Community belonging and health

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Abstract

Objectives

This article explores the relationship between sense of community belonging and self-perceived health.

Data source

The data are from the first half of cycle 1.1 of the Canadian Community Health Survey (CCHS), collected from September 2000 through February 2001.

Analytical techniques

Descriptive information relating socio-demographic variables to sense of community belonging is presented. Multiple logistic regression is used to study the association between sense of community belonging and self-perceived health, while controlling for socio-demographic conditions and other health-related factors.

Main results

Just over half (56%) of Canadians report a strong or somewhat strong sense of belonging to their local community. Community belonging is associated with self-perceived health, even when controlling for socio-economic status, the presence of chronic disease, health behaviours, stress and other factors.

Key words

health status, social identification, health surveys

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- *Researchers have known for some time that social relationships are important for good health.*
- *This study examines the relationship between individuals' sense of belonging to their local community and their self-perceived health. Even after taking account of a range of other factors, Canadians' sense of community belonging is associated with health.*

For some time, research has shown that people who feel attached to and interact with others enjoy better health than do those who are more isolated.[1-3] Some of the best evidence of the benefits of social connections comes from a large study of residents of Alameda County, California through the late 1960s and 1970s. This research indicated that people who reported ties to the community (measured by the numbers of friends and acquaintances, and volunteer and religious affiliations) experienced lower rates of disease and death, compared with people without such links, even when taking into account differences in socio-economic status, health behaviours and the use of health care services.[1] Throughout the 1980s and 1990s, further study demonstrated an association between lack of social relationships and poor health outcomes.[2-3]

More recently, interest in the concept of "social capital" and its association with good health has been growing.[4,5] Social capital has numerous meanings: at its most basic level, the term refers to the notion that relationships with others have important implications for well-being.[9] Individuals can possess social capital by having a large network of friends and acquaintances, but social capital can also be thought of as a type of social savvy. In the broader context, many researchers consider social capital to

Methods

Data source

This analysis is based on the first half of data collected for cycle 1.1 of Statistics Canada's Canadian Community Health Survey (CCHS); these data were collected from September 2000 through February 2001. The CCHS collects information about the health of the population in health regions across the country. (See "Canadian Community Health Survey—Methodological Overview" in this issue.) Data from the CCHS are cross-sectional.

Data from a sample of 48,412 respondents aged 18 or older residing in households in the 10 provinces were used in the analysis. The data were weighted to represent the household population of the provinces over the period of data collection, September 2000 through February 2001. The response rate was 80%.

Analytical techniques

Weighted cross-tabulations were used to estimate the proportions of people reporting a strong or somewhat strong sense of belonging to their local community, by selected socio-demographic characteristics. Multiple logistic regression was used to model the relationship between self-perceived health reported as very good or excellent, and sense of community belonging. Socio-demographic characteristics, and other factors known to influence health (activity restriction, chronic conditions, smoking, stress) were included in the model as control variables.

To account for survey design effects, the variance used in the calculation of coefficients of variation and confidence limits was estimated with the bootstrap technique.[6-8]

Limitations

The content of the CCHS varies somewhat between health regions; this analysis focuses on information collected in all health regions. In multivariate analysis, the principal explanatory variable of interest in relation to health was sense of community belonging. However, data on other variables (for example, social support and psychosocial factors) that may have modified the apparent relationship between community belonging and health were not available from all health regions and were therefore not included in the analysis. When four composite measures of social support were included in a model based on a reduced sample, the magnitude of the odds ratio for community belonging was not substantially affected (data not shown). This suggests that sense of belonging to local community is conceptually distinct from social support and has an independent relationship with self-reported health. However, the findings of other analysis on reduced samples suggested that self-esteem might act as an intermediary between community belonging and health.

The CCHS data are cross-sectional, and associations observed between variables cannot be inferred to be causal. Thus it cannot be concluded that a weak sense of belonging to local community brings about poor health. It may be that poor health influences one's sense of community belonging.

The data are self- (or proxy-) reported, and the degree to which they are biased because of reporting error is unknown. To minimize reporting error in data related to chronic conditions, respondents were instructed to report only conditions that had been "diagnosed by a health professional."

Of the 54,788 interviews (of people aged 12 or older) conducted during the first half of data collection for cycle 1.1, 7.6% were completed by proxy respondents. However, specific sections of the questionnaire, including the question on community belonging, were designed for self-response only; responses to these sections were missing for persons whose interviews were completed by proxy. During data processing, imputation was used to complete data that were not obtained because of proxy response.

The question used to measure sense of community belonging ("How would you describe your sense of belonging to your local community?") may be interpreted differently among survey respondents. For example, the term 'local community' is not defined, and might be understood in a variety of ways. The effect of such differences in interpretation on the observed association between sense of community belonging and self-perceived health is unknown.

The analysis pertains only to individuals' sense of community belonging. Data on the social or material properties of communities that make individuals feel connected to them are not available from the CCHS.

comprise properties of a community, which are indirectly linked to health.[10] So, for example, communities with high levels of social capital might be those that offer opportunities for interaction and that have well-developed public resources such as parks, libraries and recreational facilities.

According to one observer, the drop in memberships in major civic organizations and in socializing with neighbours over the past two decades is an indicator that social capital is on the decline, at least in the United States.[11]

Despite the variety of viewpoints in the literature as to what exactly social capital is, the concept is compelling. Research in the United States indicates that in states where social capital is high, children watch less television, violent crime is less common, and health is better than elsewhere.[4]

Social interaction and health

Interaction between community members can affect health in a number of ways. One way is through the transmission of social norms related to health-promoting or health-damaging behaviours.[12] Another theory suggests that being socially disconnected is chronically stressful, and that a biological response to the stress may be a kind of "accelerated aging."[12] Community involvement may also lead to increased social influence and access to social and material resources, which may in turn provide the health benefits that social status seems to afford.[13,14]

Preliminary data from Statistics Canada's Canadian Community Health Survey (CCHS) provide a unique opportunity to examine self-perceived health in relation to sense of community belonging (see *Methods*). Self-perceived health has repeatedly been shown to be a reliable measure of physical and mental health status and is predictive of future adverse health events.[15-17]

The concept of community belonging used for this analysis differs from the traditional epidemiologic measures of social ties (that is, counts of friends or affiliations) or perceived social and emotional support, upon which most knowledge about the importance of social connections to health is based. To measure connection to the community, the CCHS asks respondents to rank, on a four-point Likert scale, their sense of belonging to their local community.

This analysis provides a profile of people who report a strong sense of belonging to their communities. It also presents the findings of an analysis of community belonging in relation to self-reported health, while taking into account the effects of other pertinent factors.

About half feel connected to community

Preliminary data from the CCHS indicate that just over half (56%) of Canadians feel at least a

Table 1
Percentage of population aged 18 or older reporting strong/somewhat strong sense of community belonging, by selected characteristics, Canada excluding territories, September 2000 to February 2001

	%
Sex	
Men	56
Women	56
Age group	
18-29	48†
30-44	55†
45-64	58†
65+	65†
Children under age 12 in household	
No	56‡‡
Yes	57
Education‡	
Less than secondary graduation	54
Secondary graduation	55
Some postsecondary	56
Postsecondary graduation	56
Household income	
Low	48§
Lower-middle	53††
Middle	56
Upper-middle	57
High	57
Residential area	
Urban	55‡‡
Rural	62

***Data source**: Canadian Community Health Survey, preliminary file, September 2000 to Feburary 2001*
***Notes**: Based on 48,412 respondents aged 18 or older. Where applicable, significance tests were adjusted for multiple comparisons.*
† Significantly different from values in all other categories ($p < 0.05$)
‡ For people aged 25 to 64
§ Significantly lower than values for middle, upper-middle and high income categories ($p < 0.05$)
†† Significantly lower than values for upper-middle and high income categories ($p < 0.05$)
‡‡ Significantly lower than value for other category ($p < 0.05$)

Definitions

To measure *sense of community belonging*, respondents to the Canadian Community Health Survey were asked, "How would you describe your sense of belonging to your local community? Would you say it is: very strong? somewhat strong? somewhat weak? very weak?" For the multivariate analysis, respondents were categorized in two groups: very strong or somewhat strong; and somewhat weak or very weak.

Self-perceived health was assessed with the question, "In general, would you say your health is: excellent? very good? good? fair? poor?" Based on their response to this question, individuals were categorized into two groups: very good or excellent; and poor, fair or good.

Four *age groups* were established: 18 to 29, 30 to 44, 45 to 64, and 65 or older.

Marital status was categorized into three groups: single (never married); divorced, separated or widowed; and married or common-law.

A variable categorizing respondents as living in households with *children under age 12* or not was derived from information provided on household composition.

Education was categorized into four groups: less than secondary graduation, secondary graduation, some postsecondary, and postsecondary graduation. For the bivariate analysis, the variable measuring education was applied to the population aged 25 through 64.

Household income level is a derived variable that adjusts the reported post-transfer, pre-tax household income from all sources for household size. Five household income groups were defined:

Household income group	People in household	Total household income
Lowest	1 to 4	Less than $10,000
	5 or more	Less than $15,000
Lower-middle	1 or 2	$10,000 to $14,999
	3 or 4	$10,000 to $19,999
	5 or more	$15,000 to $29,999
Middle	1 or 2	$15,000 to $29,999
	3 or 4	$20,000 to $39,999
	5 or more	$30,000 to $59,999
Upper-middle	1 or 2	$30,000 to $59,999
	3 or 4	$40,000 to $79,999
	5 or more	$60,000 to $79,999
Highest	1 or 2	$60,000 or more
	3 or more	$80,000 or more

Residential area was categorized as urban or rural, based on Statistics Canada's geographical classifications for the 1996 Census at the Census Enumeration Area level.

Respondents were categorized as *currently having a job* if they reported that in the 7 days before the interview they had either worked at, or been absent from, a paying job. Questions related to this variable were asked of respondents under age 75.

To measure *activity restriction*, respondents were asked about health problems that affect daily activities. If they indicated that, because of a long-term physical or mental condition or a health problem (one that had lasted or was expected to last six months or more), they sometimes or often had difficulty hearing, seeing, communicating, walking, climbing stairs, bending, learning or doing any similar activities, or were limited in the kind or amount of activity they could do at home, at school, at work or in other activities such as transportation to or from work or during leisure time, they were considered to have an activity restriction.

To measure the presence of *chronic conditions*, respondents were asked about specific long-term conditions that had lasted or were expected to last six months or more and that had been diagnosed by a health professional. Counts of chronic conditions were categorized as none, one, and two or more, based on responses to questions about diagnoses of the following conditions: asthma, fibromyalgia, arthritis or rheumatism, back problems, high blood pressure, migraine headaches, chronic bronchitis, emphysema or chronic obstructive pulmonary disease, diabetes, epilepsy, heart disease, cancer, stomach or intestinal ulcers, effects of a stroke, urinary incontinence, bowel disorder such as Crohn's disease or colitis, Alzheimer's disease or any other dementia, cataracts, glaucoma, a thyroid condition, Parkinson's disease, multiple sclerosis, chronic fatigue syndrome, multiple chemical sensitivities.

Smoking status was determined from the question, "At the present time, do you smoke cigarettes daily, occasionally, or not at all?"

Stress was determined from the question, "Thinking about the amount of stress in your life, would you say that most days are: not at all stressful, not very stressful, a bit stressful, quite a bit stressful or extremely stressful?" Respondents were considered to have high stress if they responded that most days were quite a bit or extremely stressful and low stress if they answered not stressful at all, not very stressful or a bit stressful.

somewhat strong sense of belonging to their local community (data not shown). The proportions of men and women who reported a sense of community belonging at this level did not differ (Table 1).

Young adults were the least likely to report feeling at least somewhat strongly connected to their community. At progressively older ages, increasingly larger proportions of people reported feeling connected. This finding is consistent with research that has identified a positive link between age and sense of community; observers conjecture that as people age, they have more time to participate in community life.[18]

Time pressures experienced by people with young children may explain why they were only slightly more likely than others to feel connected to the community. Although children's involvement in school and organized activities, as well as informal play, may facilitate their parents' sense of community belonging, the demands of childrearing may interfere with active community involvement.

The literature reports conflicting findings on the relationship between educational attainment and social involvement. In one study, educational attainment was identified as the single most important predictor of social engagement,[5] while other research has shown a negative association between educational attainment and neighbourhood cohesion.[19,20] In contrast, data from the CCHS indicate neither a positive nor a negative association between sense of community belonging and level of education. This diversity of findings in relation to education may reflect conceptual or measurement differences in the social variables used in the various studies.

For household income, a limited positive association with sense of community belonging did emerge. People in lower income groups were less likely to report being strongly connected to their communities, compared with those in middle or upper income groups. There were no differences between people in the middle, upper middle or high income groups. These findings suggest that some threshold of income increases the potential for strong connection to local community.

Finally, people living in rural areas were far more likely to report a strong or somewhat strong sense of community belonging than were people in urban areas.

Community attachment relates to health

Sense of community belonging was strongly related to self-perceived health status, even when the effects of numerous other influences on health were taken into account (Table 2). Compared with people reporting a very or somewhat weak sense of belonging to their local community, those who felt very strongly connected had nearly twice the odds of reporting excellent or very good health. Indeed, leaving aside the "very weak" sense of community belonging, for every step up this scale, the odds of reporting excellent or very good health increased with the strength of sense of community belonging. This early finding from the CCHS provides evidence that social integration is linked to health status, an association that could be further explored as more data become available.

The results of the multivariate analysis in Table 2 also reinforce some familiar relationships between level of health and socio-demographic factors, health behaviours and stress. Higher levels of education and household income were positively associated with excellent or very good health. Being employed outside the home was also linked with favourable levels of health. Of course, the cross-sectional nature of the data precludes interpretation of the direction of these relationships. Reverse causation, or the idea that ill health is the precursor of unemployment, underemployment or low income has been offered as an explanation for the income-health relationship.[21] Other research, which has followed individuals over a number of years, shows that reverse causation is not likely the main contributor to the relationship between income and health.[22]

People living in urban areas had lower odds of reporting excellent or very good health, compared with residents of rural areas. As expected, chronic conditions and activity restrictions were both associated with lower self-perceived health. Not

Table 2
Adjusted odds ratios for reporting very good or excellent health, by sense of community belonging and other selected characteristics, population aged 18 or older, Canada excluding territories, September 2000 to February 2001

	Adjusted odds ratio	95% confidence interval
Sense of community belonging		
Very strong	1.7*	1.6, 1.9
Somewhat strong	1.3*	1.2, 1.4
Somewhat weak	1.0	1.0, 1.1
Very weak†	1.0	...
Sex		
Women	1.1*	1.1, 1.2
Men†	1.0	...
Age group		
18-29	1.6*	1.4, 1.9
30-44	1.3*	1.1, 1.4
45-64	1.0	0.9, 1.1
65 or older†	1.0	...
Marital status		
Single	1.0	0.9, 1.1
Divorced/Separated/Widowed	1.0	1.0, 1.1
Married/Common-law†	1.0	...
Children under age 12 in household		
Yes	1.1	1.0, 1.2
No†	1.0	...
Education		
Postsecondary graduation	1.9*	1.7, 2.0
Some postsecondary	1.6*	1.4, 1.8
Secondary graduation	1.5*	1.4, 1.6
Less than secondary graduation†	1.0	...
Household income		
Highest	2.5*	2.1, 3.0
Upper-middle	1.8*	1.5, 2.0
Medium	1.4*	1.2, 1.6
Lower-middle	1.1	0.9, 1.3
Lowest†	1.0	...
Currently has job		
Yes	1.4*	1.3, 1.5
No†	1.0	...
Residential area		
Urban	0.9*	0.9, 1.0
Rural†	1.0	...
Activity restriction		
Yes	0.4*	0.4, 0.4
No†	1.0	...
Chronic conditions		
Two or more	0.3*	0.2, 0.3
One	0.6*	0.5, 0.6
None†	1.0	...
Smoking status		
Daily	0.7*	0.7, 0.8
Occasional	0.9	0.8, 1.1
Non-smoker†	1.0	...
Stress		
High	0.7*	0.6, 0.7
Low†	1.0	...

Data source: *Canadian Community Health Survey, preliminary file, September 2000 to February 2001*
Notes: *Based on 47,160 respondents aged 18 or older. An "unknown" category for income was included in the analysis to maximize the sample size; the odds ratio is not shown. Figures were rounded; some odds ratios having confidence intervals with 1.0 as the lower or upper limit were significant.*
† Reference category
... Not applicable
** $p < 0.01$*

surprisingly, people who smoked daily had significantly lower odds of reporting excellent or very good health, compared with non-smokers. Finally, individuals reporting high levels of stress in their daily lives had lower odds of excellent or very good health, compared with people under less stress.

Still, even after all these factors were taken into account, the preliminary CCHS data show an important relationship between sense of community belonging and self-perceived health.

Concluding remarks

This analysis indicates an association between sense of community belonging and health. This finding comes at a time when many researchers are suggesting that social capital is eroding or that the notion of "community" is disappearing in highly urbanized, post-industrial societies like Canada's. The availability of full data from the CCHS in the near future will provide the opportunity to compare sense of community belonging among regions of the country. This will allow for research that examines the role of community belonging in mediating health outcomes at the regional level, as well as studies of policies and practices in place at smaller geographic scales that enhance or diminish community belonging. ●

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