597873</td>
<td>1285882</td>
</tr>
<tr>
<td>25-29</td>
<td>1282190</td>
<td>2528572</td>
<td>1246382</td>
</tr>
<tr>
<td>20-24</td>
<td>1067593</td>
<td>2108978</td>
<td>1041385</td>
</tr>
<tr>
<td>15-19</td>
<td>984993</td>
<td>1925780</td>
<td>940787</td>
</tr>
<tr>
<td>10-14</td>
<td>980292</td>
<td>1912979</td>
<td>932687</td>
</tr>
<tr>
<td>5-9</td>
<td>998293</td>
<td>1953079</td>
<td>954786</td>
</tr>
<tr>
<td>0-4</td>
<td>1000393</td>
<td>1953280</td>
<td>952887</td>
</tr>
</tbody>
</table>

1991 TOTALS: 13938100, 28117600, 14179500
Population Aging

Canada shows its age as seniors outnumber children for first time

ERIC ANDREW-GE
The Globe and Mail
Published Tuesday, Sep. 29, 2015 9:50PM EDT
Last updated Wednesday, Sep. 30, 2015 8:07AM EDT
Percentage of one-person households in Canada, 1951 to 2016

The Globe and Mail
Isolation and Loneliness

The terms **isolation** and **loneliness** are often used interchangeably, but they refer to two distinct concepts.

**Isolation**

- Separation from social or familial contact, community involvement or access to services

**Loneliness**

- An individual’s personal, subjective sense of lacking these things to the extent that they are wanted or needed
Select Findings

The Canadian Longitudinal Study on Aging (CLSA) Report on Health and Aging in Canada
Findings from Baseline Data Collection 2010-2015

Editors
Paminder Raina
Christina Wolfson
Susan Kirkland
Lauren Griffith

McMaster University
Institute for Research on Aging
mcmaster.ca
Demographics

84.1% of participants report being born in Canada

91.8% of participants self-identify as white

3.7% of participants self-identify as indigenous

68.7% of participants are married or live in a common-law relationship
% of participants report having a post-secondary degree or diploma: 74%

% report their total annual household income is $50,000 to $100,000: 33.4%

% of participants indicate their total annual income is less than $20,000: 5.7%

% of participants report they are completely retired: 45.3%
Loneliness, Social Isolation, and Social Engagement: Canadian Data
More **women** than men of all ages in the CLSA reported being **lonely** at least some of the time.
Patterns of Loneliness & Social Isolation

- Perceived loneliness is significantly higher among widowed, divorced/separated, single, and married/partnered in that order.
- Loneliness is higher among married women than men, but this sex difference reverses for all other non-coupled marital statuses.
- Loneliness decreases across the three age groups, except for married women.
- Loneliness affects older women most.
Overall, the pattern of feeling lonely is most pronounced for widowed individuals, especially widowed men aged 45-64, although the other age groups also experience high rates of loneliness.
The lowest reported loneliness occurs for married men aged 75+

But the highest loneliness rates among married individuals are reported among women aged 75+

Figure 1a – Percentage who are lonely at least some of the time stratified by marital status, age, and sex
Perceived loneliness is considerably more prevalent among persons living alone versus those who live with somebody. This pattern is more pronounced among men, and is maintained across age groups with only slight variations.

Figure 1c – Percentage who are lonely at least some of the time stratified by living arrangement, age, and sex
Patterns of Loneliness & Social Isolation

- Individuals who report being lonely at least some of the time report lower life satisfaction than those stating that they are rarely or never lonely.

- Loneliness is strongly associated with depression (scores on the CES-D depression screen).
Individuals reporting they are lonely at least some of the time are considerably less likely to report being happy and this trend decreases with age.

Those who report being rarely or never lonely also report high levels of happiness; this finding is constant across the age and sex groups.
Social Engagement & Participation

- The desire for more participation in activities is:
  - Highest among the divorced/separated individuals
  - Declines with age

- The preference to participate in more activities is highest for middle-aged persons (45-64) compared to 65-74 and 75+ age groups, and is consistent across living alone or not.
Persons who express a desire to participate in more activities tend to report lower levels of happiness than those who have no desire for more activities, regardless of age or sex.

Figure 2b – Percentage who report being happy all of the time, stratified by desire to participate in more activities, age, and sex.
Key Insights

- Strong associations emerge between social isolation measures and marital status and living alone/not living alone
- Robust associations found between selected social isolation variables and happiness, life satisfaction, depression score and a depression clinical screen
- CLSA data offers potential opportunities to further examine and understand loneliness, social isolation, social engagement and aging
Risk Factors

- Factors related to personal circumstances
  - E.g. people who are widowed or have no children
- Life events
  - E.g. bereavement or having to move into residential care
- Poor physical and mental health
- (And expectation of future poor health)
Risk Factors for Loneliness

- **Personal**
  - Poor health
  - Sensory loss
  - Loss of mobility
  - Lower income
  - Bereavement
  - Retirement
  - Becoming a carer
  - Other changes (E.g. giving up driving)

- **Wider society**
  - Lack of public transport
  - Physical environment (E.g. no public toilets or benches)
  - Housing
  - Fear of crime
  - High population turnover
  - Demographics
  - Technological changes
Social Relations and Mortality Risk

Multiple studies show association – but how?

- Caring network encourages healthful practices
- Caring network improves adherence to treatments
- Groups or individuals provide actual physical or financial help
- Effects on immune function
- Effects on neuroendocrine function
The Impact of Loneliness - Mortality

- A meta-analysis of 148 studies of social relationships and mortality
  - 50% increase in survival for those with strong social connections after an average of 7½ years.
  - Having weak social connections carries a health risk:
    - Equivalent to smoking 15 cigarettes a day
    - Equivalent to being an alcoholic
    - More harmful than not exercising
    - Twice as harmful as obesity

- These correlations are likely to be greater for social connections if the positive effects of relationships were isolated.
The Impact of Loneliness – Mental Health

- Depression affects 1 in 5 older people living in the community and 2 in 5 in care homes
- Lonely individuals are more prone to depression
  - This has been shown to be causal
  - The more lonely someone is, the more likely they are to experience depressive symptoms
- Loneliness affects cognition
  - Lonely people become more vigilant for threats and focused on self-preservation
  - They can become less attentive to others’ feelings
  - They exaggerate negative and positive interactions
  - All this can impact relationships
Empowering our Citizens to Age Optimally: McMaster Optimal Aging Portal
Empowering our Citizens to Age Optimally
McMaster Optimal Aging Portal

▪ What is the Portal?
  • The world’s most comprehensive online source of evidence-based information for older adults
  • Health content about how to age optimally (e.g. health and nutrition) and manage health conditions (e.g., diabetes and high blood pressure)
  • Content about the social aspects of aging (e.g., social care, elder abuse, volunteering, financial security, and retirement planning)

▪ Who is the Portal for?
  • Aging people and their caregivers
  • Researchers, clinicians, public health professionals and policymakers
Content for Professionals and Researchers

What is offered?
- Access to scientific articles for clinicians, public health professionals, policymakers; members of the public can also review the professional materials

What is the research potential of the Portal?
- ~100K unique users per month
- Access to search terms, analytics data
- Identify gaps in evidence for future research opportunities
- Understand different KT approaches and how evidence impacts behaviour and decision-making
Portal Components

Best Evidence/Evidence Summaries

Email Alerts

Web Resource Ratings

McMaster Optimal Aging Portal

Search & Browse

Blog Posts

→ On health and social aspects of aging
McMaster Optimal Aging Portal

Your source for healthy aging information that you can trust

Looking for something specific? Try a search.

Enter your search terms

Search
Intergenerational programs: It takes a village to age optimally

The Bottom Line

- Intergenerational programs can have a positive impact on everyone involved.
- They have the potential to improve the well-being of older adults, reduce stigma associated with aging and discrimination against older adults, while also supporting youth development.
- Guides are available to support individuals and groups wishing to develop intergenerational programs.
Combat loneliness and depression by sharing memories: Relive those glory days!

One of the pleasures in life is spending time with family and friends. Another is getting together to relive those good times and memorable moments. New research shows that group activities involving reminiscing can help relieve loneliness and depression.
MIRA & LABARGE CENTRE FOR MOBILITY IN AGING

AGING REIMAGINED

Transforming the experience of aging by transforming the science of aging

Visit us at: mira.mcmaster.ca
WWW.MCMASTEROPTIMALAGINGPORTAL.CA
Follow us on Twitter @MIRAMcMaster

Contact:
Email: info@clsa-elcv.ca
Toll-free: 1-866-999-8303

praina@mcmaster.ca

WWW.CLSA-ELCV.CA