



The strength of our social connections, our feelings of inclusion and support in our relationships and communities, is integral to our physical and mental health.<sup>1-3</sup> People with weak social connections have a 50% greater risk of death than those with stronger connections; an effect on mortality as strong as smoking 15 cigarettes a day.<sup>3</sup> This is particularly important because evidence tells us that in our communities social connections are becoming weaker and people are becoming lonelier and more isolated.<sup>4</sup>

Strong social connections are thought to enhance health by buffering the negative effects of stress and promoting healthier behaviours.<sup>5,6</sup> It turns out that our perceptions of social support can help us cope and recover from stressful situations faster.<sup>7</sup> Effective stress management has been shown to lower anxiety and inflammation while enhancing immunity.<sup>8,9</sup> When we feel connected we value and encourage healthful behaviour for ourselves and others through activities like exercise, eating well, and adhering to medical regimens.<sup>7,8</sup>

We can take action to build social connectedness. For example, our built environments help shape the structure of our community, and can facilitate or impair the development and maintenance of our social connections and health behaviours.<sup>10</sup> Community design can facilitate active mobility, create natural spaces for gathering and promote feeling safe and secure. This way, community design can create environments that foster social connection.<sup>11-14</sup> When our environments become places of social inclusion and support, we are all more resilient.

Data for this report on social connection are from the [My Health My Community survey](#), which was conducted in 2013-2014 across the Lower Mainland of British Columbia. Over 33,000 people, aged 18 years and older, participated in the survey. In this report we describe social connection primarily through two indicators.

- 1) Perception of community belonging (somewhat strong/very strong sense of community belonging is a primary indicator in this report, herein described as strong sense of community belonging),
- 2) The number of people you can confide in, tell your problems to, or call when you really need help (4 or more people to confide in is a primary indicator in this report).

Combined, these indicators provide insight into the strength of our social networks and broader communities to foster health and well-being in our region.



## KEY MESSAGES



**43% OF RESIDENTS** OF BRITISH COLUMBIA'S LOWER MAINLAND **REPORT LOW OR VERY LOW SENSE OF COMMUNITY BELONGING.**



**FEELING LIKE WE BELONG IN OUR COMMUNITY AND HAVING PEOPLE TO CONFIDE IN ARE STRONG INDICATORS OF GENERAL & MENTAL HEALTH.**



**HEALTHY BEHAVIOURS LIKE PHYSICAL ACTIVITY AND EATING FRUITS AND VEGETABLES ARE MORE LIKELY TO BE REPORTED BY THOSE WITH GREATER SOCIAL CONNECTEDNESS.**



PEOPLE WITH **LOWER LEVELS OF SOCIAL CONNECTEDNESS** REPORT **HIGHER LEVELS OF STRESS.**

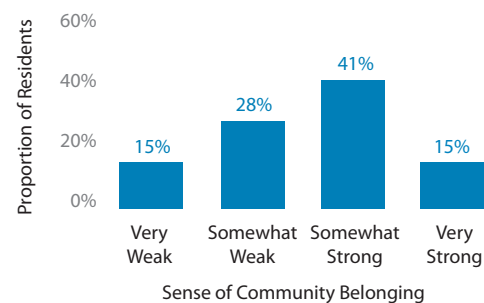


PEOPLE IN NEIGHBOURHOODS WITH **HIGHER RESIDENT-RATED BUILT ENVIRONMENT FEATURES** REPORT **GREATER SOCIAL CONNECTEDNESS.**

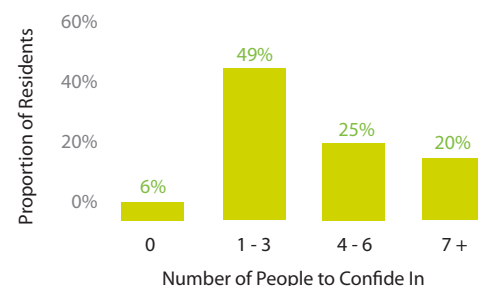


THE LENGTH OF **TIME YOU LIVE IN A NEIGHBOURHOOD IS STRONGLY RELATED TO COMMUNITY BELONGING** REGARDLESS OF WHETHER YOU RENT OR OWN YOUR HOME.

## SENSE OF COMMUNITY BELONGING AMONG RESIDENTS OF BRITISH COLUMBIA'S LOWER MAINLAND



## NUMBER OF PEOPLE TO CONFIDE IN AMONG RESIDENTS OF BRITISH COLUMBIA'S LOWER MAINLAND



# SOCIAL CONNECTION AND GENERAL AND MENTAL HEALTH

SELF-REPORTED GENERAL AND MENTAL HEALTH ARE HIGHLY INFLUENCED BY A SENSE OF COMMUNITY BELONGING AND HAVING PEOPLE TO CONFIDE IN

## COMMUNITY BELONGING AND PERCEPTION OF HEALTH



61% of people with strong community belonging reported both very good/excellent general health and mental health.



People with a very strong sense of community belonging were:

**2.6x**

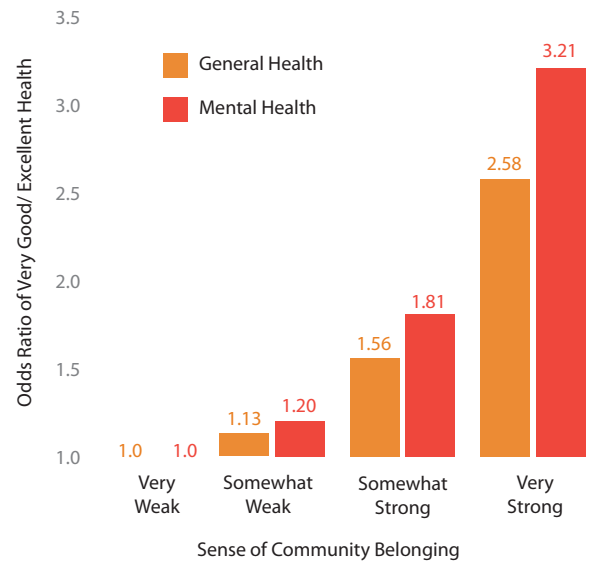
MORE LIKELY TO REPORT VERY GOOD/ EXCELLENT GENERAL HEALTH\*

**3.2x**

MORE LIKELY TO REPORT VERY GOOD/EXCELLENT MENTAL HEALTH\*

\*compared to those with very weak sense of community belonging

ASSOCIATION BETWEEN SENSE OF COMMUNITY BELONGING AND PERCEPTION OF HEALTH



## NUMBER OF PEOPLE TO CONFIDE IN AND PERCEPTION OF HEALTH



Among those with 7+ people to confide in, 61% and 72% reported very good/excellent general health and mental health, respectively.



People with 7+ people to confide in were:

**70%**

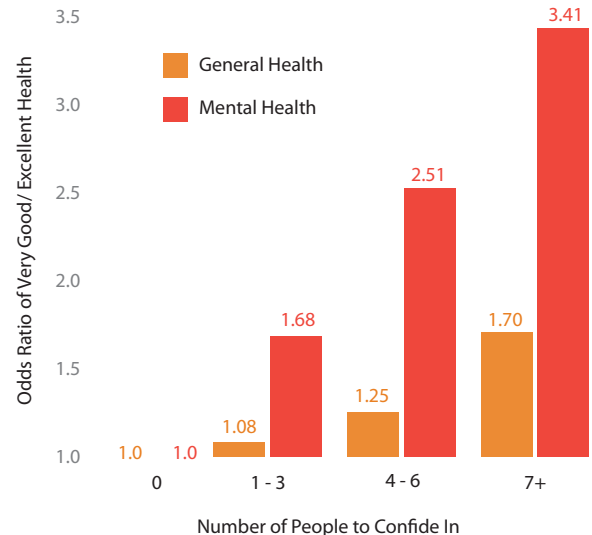
MORE LIKELY TO REPORT VERY GOOD/ EXCELLENT GENERAL HEALTH\*\*

**3.4x**

MORE LIKELY TO REPORT VERY GOOD/EXCELLENT MENTAL HEALTH\*\*

\*\*compared to those with no one to confide in.

ASSOCIATION BETWEEN NUMBER OF PEOPLE TO CONFIDE IN AND PERCEPTION OF HEALTH



Results technical notes in appendix page 10; Model A

# SOCIAL CONNECTION IN OUR POPULATION

# THERE ARE MANY WAYS TO DEVELOP STRONG SOCIAL CONNECTIONS



**Women** were **19% more likely** to have a **strong sense of community belonging** and **54% more likely** to have **4+ people to confide in** than men.



People with a **University degree** were **22% less likely** to have a **strong sense of community belonging** than those without high school degrees, but having **more people to confide in** did not differ by education.



People who identify as **gay and lesbian** were **41% more likely** to have **4+ people to confide in** than those who identify as heterosexual.



People who are **married/common law** were **25% more likely** to have a **strong sense of community belonging** than those who are **single** and **people who live with children** were **23% more likely** than those who live alone.



**Income** has no association with a **strong sense of community belonging** but people with **higher incomes** were more likely to report **4+ people to confide in**.



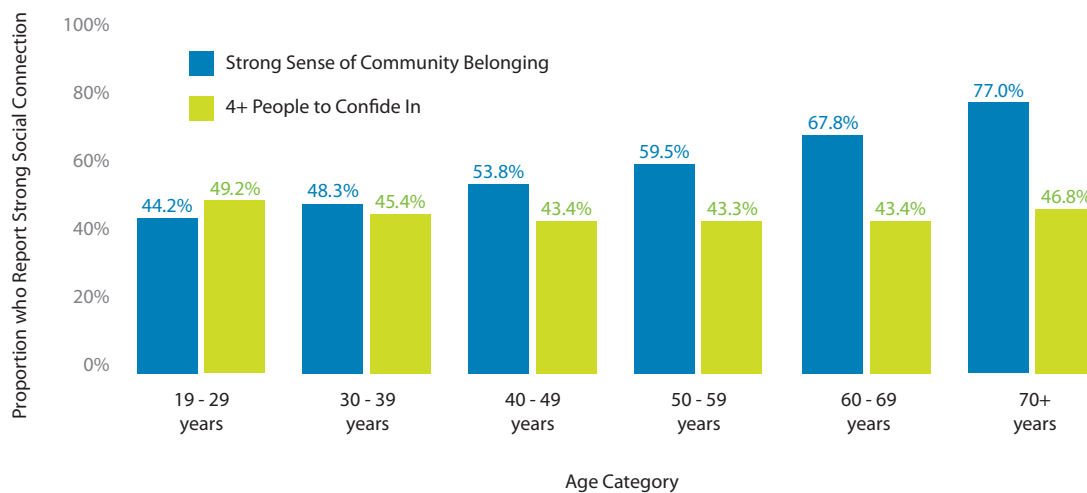
**Aboriginal people** and **South Asian people** were **more likely** to have a **strong sense of community belonging** and **Caucasian people** were more likely to have **4+ people to confide in**.



**New immigrants** with less than **5 years** in Canada were **as likely as Canadian born** to report **strong sense of community belonging** and **4+ people to confide in**.

Results technical notes in appendix page 10; Model B

## AGE AND SOCIAL CONNECTION

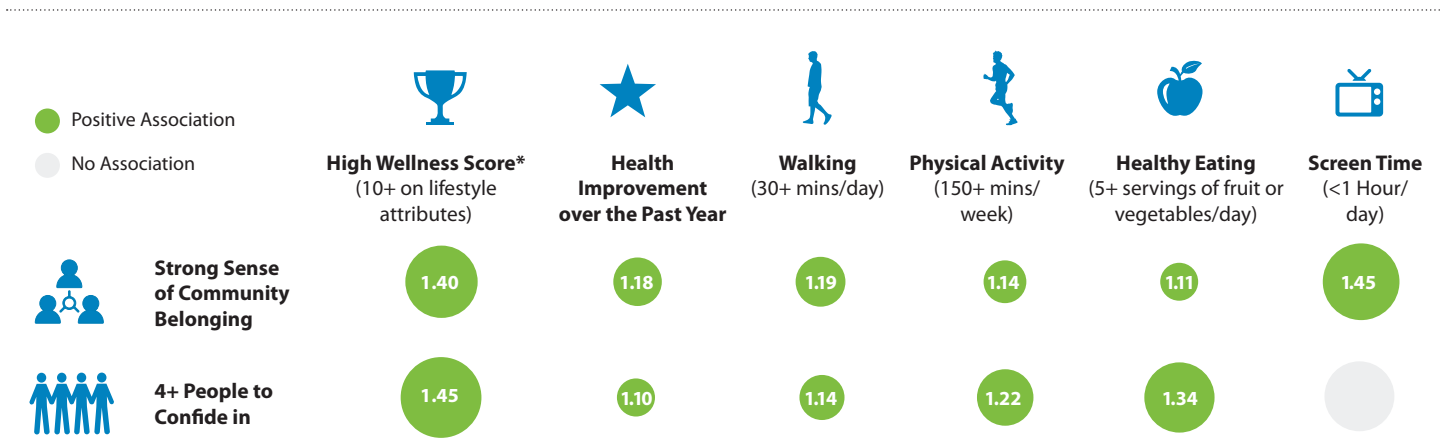


**As people age** a greater proportion have a **strong sense of community belonging**, but a higher proportion of younger people have **4+ people to confide in**.

The association between health and social connection can be described as being healthy for and with the people we care about. The meaningful relationships we develop also improve our ability to manage difficult circumstances and cope with stress. Combined, these features create tangible benefits for our general and mental health.

### ➔ HEALTH BEHAVIOUR

People who indicate a higher level of social connectedness report healthier lifestyle behaviours.



Note: Results technical notes in appendix page 10; Model B

\* Composite index of wellness indicators characterised by eating 5+ servings of fruits or vegetables a day, 30+ minutes of walking a day, 150+ minutes of moderate or vigorous physical activity a week, and not smoking.

Measurement of associations are odds ratios (OR) used to quantify the effect between an exposure and an outcome. For example an OR of 1.45 can be explained as "People who have a high wellness score have 1.45 times the odds (or likelihood) of having 4+ people to confide in."



Those with a **high wellness score** (10+) were **40% more likely** to report a **strong sense of community belonging** and **45% more likely to have 4+ people to confide in**, indicating a tendency for those with positive lifestyle attributes to have stronger social connectedness.



Those who **walk more than 30 minutes** per day or **meet the physical activity recommendation** of 150 minutes or more of moderate to vigorous activity were **14-22% more likely to report stronger social connections**.



People with **less than an hour of screen time** per day were **45% more likely to report a strong sense of community belonging** compared to those with two or more hours of screen time.



Those who **eat 5 or more servings of fruit and vegetables** per day were **34% more likely to have 4+ people to confide in**.

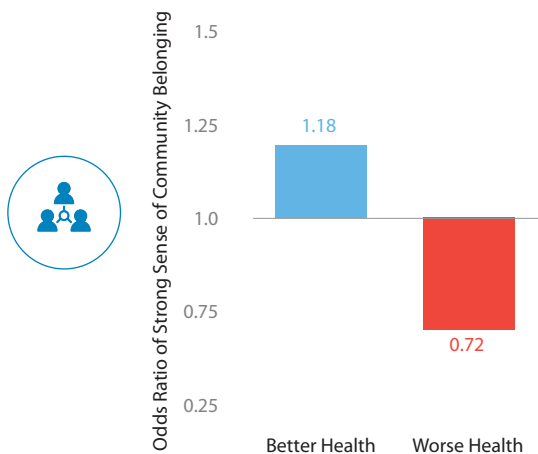
## HEALTH IMPROVEMENTS

Perceiving good health is associated with increased social connection.

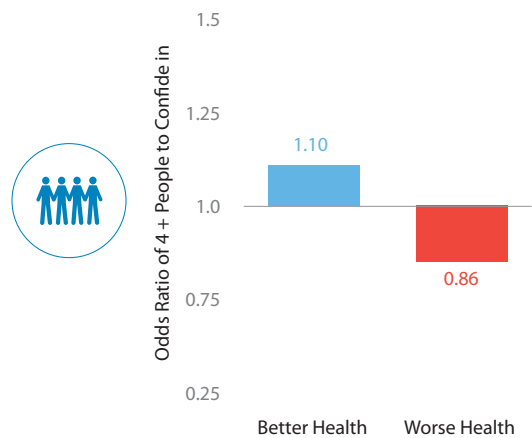


Those who feel their **health declined in the past year**, were **28% less likely to report a strong sense of community belonging** and **14% less likely to report 4+ people to confide in** than those who feel their health remained the same.

CHANGE IN HEALTH COMPARED TO LAST YEAR AND ASSOCIATION WITH COMMUNITY BELONGING



CHANGE IN HEALTH COMPARED TO LAST YEAR AND ASSOCIATION WITH NUMBER OF PEOPLE TO CONFIDE IN



## STRESS

**Strong social connections help us be resilient in the face of life's challenges.** Our friends, family and environment can help us through stressful events by providing support and lending a helping hand.



People who are quite/extremely **stressed** were **half as likely to report a strong sense of community belonging** and **43% less likely to report 4+ people to confide in** than those who indicate their days are not very stressful.

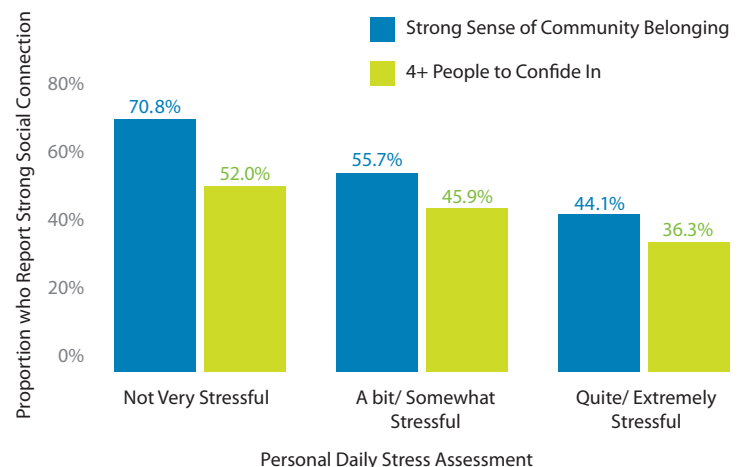


**22%** of quite/extremely **stressed people** indicated **social isolation as a factor in their stress.**



Those with a **mood or anxiety disorder** were **25% less likely to have 4+ people to confide in and a strong sense of community belonging.**

DAILY STRESS LEVEL AND FEELINGS OF SOCIAL CONNECTION

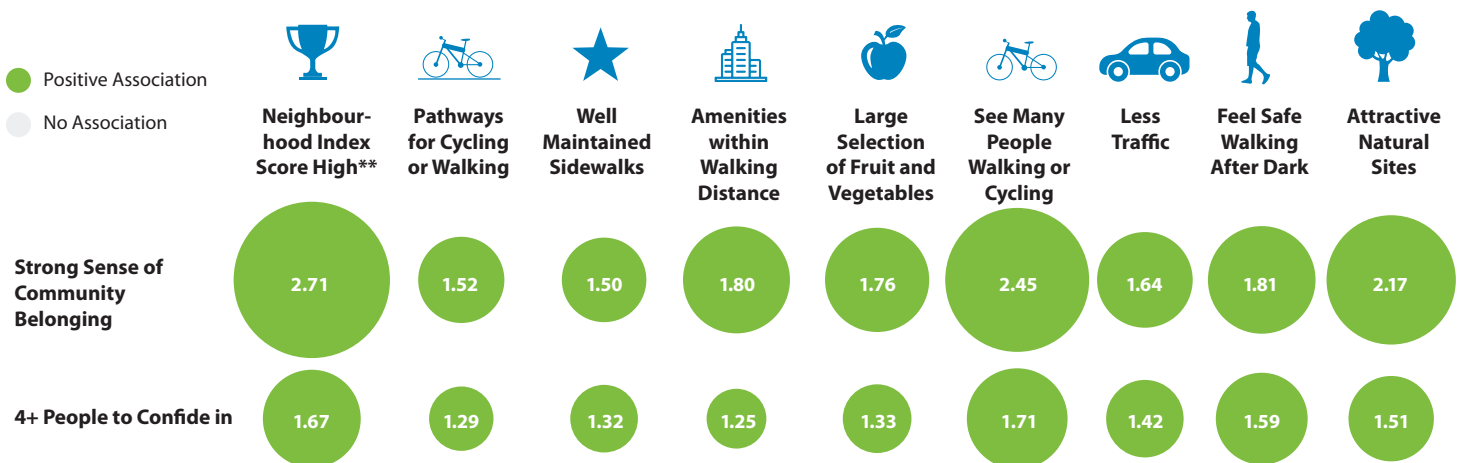


Results technical notes in appendix page 10; Model B

The built environment plays a key role in connecting us to our neighbourhoods and the people we care about. Our built environment includes convenient access to amenities, quality housing, shared community space, and joining infrastructure, such as roads, sidewalks, bike lanes and transit. Municipalities and local agencies play a vital role in designing spaces and developing policies that improve health, equity, and connectedness.

### ➔ PERCEPTION OF NEIGHBOURHOOD BUILT ENVIRONMENT\*

**People who rated their neighbourhood higher on built environment features were also more likely to report stronger sense of community belonging.**



Note: Results technical notes in appendix page 10; Model C

\*Respondents were asked about their perception of some aspects of the built environment in their neighborhood and are not intended to be comprehensive.

\*\*Composite index that combined respondents' perceptions of eight neighbourhood design and environment features.

Measurement of associations are odds ratios (OR) used to quantify the effect between an exposure and an outcome. For example: an OR of 1.45 can be explained as "People who have a high wellness score have 1.45 times the odds (or likelihood) of having 4+ people to confide in."

People who gave a **higher score** on eight perceptions of **their built environment** were **2.7x more likely to report a strong sense of community belonging** and **67% more likely to have 4+ people to confide in.**

People who reported living in areas with **attractive natural sites** were **2.2x more likely to report strong community belonging** and **51% more likely to have 4+ people to confide in.**

Having **pathways for walking and cycling** is associated with a **1.5 fold increase in the reported sense of community belonging.** **Seeing people actively using those pathways has an even stronger effect,** with a 2.5 fold increase in the reported sense of community belonging.

**Feeling safe** in our neighbourhoods after dark is **strongly associated with social connectedness, indicated by** increased likelihood of reporting community belonging (+81%) and having **4+ people to confide in (+59%).**

## ➔ TRANSPORTATION

**Accessible transportation connects people and reduces isolation.** Types of transportation utilized and duration of the commute influences community belonging.



People who walk or cycle to work, were **18% more likely to report a strong sense of community belonging** than those who drive.



People with **longer commutes** (30+ minutes) were **20% less likely to report a strong sense of community belonging.**



People who live within a **5 minute walk of a transit stop** were **15% more likely to report a strong sense of community belonging.**

## ➔ VOLUNTEERING AND FACILITY USE\*

**Having strong social connections may encourage us to give back to our communities, which may strengthen those connections further.**



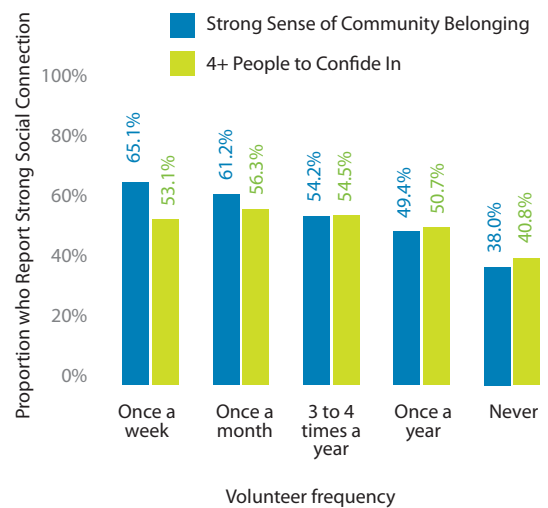
**60%** of Vancouver and Richmond, British Columbia residents **who volunteer report strong community belonging** compared to 38% of those who do not volunteer.



**53%** of Richmond, British Columbia residents **who utilize community facilities**, such as libraries, parks, community and recreation centres, and attend arts events **report strong community belonging** compared to 31% of those who do not use facilities.

\*Data available for Vancouver and Richmond residents only

### VOLUNTEER FREQUENCY AND PROPORTION WHO REPORT STRONG SOCIAL CONNECTION



## ➔ NEIGHBOURHOOD STABILITY

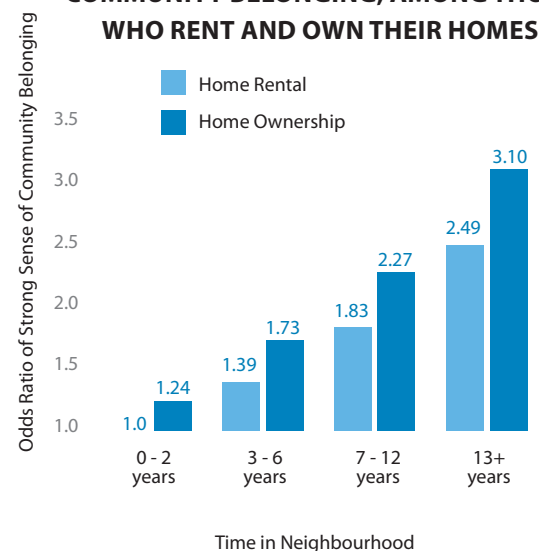
**Feeling stable and secure in the places we live allows us to develop a long-lasting attachment with the people and places around us.** The time someone lives in their neighbourhood is strongly associated with a sense of community belonging.



People, both renters and home owners, who have **lived in their neighbourhood for 13 or more years are 2.5 times more likely to report a strong sense of community belonging** than those who have lived in the community for 2 years or less. However, overall, people who own their homes are more likely to report a strong sense of community belonging.

Results technical notes in appendix page 10; Model B

### TIME IN NEIGHBOURHOOD AND SENSE OF COMMUNITY BELONGING, AMONG THOSE WHO RENT AND OWN THEIR HOMES







## RESOURCES

**Plan H:** offers healthy community planning tools including a social connectedness report ([http://planh.ca/sites/default/files/hfbc-social-connectedness-actionguide-v03\\_07.30.15\\_weblinks.pdf](http://planh.ca/sites/default/files/hfbc-social-connectedness-actionguide-v03_07.30.15_weblinks.pdf))

**Vancouver Foundation Connect and Engage Report (2017):** survey that investigates barriers and opportunities for stronger social engagement among Metro Vancouver residents. (<https://www.vancouverfoundation.ca/connectandengage/key-findings>)

**Healthy Built Environment Toolkit:** Provincial Health Services Authority: tool to assist public health practitioners and planners to apply health evidence in built environment design. (<https://bccdc.ca/our-research/projects/healthy-built-environment-linkages-toolkit>)

**MHMC Atlas:** offers interactive platform for health data across the My Health My Community survey region. (<fraserhealth.ca/MHMCAtlas/index.html>)

**MHMC Community Health Profiles:** health and lifestyle data for communities across the Lower Mainland of British Columbia to help local governments, community groups, and health agencies on planning decisions and policy development at a local level. (<http://www.myhealthmycommunity.org/Results/CommunityProfiles.aspx>)

## CITATIONS

1. House JS, Landis KR, Umberson D. Social Relationships and Health. *Science*. 1988;241:540-545.
2. Shields M. Community belonging and self-perceived health. *Statistics Canada Catalogue no. 82-003*. Ottawa. 2008.
3. Holt-Lundstad J, Smith TB, Layton JB. Social relationships and mortality risk: a meta-analytic review. *PLoS Med*. 2010;7(7):e1000316.
4. McPherson M, Smith-Lovin L, Brashears ME. Social isolation in America: changes in core discussion networks over two decades. *American Sociological Review*. 2006;71:353-375.
5. Holt-Lundstad J. Why social relationships are important for physical health: a systems approach to understanding and modifying risk and protection. *Ann Rev Psychol*. 2017;69:21.1-21.22.
6. Hystad P, Carpiano RM. Sense of community-belonging and health-behaviour change in Canada. *J Epidemiol Community Health*. 2012;66:277-283.
7. Cohen S. Social Relationships and Health. *Am Psychol*. 2004; 59:676-684.
8. Uchino BN. Social support and health: a review of physiological processes potentially underlying links to disease outcomes. *Journal of Behavioral Medicine*. 2006; 29:377-387.
9. Kim DA, Benjamin EJ, Fowler JH, Christakis NA. Social connectedness is associated with fibrinogen level in a human social network. *Proc. Biol. Sci*. 2016;283(1837):20160958.
10. Malambo P, Kengne AP, Villiers AD, Lambert EV, Puoane T. Built environment, selected risk factors and major cardiovascular disease outcomes: a systematic review. *PLoS One*. 2016;11(11):e0166846.
11. Kaczynski AT, Glover TD. Talking the talk, walking the walk: examining the effect of neighbourhood walkability and social connectedness on physical activity. *Journal of Public Health*. 2012; 34(3):382-389.
12. Leyden KM. Social capital and the built environment: the importance of walkable neighborhoods. *Am J Public Health*. 2003;93:1546-1551.
13. Portacolone E, Perissinotto C, Yeh JC, Greysen SR. "I feel trapped": The tension between personal and structural factors of social isolation and the desire for social integration among older residents of a high-crime neighborhood. *Gerontologist*. 2017;10.1093.
14. Buckner-Brown J, Sharify TS, Blake B, Phillips T, Whitten K. Using the community readiness model to examine the built and social environment: a case study of the High Point neighborhood, Seattle, Washington, 2000-2010. *Prev Chronic Dis*. 2014; 11:E194.

## APPENDIX: RESULTS TECHNICAL NOTES

### MY HEALTH MY COMMUNITY SURVEY MODEL VARIABLE CATEGORIES:

VARIABLE CATEGORY	COVARIATES
Demographics	age, gender, ethnicity, income, education, sexual orientation, marital status, time in Canada, household composition, years in neighbourhood, geography
Health and Health Behaviour	number of chronic conditions, mood and anxiety disorder, alcohol consumption, body mass index, stress, health change in past year, screen time, wellness score (composite of fruit and vegetable consumption, walking, physical activity, smoking)
Built Environment	home ownership, commute time and mode, neighbourhood index (composite score of pathways for cycling or walking, well maintained sidewalks, amenities within walking distance, large selection of fruit and vegetables, see people walking or cycling, traffic, feel safe walking after dark, attractive natural sites)

#### Models A: Association between Social Connection and General and Mental Health

Outcomes: very good/ excellent general health or mental health. Predictors: somewhat strong/ very strong sense of community belonging or 4+ people to confide in. Adjusted for demographic variables, health and health behaviour variables, built environment variables

#### Models B: Demographic and Health Determinants of Social Connection

Outcomes: somewhat strong/ very strong sense of community belonging or 4+ people to confide in. Covariates assessed for significant association (determinants) with social connection outcomes include demographic variables, health and health behaviour variables, built environment variables with neighborhood index. For the model that assesses the wellness score determinant for social connection, covariates that create the composite index were removed from that model.

#### Models C: Neighbourhood Built Environment Determinants of Social Connection

Outcomes: somewhat strong/ very strong sense of community belonging or 4+ people to confide in. All covariates are the same as demographic and health determinants model. To derive the associations with the individual design and environment features that make the neighbourhood index composite score, the neighbourhood index was removed as a covariate and replaced by each design and environment feature individually.