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Abstract

According to results from the 2007/2008 Canadian Community Health Survey, about 1 in 10 Canadians aged 12 to 44—9% of males and 12% of females, an estimated 1.5 million people—experienced chronic pain. The prevalence of chronic pain increased with age and was significantly higher among people in households where the level of educational attainment was low and among the Aboriginal population. The most common pain-related chronic conditions at ages 12 to 44 were back problems and migraine headaches. Chronic pain prevented at least a few activities in the majority of sufferers. It was associated with activity limitations and needing help with everyday tasks, and had work-related implications. Individuals with chronic pain were frequent users of health care services, and were less likely than people without chronic pain to respond positively on measures of well-being, including mood and anxiety disorders.

Key words

ADL, anxiety disorders, cross-sectional studies, health status, health surveys, IADL, mood disorders, prevalence, quality of life

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Pain lasting for several months,[1] or persisting after an injury has healed,[2] is considered chronic. Chronic pain affects not only individuals, but also their families, the health care system, and society as a whole.[3] It may lead to other health concerns such as eating problems, sleep disturbances and fatigue.[4-6] Absences from school, work and social activities have been linked to chronic pain.[3,7,8] People may lose or change jobs, and in more extreme cases, cannot work at all.[3,5,9,10] Mental health may be compromised; chronic pain has been associated with anxiety, depression, loneliness, and suicide ideation and attempts.[11]

Although chronic pain is usually associated with aging, it is relatively common at younger ages. However, few large, population-based studies have examined chronic pain among non-elderly people.[4,12-14] Instead, research on pain at younger ages has focused on specific chronic conditions and pain sites,[15-17] small sectors of the population such as occupational or ethnic groups,[18-20] or convenience samples such as children attending certain schools or living in certain areas.[4,21] Results from such studies provide only a partial picture of chronic pain in younger people.

This population-based analysis uses data from the 2007/2008 Canadian Community Health Survey (CCHS). It provides estimates of the prevalence of chronic pain by socio-demographic characteristics for a sample of 57,660 respondents aged 12 to 44, representing the 14.6 million Canadians in that age range (Appendix Table A). Chronic pain is examined in relation to chronic conditions, impact on functioning, work characteristics, health care use, and general well-being and mental health.

The data

The cross-sectional Canadian Community Health Survey (CCHS) collects information about health status, health care use and health determinants for about 98% of the population aged 12 or older. It covers household residents in the provinces and territories; members of the Canadian Forces and residents of institutions, Indian reserves and other Aboriginal settlements, and some remote areas are excluded.

Data collection for cycle 4.1 began in January 2007 and continued over 24 months. The sample size was 131,959; the response rate was 76.4%. To account for survey design effects, in this analysis, standard errors and coefficients of variation were estimated using the bootstrap technique.[22,23] A significance level of $p < 0.05$ was used.

This analysis pertains to 57,660 CCHS respondents aged 12 to 44, representing an estimated 14.6 million Canadians (Appendix Table A). Proxy respondents (1,062) were excluded from the study sample. (The prevalence of pain did not differ significantly between proxy and non-proxy respondents). An estimated 63% of the study population were aged 25 to 44, and 69% were married or living in common-law relationships. The majority lived in households where at least one member was a postsecondary graduate (81%) and resided in urban areas (84%). An estimated 4% were Aboriginal; 76% defined their cultural or racial background as "White." An estimated 11% reported chronic pain, and more than half of these people characterized their pain as at least "moderate."

Respondents were asked, "Are you usually free of pain or discomfort?" Those who answered "No" were considered to have *chronic pain* and were asked to assess the usual intensity as "mild," "moderate" or "severe." They were also asked how many activities their pain prevents. Those who responded "a few," "some" or "most" (versus "none") were considered to have *pain that prevents activities.*

Respondents were categorized into four *age groups*: 12 to 17; 18 to 24; 25 to 34; and 35 to 44.

Among respondents aged 25 to 44, *marital status* was categorized as single (never married); married/common-law; or separated/divorced/widowed.

Based on the highest level of *education* in the household, respondents were grouped into four categories: less than secondary graduation, secondary graduation, some postsecondary, and postsecondary graduation.

Racial/Cultural group was defined as White, Aboriginal, or other (includes multiple racial/cultural origins).

Residence identified whether a respondent lived in an urban or rural area based on 2006 Census geography.

The presence of *chronic conditions* was established by asking respondents if a health professional had diagnosed them as having a condition that had lasted, or was expected to last, at least six months. The interviewer read a list of conditions. Individual conditions reported in this study included back problems (excluding fibroymyalgia and arthritis), arthritis, migraine, mood disorder, anxiety disorder, stomach/intestinal ulcers, bowel disorder/Crohn's disease or colitis, and diabetes.

A more comprehensive list of chronic conditions was used to estimate the total *number of chronic conditions* each respondent had. In addition to those listed above, cancer, asthma, high blood pressure, heart disease, effects of stroke, urinary incontinence, Alzheimer's disease or other dementia, emphysema, and chronic obstructive pulmonary disease were included. The count of chronic conditions was categorized into four groups: none, 1, 2, and 3 or more.

Activity restriction was based on a response of "often" or "sometimes" (versus "never") to the questions: "Does a long-term physical condition or mental condition or health problem, reduce the amount or the kind of activity you can do . . .

- . . . at home?"
- . . . at school?"
- . . . at work?"(respondents aged 25 to 44)
- . . . in other activities, for example, transportation or leisure?"

Perceived health was based on the question, "In general would you say your health is:…" The five response categories were combined into two groups: good/very good/excellent and fair/poor. A similar question was asked for *perceived mental health*.

Among respondents aged 25 to 44, *perceived work stress* at the main job or business in the past 12 months was measured by asking: "Would you say that most days at work were: not at all stressful? a bit stressful? quite a bit stressful? extremely stressful?" Respondents who answered "quite a bit" or "extremely stressful" were classified as having high perceived work stress.

Based on respondents' working status in the week before the interview, they were classified as *worked at a job last week*; *absent from work last week*; *did not have a job last week;* or *permanently unable to work.* These variables were restricted to respondents aged 25 to 44.

This study has a number of limitations. Respondents were not asked about the duration, frequency or site of their pain, and no distinction is made between cancer and non-cancer pain. Information on medications, especially those that may have an impact on pain, was not collected. The data are cross-sectional, so no conclusions can be made about temporal order, that is, whether pain led to activity limitations or vice versa. Finally, chronic conditions were self-reported and not verified by another source.

One in ten

In 2007/2008, more than 1.5 million Canadians aged 12 to 44—9% of males and 12% of females—reported chronic pain (Table 1). The prevalence of chronic pain rose with advancing age: among 12- to 17-year-olds, 2% of males and 6% of females reported chronic pain; at ages 35 to 44, the corresponding figures were 14% and 17%.

Consistent with previous research,[9,10,20,24,25] data from the 2007/2008 CCHS show that females aged 12 to 44 had higher odds of chronic pain than did males in that age range. However, the relationship was no longer significant when the presence of chronic conditions was considered, suggesting that they largely account for the association between gender and pain (data not shown).

Household educational attainment was associated with pain. People in households where no one had graduated from secondary school were almost twice as likely to report chronic pain as

Table 1
Prevalence of chronic pain, by sex and selected characteristics, household population aged 12 to 44, Canada, 2007/2008

	Males				Females			
	Estimated number		95% confidence interval		Estimated number		95% confidence interval	
Characteristic	'000	%	from	to	'000	%	from	to
Total with chronic pain	**669**	**9.1**	**8.6**	**9.6**	**867**	**11.9§**	**11.4**	**12.5**
Pain intensity								
Mild	257	3.5	3.2	3.8	303	4.2§	3.8	4.5
Moderate	323	4.4	4.0	4.8	451	6.2§	5.8	6.6
Severe	88	1.2	1.0	1.4	105	1.5	1.3	1.6
Age group								
12 to 17†	30	2.4	2.0	2.9	71	5.9§	5.0	6.7
18 to 24	99	6.5*	5.5	7.6	131	9.2*§	8.0	10.3
25 to 34	212	9.7*‡	8.7	10.7	261	11.8*‡§	10.9	12.7
35 to 44	327	13.7*‡	12.7	14.8	404	16.7*‡§	15.7	17.8
Marital status (ages 25 to 44)								
Single (never married)†	143	11.3	10.0	12.6	147	14.5§	12.9	16.1
Married/Common-law	356	11.5	10.6	12.4	437	13.6§	12.8	14.5
Separated/Divorced/Widowed	40	20.1*	16.1	24.1	80	20.1*	17.4	22.9
Highest level of education in household								
Less than secondary graduation	39	17.0*	14.0	20.1	39	19.0*	15.6	22.5
Secondary graduation	60	9.4	7.8	11.1	88	14.5*§	12.3	16.7
Some postsecondary	45	11.7*	9.4	13.9	57	13.8*	11.6	16.0
Postsecondary graduation†	450	8.7	8.1	9.3	610	11.4§	10.8	12.0
Missing	74	8.1	6.7	9.5	73	10.5§	8.7	12.3
Racial/Cultural group								
White†	503	9.3	8.7	9.8	619	11.6§	11.1	12.2
Aboriginal (off reserve)	46	15.4*	12.5	18.2	53	16.5*	13.9	19.1
Other (includes multiple racial/cultural origins)	101	7.1*	5.7	8.4	171	11.9§	10.4	13.4
Missing	19	9.7	6.7	12.7	23	13.3	9.4	17.1
Residence								
Urban†	536	8.7	8.2	9.3	721	11.8§	11.2	12.4
Rural	133	11.0*	9.8	12.2	146	12.6	11.5	13.6

† reference category
* significantly different from estimate for reference category (p<0.05)
‡ significantly different from preceding age group (p<0.05)
§ significantly different from estimate for males (p<0.05)
Source: 2007/2008 Canadian Community Health Survey, 24-month file.

were those in households with at least one postsecondary graduate.

Compared with people whose racial/cultural background was White, Aboriginal people were more likely to report pain. This may, in part, be explained by the higher prevalence of pain-related chronic conditions (back problems, migraine, arthritis, stomach/intestinal ulcers, anxiety disorders and mood disorders) among the Aboriginal population (data not shown).

And for males, chronic pain was more common among those in rural than urban areas.

Chronic conditions

Back problems were reported by more than 2 million people aged 12 to 44 (14% of males and 17% of females), about a third of whom also reported chronic pain (Table 2). Migraine headaches, too, were common at these ages, especially among females (17%), and almost a quarter of these females reported chronic pain. Arthritis, relatively uncommon at ages 12 to 44 (fewer than 5%), was highly associated with pain; about half of males and females with arthritis also reported chronic pain. Not surprisingly, the more chronic conditions people had, the more likely they were to report chronic pain.

Activity limitations

More than 60% of 12- to 44-year-olds with chronic pain reported experiencing activity limitations "sometimes" or "often," compared with 15% of those who did not have chronic pain (Table 3). These limitations touched all domains of life—home, school, work, transportation and leisure—and persisted in multivariate analysis that accounted for age, socio-demographic characteristics and chronic conditions (data not shown).

The majority of males (64%) and females (74%) with chronic pain reported that it not only limited but prevented at least a few activities. The prevalence of activity-preventing pain rose with age and was consistently higher among females than males. The difference between the sexes was particularly pronounced at ages 12 to 17: 66% of females with chronic pain reported that it prevented activities, compared with 42% of males.

Needing help

Activities of daily living (ADL) (activities vital to retaining independence) include personal care such as bathing, dressing, eating and taking medication, as well as moving about inside the house. *Instrumental activities of daily living (IADL)* further assess functional independence and include preparing meals, doing everyday housework, getting to appointments, running errands such as grocery shopping, and banking and paying bills. People who needed help with ADL or IADL tasks because of health problems were identified. Because most 12- to 17-year-olds, regardless of their health status, require help with many IADL, this variable was examined only for people aged 18 to 44.

Very few pain-free 18- to 44-year-olds needed help with ADL, but among those with chronic pain, 3% of men and 5% of women required assistance (Table 3). Similarly, while 2% of people without chronic pain needed help with IADL, the figures were 13% for men and 23%

Table 2
Percentage reporting chronic conditions and chronic pain, by sex, household population aged 12 to 44, Canada, 2007/2008

	Chronic condition				Prevalence of chronic pain among those with chronic condition			
	Estimated number		95% confidence interval		Estimated number		95% confidence interval	
	'000	%	from	to	'000	%	from	to
Males								
Chronic condition								
Back problems	1,058	14.4	13.8	15.1	313	29.6	27.5	31.7
Migraine	542	7.4	6.9	7.8	106	19.7	17.3	22.0
Mood disorder	277	3.8	3.5	4.1	81	29.2	25.1	33.4
Anxiety disorder	255	3.5	3.2	3.8	56	21.8	18.5	25.1
Arthritis	249	3.4	3.1	3.7	122	49.0	44.3	53.8
Stomach/Intestinal ulcers	165	2.3	2.0	2.5	44	26.6	21.1	32.1
Bowel disorder/Crohn's Disease or colitis	152	2.1	1.8	2.3	37	24.1	18.9	29.3
Diabetes	106	1.4	1.2	1.7	21[E]	19.7[E]	13.4	26.1
Number of chronic conditions								
None[†]	4,728	65.4	64.5	66.2	184	3.9	3.5	4.3
One	1,698	23.5	22.8	24.2	208	12.3*	11.0	13.6
Two	551	7.6	7.1	8.1	147	26.8*‡	23.9	29.6
Three or more	255	3.5	3.2	3.8	107	42.1*‡	37.6	46.7
Females								
Chronic condition								
Back problems	1,215	16.7§	16.1	17.4	408	33.6§	31.6	35.6
Migraine	1,220	16.8§	16.2	17.5	296	24.3§	22.6	26.0
Mood disorder	561	7.7§	7.3	8.2	177	31.7	28.9	34.5
Anxiety disorder	540	7.4§	7.0	7.9	156	28.9§	26.0	31.8
Arthritis	327	4.5§	4.2	4.8	160	48.9	45.2	52.6
Stomach/Intestinal ulcers	151	2.1	1.8	2.3	51	33.9§	29.1	38.6
Bowel disorder/Crohn's Disease or colitis	312	4.3§	4.0	4.6	98	31.5§	28.1	34.9
Diabetes	99	1.4	1.2	1.6	28	28.3	21.3	35.3
Number of chronic conditions								
None[†]	3,993	55.6§	54.7	56.4	169	4.2	3.7	4.7
One	1,830	25.5§	24.7	26.2	240	13.1*	12.0	14.2
Two	810	11.3§	10.7	11.8	190	23.5*‡	21.5	25.5
Three or more	555	7.7§	7.3	8.2	248	44.7*‡	41.8	47.6

[†] reference category
* significantly different from estimate for reference category (p<0.05)
‡ significantly different from preceding category (p<0.05)
§ significantly different from estimate for males (p<0.05)
[E] interpret with caution (coefficient of variation 16.6% to 33.3%)
Source: 2007/2008 Canadian Community Health Survey, 24-month file.

for women with chronic pain. Among people with chronic pain, women were more likely than men to need help moving about inside the house, doing housework, running errands, and preparing meals. The percentages of men and women with chronic pain who needed help with personal care or managing finances did not differ significantly (data not shown).

Employment

In the week before they were interviewed, the majority of 25- to 44-year-olds had worked at a job. However, while 87% of men and 72% of women who were pain-free had done so, the figures were 78% for men and 65% for women who reported chronic pain (Table 3). As these differences suggest, people with chronic pain were more likely than the no-pain group to be without a job in the week before their interview or to be permanently unable to work.

Workers with chronic pain were no more likely than those without chronic pain to be absent from their jobs. But possibly as a consequence of trying to cope with pain-related work limitations, those with chronic pain were more likely to report work stress.

Health care

Not surprisingly, people aged 12 to 44 with chronic pain were more likely than those without chronic pain to use a variety of health care services, including many not covered by public health insurance (Table 4). For example, 19% of males and 18% of females with chronic pain had consulted a physiotherapist in the previous 12 months, compared with 7% of males and females who were generally pain-free.

Well-being

As might be expected, people with chronic pain were less likely than those who were generally pain-free to assess their well-being positively (Table 5). While almost all (more than 95%) of 12- to 44-year-olds who were free of chronic pain described their health as good, very good or excellent, the percentages were considerably lower for those with chronic pain: 80% of males and 76% of females. As well, 23% of people with chronic pain reported that their health was worse than it had been a year earlier; this was the case for 7% of those who were pain-free.

People with chronic pain were less likely than those without it to be satisfied with their lives or to have a positive sense of community belonging. They were more likely to perceive life as stressful and were less likely to report good, very good or excellent mental health.

Mood disorders such as depression and dysthymia, and anxiety disorders such as a phobia and panic disorder are relatively common at ages 12 to 44, especially among females (Table 2). The prevalence of mood and anxiety orders was particularly high among people with chronic pain (Table 5). For example, 21% of females with chronic pain had a mood disorder and 18% had an anxiety disorder; among women who were pain-free, 6% reported a mood disorder, and 6%, an anxiety disorder.

Table 3
Measures of functioning and work characteristics, by sex and chronic pain status, household population aged 12 to 44, Canada, 2007/2008

	Males				Females			
	Estimated number '000	%	95% confidence interval from	to	Estimated number '000	%	95% confidence interval from	to
Activity limitation (sometimes/often)								
Chronic pain	417	62.4*	59.6	65.2	547	63.3*	61.1	65.5
No chronic pain†	970	14.6	13.9	15.3	980	15.3	14.7	16.0
Activity limitation at home (sometimes/often)								
Chronic pain	269	40.2*	37.4	43.0	426	49.2*‡	46.8	51.6
No chronic pain†	369	5.5	5.1	6.0	459	7.2‡	6.7	7.7
Activity limitation at school (sometimes/often)								
Chronic pain	31	21.3*	16.9	25.8	77	31.8*‡	27.5	36.2
No chronic pain†	139	5.0	4.4	5.5	191	6.8‡	6.1	7.5
Activity limitation at work (sometimes/often) (ages 25 to 44)								
Chronic pain	198	42.1*	38.5	45.7	227	44.5*	41.7	47.4
No chronic pain†	271	7.0	6.4	7.7	254	7.5	6.9	8.2
Activity limitation - other (sometimes or often)								
Chronic pain	300	44.9*	42.0	47.8	411	47.5*	45.2	49.7
No chronic pain†	432	6.5	6.0	7.0	475	7.4‡	7.0	7.9
Help needed for ADL								
Chronic pain	23	3.4*	2.4	4.4	47	5.4*‡	4.3	6.6
No chronic pain†	28	0.4	0.3	0.6	31	0.5	0.4	0.6
Help needed for IADL (ages 18 to 44)								
Chronic pain	85	13.3*	11.2	15.3	180	22.6*‡	20.4	24.8
No chronic pain†	89	1.6	1.4	1.9	122	2.3‡	2.0	2.6
Worked at a job last week (ages 25 to 44)								
Chronic pain	409	77.5*	74.8	80.2	425	65.3*‡	62.6	68.0
No chronic pain†	3,420	87.3	86.5	88.1	2,770	71.7‡	70.6	72.8
Absent from work last week (ages 25 to 44)								
Chronic pain	31	5.8	4.3	7.3	48	7.3	6.0	8.7
No chronic pain†	183	4.7	4.2	5.2	339	8.8‡	8.1	9.5
Did not have a job last week (ages 25 to 44)								
Chronic pain	57	10.8*	8.9	12.7	145	22.3*‡	19.9	24.7
No chronic pain†	297	7.6	6.9	8.2	743	19.2‡	18.3	20.2
Permanently unable to work (ages 25 to 44)								
Chronic pain	31	5.9*	4.6	7.3	33	5.0*	3.9	6.2
No chronic pain†	17E	0.4E	0.3	0.6	12E	0.3E	0.2	0.4
Work stress (ages 25 to 44)								
Chronic pain	193	40.3*	36.9	43.6	202	39.2*	36.1	42.3
No chronic pain†	1,132	29.2	28.2	30.3	1,059	31.5‡	30.3	32.8
Population reporting chronic pain that prevents a few/some/most activities	**424**	**63.5**	**60.9**	**66.1**	**634**	**73.6‡**	**71.4**	**75.9**
Age group								
12 to 17†	13	42.0	32.5	51.4	46	65.6‡	57.6	73.6
18 to 24	58	58.0*	50.1	65.9	93	71.9‡	65.6	78.2
25 to 34	139	65.7*	61.0	70.3	199	76.7*‡	72.8	80.6
35 to 44	215	65.8*	62.1	69.5	297	73.6‡	70.2	77.1
Number of activities prevented								
None	244	36.5	33.9	39.1	227	26.4‡	24.1	28.7
A few	210	31.4	28.9	34.0	316	36.7‡	34.3	39.0
Some	126	18.9	16.5	21.3	203	23.6‡	21.7	25.5
Most	88	13.1	11.4	14.9	115	13.3	11.8	14.9
Pain intensity								
Mild†	118	45.9	41.4	50.4	165	55.1‡	50.6	59.6
Moderate	231	71.5*	67.9	75.2	371	82.3*‡	79.7	85.0
Severe	75	85.6*	80.4	90.9	94	89.5*	85.5	93.5

† reference category
* significantly different from estimate for reference category (p<0.05)
‡ significantly different from estimate for males (p<0.05)
E interpret with caution (coefficient of variation 16.6% to 33.3%)
Source: 2007/2008 Canadian Community Health Survey, 24-month file.

Table 4
Health care use in past 12 months, by sex and chronic pain status, household population aged 12 to 44, Canada, 2007/2008

	Males				Females			
	Estimated number		95% confidence interval		Estimated number		95% confidence interval	
Characteristic	'000	%	from	to	'000	%	from	to
Consulted health care professional								
Chronic pain	622	93.0*	91.8	94.3	846	97.7*‡	97.0	98.5
No chronic pain†	5,919	89.0	88.4	89.6	6,125	96.0‡	95.6	96.3
Has regular medical doctor								
Chronic pain	511	76.5*	74.1	78.9	762	88.0*‡	86.4	89.6
No chronic pain†	4,862	73.1	72.4	73.9	5,398	84.6‡	83.9	85.3
Consulted family doctor/general practitioner								
Chronic pain	507	75.8*	73.5	78.1	756	87.4*‡	85.7	89.0
No chronic pain†	4,045	60.8	59.8	61.7	4,919	77.0‡	76.2	77.8
Consulted other medical doctor								
Chronic pain	214	32.1*	29.4	34.8	420	48.4*‡	46.0	50.9
No chronic pain†	985	14.8	14.1	15.4	1,843	28.8‡	28.0	29.7
Consulted nurse								
Chronic pain	92	13.8*	12.0	15.6	193	22.3*‡	20.3	24.3
No chronic pain†	541	8.1	7.7	8.6	903	14.1‡	13.5	14.8
Consulted chiropractor								
Chronic pain	139	20.7*	18.4	23.1	177	20.5*	18.5	22.4
No chronic pain†	644	9.7	9.2	10.1	705	11.0‡	10.5	11.6
Consulted physiotherapist								
Chronic pain	127	19.0*	16.7	21.4	176	20.3*	18.4	22.3
No chronic pain†	441	6.6	6.2	7.1	427	6.7	6.3	7.1
Consulted social worker/counsellor								
Chronic pain	47	7.1*	5.8	8.4	117	13.5*‡	11.9	15.1
No chronic pain†	279	4.2	3.8	4.5	427	6.7‡	6.3	7.1
Consulted psychologist								
Chronic pain	38	5.7*	4.6	6.9	89	10.3*‡	8.9	11.7
No chronic pain†	172	2.6	2.3	2.8	294	4.6‡	4.2	5.0

† reference category
* significantly different from estimate for reference category (p<0.05)
‡ significantly different from estimate for males (p<0.05)
E interpret with caution (coefficient of variation 16.6% to 33.3%)
Source: 2007/2008 Canadian Community Health Survey, 24-month file.

The relationships between chronic pain and measures of well-being persisted when potentially confounding socio-demographic characteristics and painful chronic conditions were taken into account (Table 5). In most cases, the associations between pain and well-being were present regardless of pain intensity (data not shown).

Summary

Chronic pain is common in younger Canadians. It affects daily activities, employment, health care use, and general and psycho-social well-being. The association between chronic pain and mood and anxiety disorders revealed in this study highlights the importance of monitoring younger people with chronic pain for these mental disorders. ■

Table 5
Prevalence of and adjusted odds ratios for well-being and mental health disorders, by sex and chronic pain status, household population aged 12 to 44, Canada, 2007/2008

	Males							Females						
	Estimated number '000	%	95% confidence interval from	to	Adjusted‡ odds ratio	95% confidence interval from	to	Estimated number '000	%	95% confidence interval from	to	Adjusted‡ odds ratio	95% confidence interval from	to
Positive self-perceived health														
Chronic pain	537	80.4*	78.3	82.6	0.3*	0.2	0.3	661	76.4*	74.4	78.5	0.2*	0.1	0.2
No chronic pain†	6,381	95.7	95.3	96.1	1.0	...	...	6,164	96.4	96.1	96.7	1.0	...	...
Self-perceived health worse than a year ago														
Chronic pain	151	22.5*	20.1	25.0	3.4*	2.8	4.2	198	22.9*	20.8	24.9	2.7*	2.3	3.3
No chronic pain†	444	6.7	6.2	7.2	1.0	...	...	474	7.4	6.9	7.9	1.0	...	...
Satisfied with life in general														
Chronic pain	549	82.2*	80.0	84.5	0.4*	0.3	0.5	711	82.4*	80.5	84.3	0.4*	0.4	0.5
No chronic pain†	6,235	93.6	93.2	94.1	1.0	...	...	6,001	94.0	93.6	94.4	1.0	...	...
Positive sense of community belonging														
Chronic pain	368	55.3*	52.5	58.1	0.8*	0.7	1.0	486	56.6*	54.3	59.0	0.8*	0.7	1.0
No chronic pain†	4,138	62.8	61.8	63.7	1.0	...	...	4,072	64.4	63.4	65.3	1.0	...	...
Perceived life stress														
Chronic pain	242	37.1*	34.2	40.0	1.8*	1.5	2.1	343	40.6*	38.1	43.0	1.6*	1.5	1.9
No chronic pain†	1,233	20.4	19.6	21.2	1.0	...	...	1,375	23.7	22.8	24.5	1.0	...	...
Positive self-perceived mental health														
Chronic pain	584	87.6*	85.7	89.5	0.3*	0.2	0.4	748	86.3*	84.6	88.1	0.3*	0.3	0.4
No chronic pain†	6,439	96.6	96.3	97.0	1.0	...	...	6,170	96.5	96.2	96.9	1.0	...	...
Anxiety disorder														
Chronic pain	56	8.3*	7.0	9.6	1.8*	1.4	2.4	156	18.0*	16.1	19.9	2.2*	1.8	2.6
No chronic pain†	199	3.0	2.7	3.3	1.0	...	...	384	6.0	5.6	6.5	1.0	...	...
Mood disorder														
Chronic pain	81	12.1*	10.2	14.0	2.9*	2.2	3.9	177	20.5*	18.5	22.4	2.3*	1.9	2.8
No chronic pain†	196	2.9	2.6	3.2	1.0	...	...	383	6.0	5.6	6.4	1.0	...	...

† reference category
* significantly different from estimate for reference category ($p<0.05$)
‡ adjusted for age, marital status, household, education, race/culture, urban/rural residence; arthritis, back problems, migraine headaches
... not applicable
Note: Because of rounding, odds ratios for which upper confidence intervals were 1.0 were statistically significant.
Source: 2007/2008 Canadian Community Health Survey, 24-month file.

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Appendix

Table A
Selected charactaristics of study sample, household population aged 12 to 44, Canada, 2007/2008

	Sample size	Estimated number '000	%
Total	**57,660**	**14,607**	**100.0**
Chronic pain			
No	51,147	13,062	89.5
Yes	6,472	1,536	10.5
Missing	41	...	...
Pain intensity			
No chronic pain	51,147	13,062	89.5
Mild	2,314	560	3.8
Moderate	3,285	774	5.3
Severe	834	193	1.3
Missing	80	...	...
Sex			
Male	27,325	7,340	50.3
Female	30,335	7,267	49.7
Age group			
12 to 17	10,660	2,459	16.8
18 to 24	9,983	2,952	20.2
25 to 34	17,610	4,396	30.1
35 to 44	19,407	4,801	32.9
Marital status (ages 25 to 44)			
Single (never married)	10,145	2,276	24.8
Married/Common-law	23,822	6,312	68.7
Separated/Divorced/Widowed	3,004	599	6.5
Missing	46	...	...
Highest level of education in household			
Less than secondary graduation	2,384	431	3.3
Secondary graduation	5,487	1,243	9.6
Some postsecondary	3,223	805	6.2
Postsecondary graduation	40,423	10,508	80.9
Missing	6,143	...	...
Racial/Cultural group			
White	45,556	10,743	75.5
Aboriginal (off reserve)	4,280	621	4.4
Other (includes multiple racial/cultural origins)	6,504	2,870	20.2
Missing	1,320	...	...
Residence			
Urban	43,814	12,232	83.7
Rural	13,846	2,375	16.3

... not applicable
Notes: Excludes 1,062 proxy respondents. Because of rounding, detail may not add to totals.
Source: 2007/2008 Canadian Community Health Survey, 24-month file.