Social anxiety disorder—beyond shyness

- *Social anxiety disorder, or social phobia, usually begins in childhood or early adolescence, and symptoms often persist for decades.*
- *The disorder is associated with lower educational attainment and reduced likelihood of employment, social isolation, functional disability, and dissatisfaction with life and health.*
- *Many people with social anxiety disorder and other mental health problems—major depressive disorder, panic disorder or substance dependency—reported that their symptoms of social anxiety appeared first.*
- *Few people with social anxiety disorder seek professional advice to help deal with their social/performance fears.*

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Abstract

Objectives

This article presents prevalence estimates of social anxiety disorder (social phobia) among the Canadian household population aged 15 or older. The relationship between this mental disorder and others is examined. Selected aspects of functional impairment are compared for people with current, past, and no history of the condition.

Data source

Data are from the 2002 Canadian Community Health Survey: Mental Health and Well-being.

Analytical techniques

Cross-tabulations were used to estimate the prevalence of social anxiety disorder, to determine socio-economic factors associated with prevalence, and to examine its relationship with other mental disorders. Associations between social anxiety disorder and selected impairment variables were examined using multivariate analysis that controlled for socio-economic factors and other aspects of mental and physical health.

Main results

In 2002, 750,000 Canadians aged 15 or older (3%) had social anxiety disorder. These people had a higher risk of having major depressive disorder, panic disorder and substance dependency than the general population. Social anxiety disorder was associated with higher rates of disability, negative perceptions of physical and mental health, and dissatisfaction with life.

Key words

age of onset, comorbidity, health status indicators, mental health, prevalence, social phobia, social support

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Most people have felt awkward or embarrassed in a social or performance situation at some point in their lives. However, people with social anxiety disorder (also known as social phobia) go through life feeling extremely uncomfortable or paralyzed in such situations because they intensely fear being scrutinized or embarrassed. So they either totally avoid social encounters, or face them with dread and endure them with intense distress.[1] Although social anxiety disorder is often dismissed as mere shyness, several studies have shown it to have a chronic and unremitting course that is characterized by considerable anxiety and impairment.[2-5] The disorder has been aptly described as "crippling shyness."[6]

It is difficult to estimate how many individuals actually have social anxiety, as most people with the condition do not seek professional treatment for their fears.[3,6-12] Social anxiety disorder was thought to be a rare and usually mild condition

until the 1980s,[13] when it was recognized as a separate disorder in the *Diagnostic and Statistical Manual of Mental Disorders*.[14] Then in the 1990s, several epidemiological studies suggested that social anxiety disorder was associated with significant impairment and was far more prevalent than initially thought.[3,10,13,15,16] In fact, by this time, it was considered one of the most common mental disorders.[3,10,13,15,16] Because few people are formally treated, however, epidemiological population-based studies are really the only way to estimate the prevalence of social anxiety disorder and the burden it can impose.

This article is based on data from the 2002 Canadian Community Health Survey: Mental Health and Well-being (CCHS cycle 1.2). The CCHS 1.2 is the first survey designed and conducted to provide comprehensive information on mental health issues at the national level. This analysis of the results of that survey presents current and lifetime prevalence rates of social anxiety disorder for the Canadian household population aged 15 or older (see *Methods, Definitions* and *Limitations*). The age of onset, duration of symptoms and relationships with other mental disorders are discussed. To assess the burden of social anxiety disorder, associations with social support, functional disability and quality of life are examined in multivariate models that control for other variables that may affect outcomes—socio-economic characteristics and other aspects of physical and mental health. The number of people with the disorder who sought professional treatment is also explored.

Measuring social anxiety disorder

For the CCHS, social anxiety disorder was measured using the World Mental Health version of the Composite International Diagnostic Interview (WMH-CIDI), an instrument created to assess mental disorders based on definitions in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV®-TR).[1] The CIDI was designed to measure prevalence of mental disorders at the community level, and it can be administered by lay interviewers. (The questions and algorithm used to measure social anxiety disorder in the CCHS are presented in the *Annex*. The CCHS 1.2 questionnaire is available on Statistics Canada's Web site @ www.statcan.ca.[17])

Feared situations

According to the 2002 CCHS, just over 2 million Canadians aged 15 or older had a "lifetime history" of social anxiety disorder; that is, they had symptoms at some point in their lives (see *Definitions* and *Annex*). This represents about 8% of the total population (Table 1). Approximately 750,000 people (3%) currently had the disorder, meaning they had symptoms in the 12 months before the survey interview.

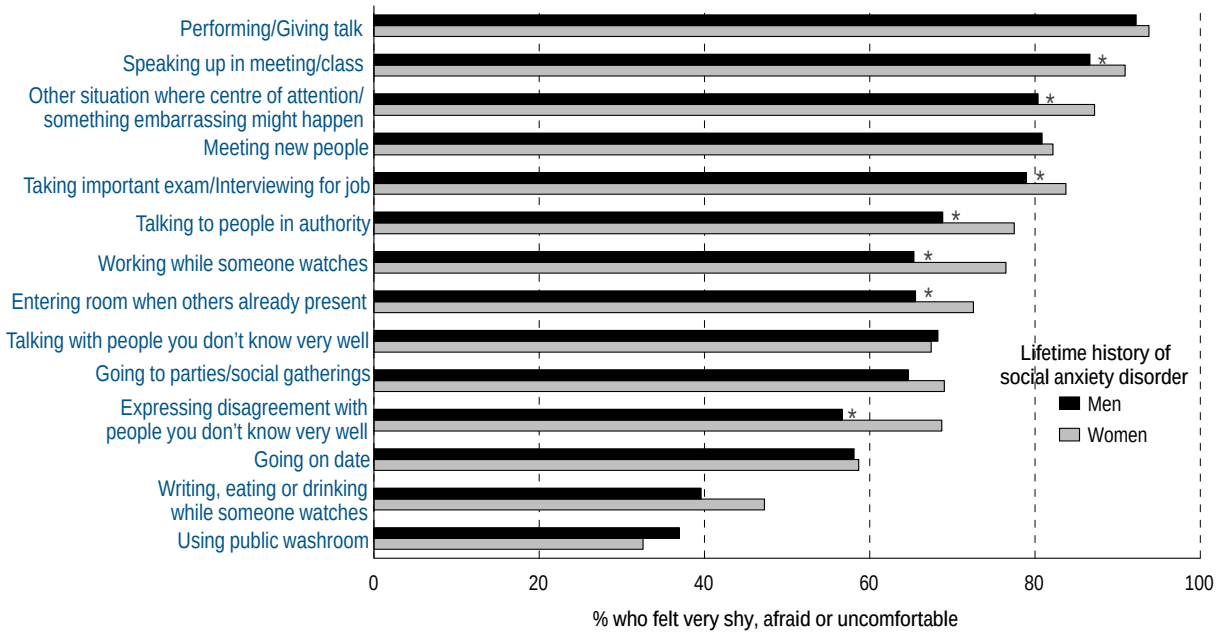
The most commonly feared situation for people with social anxiety disorder was performing or giving a talk, but many reported facing several other situations with anxiety; for example, meeting new people, talking to authority figures, or entering a roomful of people (Chart 1). The majority with social anxiety disorder reported fearing 10 or more of the 14 social situations covered by the CCHS, and close to 95% feared 5 or more. For half of the situations, women were slightly more likely than men to report a fear.

Table 1
Lifetime and current prevalence of social anxiety disorder, by selected characteristics, household population aged 15 or older, Canada excluding territories, 2002

	Lifetime	Current (past 12 months)
	%	
Total	8.1	3.0
Sex		
Men	7.5*	2.6*
Women†	8.7	3.4
Age group		
15-24	9.4	4.7*
25-34	9.6	3.8
35-54†	9.1	3.1
55 or older	4.9*	1.3*
Marital status‡		
Married/Common-law†	8.0	2.5
Widowed	7.0E1	2.4E2
Divorced/Separated	12.7*	5.0*
Never married	12.0*	5.0*
Education‡		
Less than secondary graduation	9.1	3.9*
Secondary graduation	8.8	3.3
Some postsecondary	10.3	3.9*
Postsecondary graduation†	8.9	2.7
Household income		
Low/Lower-middle	9.8*	4.6*
Middle	7.8	3.0
Upper-middle/High†	8.2	2.8

Data source: 2002 Canadian Community Health Survey: Mental Health and Well-being
† Reference category
‡ For people aged 25 to 64
** Significantly different from estimate for reference category (p < 0.05)*
E1 Coefficient of variation between 16.6% and 25.0%
E2 Coefficient of variation between 25.1% and 33.3%

Chart 1
Percentage of people with lifetime history of social anxiety disorder who felt very shy, afraid or uncomfortable in selected situations, by sex, household population aged 15 or older, Canada excluding territories, 2002



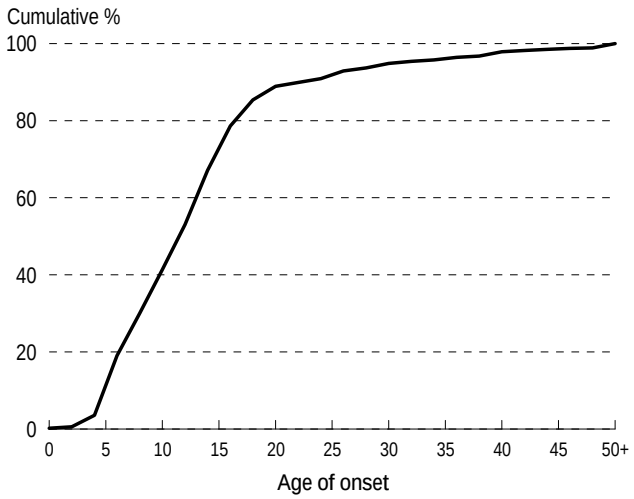
Data source: 2002 Canadian Community Health Survey: Mental Health and Well-being
Note: Estimate for each situation excludes cases for respondents who indicated situation did not apply.
** Significantly lower than estimate for women (p < 0.05)*

Early onset, persistent problems

A striking feature of social anxiety disorder is its early age of onset: symptoms typically begin appearing in childhood or early adolescence.[3,6,7,10-13,18-20] CCHS respondents were asked to report the age at which they first strongly feared or avoided social or performance situations. Among those with a lifetime history of social anxiety disorder, the average age of onset was 13; only 15% reported that symptoms first began after age 18 (Chart 2). By contrast, the first symptoms of two other common disorders—panic disorder and depression—were evident much later, at ages 25 and 28, respectively (data not shown).

Along with its early onset, social anxiety disorder can be a longstanding problem. Many studies have found that symptoms persist for years, often for two decades or longer.[3,5,12,13,21] Among CCHS respondents with a lifetime history of the disorder, the average duration of symptoms was 20 years. This underestimates the true burden of the disorder, though, because many were still suffering from it at the time of the survey.

Chart 2
Cumulative incidence of social anxiety disorder, by age of onset, household population aged 15 or older with lifetime history of social anxiety disorder, Canada excluding territories, 2002



Data source: 2002 Canadian Community Health Survey: Mental Health and Well-being

Methods

Data source

This analysis is based on data from the 2002 Canadian Community Health Survey (CCHS) cycle 1.2: Mental Health and Well-being, which began in May 2002 and was conducted over eight months. The CCHS 1.2 covers people aged 15 or older living in private dwellings in the 10 provinces. Residents of institutions, Indian reserves and certain remote areas, the three territories, as well as full-time members of the Canadian Armed Forces, were excluded.

The CCHS 1.2 sample was selected using the area frame designed for the Canadian Labour Force Survey. A multi-stage stratified cluster design was used to sample dwellings within this area frame. One person aged 15 or older was randomly selected from the sampled households. Individual respondents were selected to over-represent young people (15 to 24) and seniors (65 or older), thus ensuring adequate sample sizes for these age groups. More detailed descriptions of the design, sample and interview procedures can be found in other reports and on Statistics Canada's Web site.[17,22]

All interviews were conducted using a computer-assisted application. Most (86%) were conducted in person; the remainder, by telephone. Selected respondents were required to provide their own information as proxy responses were not accepted. The responding sample comprised 36,984 persons aged 15 or older, with a response rate of 77%.

Analytical techniques

Cross-tabulations were used to estimate the prevalence of and the characteristics associated with social anxiety disorder in the household population aged 15 or older. All estimates were based on the CCHS 1.2. From the overall sample of 36,984 respondents, 1,189 were classified as having current social anxiety disorder (symptoms in the past 12 months), 1,723 as previously having had the disorder (lifetime but not past 12 months), and 33,691, no history. (See *Annex* for complete definitions of social anxiety disorder.) Some respondents (381) could not be classified because they did not answer enough questions to allow an assessment. These respondents were excluded when estimating prevalence rates.

Cross-tabulations were also used to examine the extent to which social anxiety disorder may be associated with also having major depressive disorder, panic disorder, and substance dependency.

Multivariate logistic regression models were used to assess associations between social anxiety disorder and selected impairment variables: low levels of social support, activity limitations, disability days, negative perceptions of physical and mental health, and dissatisfaction with life. Two sets of models were used. Socio-economic variables were introduced as control variables in the first set. These variables were retained for the second set, then several health problems were added to examine comorbidity—major depressive disorder, panic disorder, substance dependency and number of physical chronic conditions—to see if the associations weakened, remained the same, or disappeared (Table 4, Appendix Tables B through D).

All estimates and analyses were based on weighted data that reflect the age and sex distribution of the household population aged 15 or older in the 10 provinces in 2002. To account for survey design effects, standard errors and coefficients of variation were estimated with the bootstrap technique.[26-28]

More common among women

In 2002, women were more likely than men to have social anxiety disorder—both lifetime and current (Table 1). The ratio of the rates of women to men was 1.2 for lifetime social anxiety disorder and 1.3 for current (past 12 months). This is consistent with other community and clinical studies, which have generally found rates for women to be higher.[7,10,13,16,19,20,23,24]

Young people aged 15 to 24 were more likely to have current social anxiety disorder (4.7%) than the middle-aged (3.1%), while individuals aged 55 or older were less likely (1.3%), a pattern also evident in other countries.[7,10,23,25] The CCHS lifetime rates were similar among those aged 15 to 54, after which they dropped off noticeably. It has been suggested that this may result from a cohort effect; that is, people born in the more distant past were less likely to develop social anxiety disorder than more recent cohorts.[6,10] It is difficult to substantiate this theory, though, because prevalence information for previous decades is lacking. It is also possible that people with social anxiety disorder die at younger ages, or that the elderly may not recall symptoms of the disorder.[10]

Marital status a factor

The 2002 prevalence of social anxiety disorder was higher among people who had never married or who were divorced or separated (both 5.0%), compared with individuals who were married (2.5%) (Table 1). Such relationships with marital status have been found

in other studies,[3,6,7,10,12,13,20,23] and it is believed that the early onset of social anxiety disorder hinders the development of social skills, making marriage or a successful marriage less likely.

It is also thought that failure to acquire social skills early in life hampers educational success,[3,6,7,10,12,13,20,25] a finding supported by the CCHS. Individuals who had not completed their secondary or postsecondary education were more likely to have social anxiety disorder than were postsecondary graduates. Among postsecondary students, this may relate to fears surrounding a move away from home and/or to another school, then dropping out of school after having to face a new social environment.[6,7]

Lower income, higher prevalence

According to the 2002 CCHS, social anxiety disorder was more prevalent among individuals living in lower, versus higher, income households (Table 1). Furthermore, people who reported symptoms of social anxiety disorder in the past 12 months were less likely to have jobs, and those who did have jobs had lower personal incomes (Table 2). This may partly result from the lower educational levels for people with social anxiety disorder, as well as difficulties remaining in a job that demands a fair amount of social interaction.[7,29] People with social anxiety disorder were also more likely to be financially dependent. In 2002, 10% of those who had current symptoms lived in households reporting income from social assistance or welfare in the past 12 months, compared with 4% for people with no history of the disorder (data not shown). These CCHS findings regarding financial dependence are consistent with those of other studies.[4,7,13,30]

Higher likelihood of other disorders

Substantial evidence indicates that social anxiety disorder is associated with increased risk of other anxiety, mood, and substance abuse disorders.[3,12,15,23,31,32] Moreover, some studies have found that social anxiety disorder is associated with the severity and persistence of these other mental conditions.[3,12,15,32]

People with current social anxiety disorder were over six times as likely than the general population to have major depressive disorder (Table 3). They were over five times as likely to have panic disorder and three times as likely to suffer from substance dependency. As well, individuals with a lifetime history of social anxiety disorder who no longer had symptoms remained at increased risk of having these other disorders. The relationship between social anxiety disorder and these three conditions persisted when examined in multivariate models that controlled for socio-economic factors (Appendix Table A).

It is thought that social anxiety disorder is more likely to be related to depression for women and to substance abuse for men.[3,5] When the CCHS multivariate models were rerun testing for an interaction between sex and history of social anxiety disorder, the only significant interaction was for depression (data not shown), which was contrary to expectations. Compared with women, men with current social anxiety disorder had a higher risk of also suffering from depression (Chart 3). However, among those who had never had the disorder or who had had it in the past, depression was more prevalent among women.

Table 2
Job status and workers' average personal income, by history of social anxiety disorder, household population aged 25 to 54, Canada excluding territories, 2002

	History of social anxiety disorder		
	Current (past 12 months)	Lifetime excluding current	Never
Currently working at job/ business (%)	72*	84	84
Average personal income for current workers ($)	36,000*	40,000	43,000

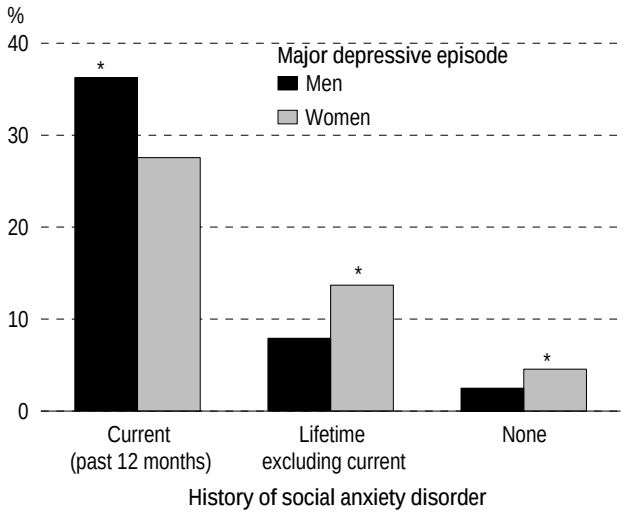
Data source: 2002 Canadian Community Health Survey: Mental Health and Well-being
** Significantly different from estimate for "never" (p < 0.05)*

Table 3
Other mental health problems, by history of social anxiety disorder, household population aged 15 or older, Canada excluding territories, 2002

	Major depressive disorder	Panic disorder	Substance dependency
	% with disorder in past 12 months		
Overall	5	2	3
History of social anxiety disorder			
Current (past 12 months)	31†	11†	9†
Lifetime excluding current	11†	4†	6†
Never	4‡	1‡	3‡

Data source: 2002 Canadian Community Health Survey: Mental Health and Well-being
† Significantly higher than overall estimate (p < 0.05)
‡ Significantly lower than overall estimate (p < 0.05)

Chart 3
Percentage of people reporting a major depressive episode in the past 12 months, by history of social anxiety disorder and sex, population aged 15 or older, Canada excluding territories, 2002



Data source: 2002 Canadian Community Health Survey: Mental Health and Well-being
** Significantly higher than estimate for opposite sex (p < 0.05)*

Often precedes other disorders

An examination of CCHS data reveals that social anxiety disorder often precedes other mental disorders, as found in many other studies.[7,10,12,15,18,20,21,23,25,31,32] In 2002, among CCHS respondents with a lifetime history of social anxiety disorder and major depressive disorder, the symptoms of social anxiety occurred first in about 7 of 10 cases (69%). Respondents reported the same age of onset for both disorders in 13% of cases.

When individuals had lifetime histories of social anxiety disorder and panic disorder, social anxiety was evident at a younger age for 59%, and the age of onset was the same for both panic and social anxiety approximately one-quarter of the time.

Other studies have found that social anxiety disorder often develops before substance abuse,[4,7,10,18,30,33,34] but information on the lifetime history of substance abuse is not available in the CCHS.

Although it has not been studied extensively, an association between social anxiety disorder and physical illness has been found.[13,25] CCHS respondents with current social anxiety disorder reported an average of 1.5 physical chronic conditions, significantly higher than the average number reported for those with a past history (1.2), which in turn was significantly higher than the average for those with no history (1.1).

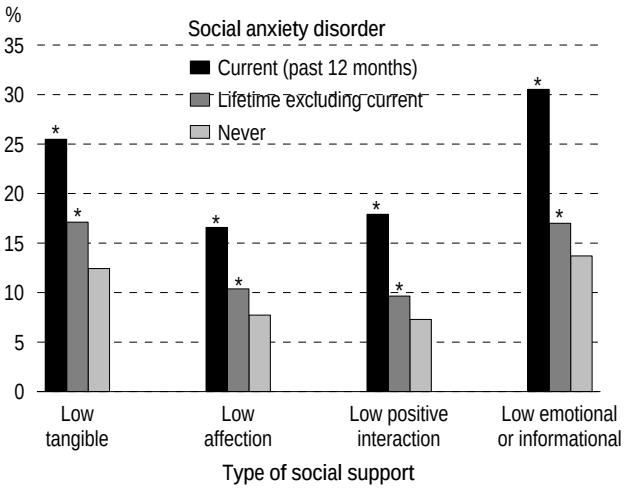
Previous studies have found that social anxiety disorder is associated with social isolation,[2,7,8,12,16] disability,[6,8,10-12,24,30,35] and reduced quality of life.[5,6,12,13,20,24,35] CCHS data provide further evidence of these associations.

Lack of social support

Four types of social support were measured in the CCHS: tangible support, affection, positive social interaction, and emotional or informational support (see *Definitions*). Tangible support is the most concrete type, and involves having someone to provide help when you need it; for example, if you are confined to bed or need someone to take you to the doctor, prepare meals, or help with daily chores. Affection is having someone who shows you love and affection, gives you hugs, or loves you and makes you feel wanted. Having someone to relax or have a good time with, or who helps get your mind off things, provides positive social interaction. Emotional or informational support comes from people who understand you and your problems, who can give you advice, and share your worries and fears.

Based on CCHS data, people with social anxiety disorder lack adequate social support. Compared with individuals with no history of the disorder, those who currently had it were over twice as likely to have low levels of each type of support (Chart 4). Although the situation was somewhat better for people who no

Chart 4
Percentage of people with low social support, by type of support and history of social anxiety disorder, household population aged 15 or older, Canada excluding territories, 2002



Data source: 2002 Canadian Community Health Survey: Mental Health and Well-being
** Significantly higher than estimate for "never" (p < 0.05)*

longer had symptoms, they were still more likely to have low social support, compared with those who had no history of the disorder. Clinical studies have found that people with social anxiety disorder actually want social contact, but their fear of interacting prevents this from happening and leads to social isolation.[2,31,36] The early age of onset makes it particularly difficult to establish and maintain meaningful relationships.

Limitations, disability more likely

Compared with people with no history of the disorder, those with current social anxiety disorder were over twice as likely to report an activity limitation (Chart 5). This means that they were limited in what they could do at home, school or work or in leisure time because of a long-term physical or mental condition or health problem. They were also over two times as likely to report at least one disability day over the past two weeks; that is, they had spent at least one day in bed, or had cut down on their usual activities because of illness or injury.

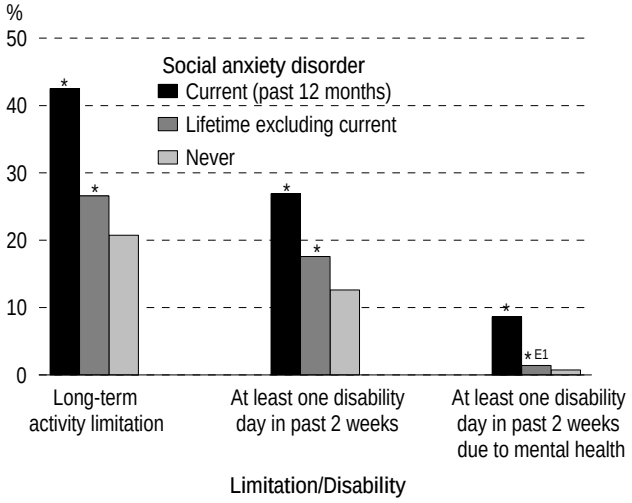
Differences in disability days due to mental or emotional health problems or use of alcohol or drugs were even more pronounced. People with current social anxiety disorder were over 10 times more likely to report at least one disability day in the past two weeks due to mental health, compared with those with no history of the disorder. Individuals who previously had social anxiety disorder were more likely to report long-term activity limitations and disability days in the past two weeks, compared with those with no history of the disorder, although their impairment rates were substantially below those of people who currently had the disorder.

Dissatisfaction with life and health

People with social anxiety disorder tended to have a lower quality of life, as indicated by their rather negative perceptions of their own health and their dissatisfaction with life (Chart 6). Close to 30% of people who currently had social anxiety disorder rated their physical health as fair or poor, compared with 17% of those who previously had the disorder, and 13% of those with no history of it. More than a third of people (37%) with current social anxiety disorder rated their mental health as fair or poor, compared with 16% who previously had the disorder and 5% with no history of the condition.

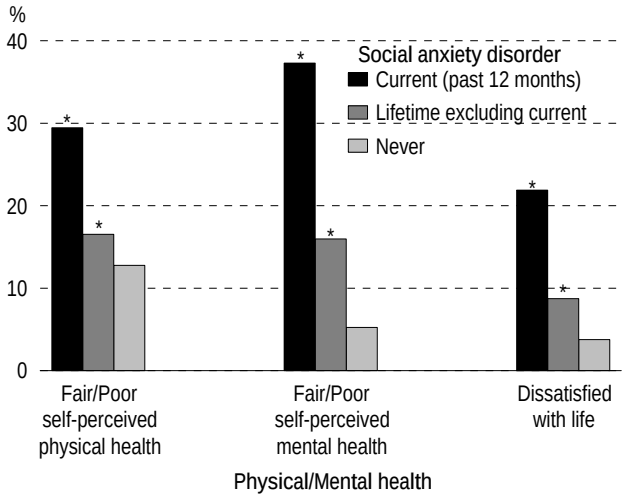
Dissatisfaction with life in general was also related to social anxiety disorder. More than 20% of people with current symptoms indicated that they felt dissatisfied, compared with 9% of people with a past history and 4% of those with no history.

Chart 5
Long-term activity limitation and two-week disability, by history of social anxiety disorder, household population aged 15 or older, Canada excluding territories, 2002



Data source: 2002 Canadian Community Health Survey: Mental Health and Well-being
** Significantly higher than estimate for "never" ($p < 0.05$)*
E1 Coefficient of variation between 16.6% and 25.0%

Chart 6
Self-reported physical and mental health, by history of social anxiety disorder, household population aged 15 or older, Canada excluding territories, 2002



Data source: 2002 Canadian Community Health Survey: Mental Health and Well-being
** Significantly higher than estimate for "never" ($p < 0.05$)*

Definitions

Canadian Community Health Survey (CCHS) respondents who experienced the following were considered to have a *lifetime history of social anxiety disorder:*

- a marked and persistent fear of one or more social or performance situations that require exposure to unfamiliar people or possible scrutiny, and fear of acting in a way (or showing anxiety symptoms) that will be humiliating or embarrassing.
- exposure to the feared social situations provokes anxiety, possibly a panic attack.
- recognition that the fear is excessive or unreasonable.
- the feared social/performance situations are either avoided or endured with intense anxiety or distress.
- the avoidance, anxious anticipation, or distress in the feared social/performance situations interferes noticeably with normal routine or social or occupational functioning.
- for people younger than 18, at least six months' duration of symptoms.

The CCHS considered respondents who met all of the above criteria for a lifetime history and who also experienced a 12-month episode and marked impairment in occupational or social functioning in the past 12 months to have *current social anxiety disorder*. See the *Annex* for the questions and algorithms used by the CCHS to measure *social anxiety disorder*, as well as *major depressive disorder, panic disorder* and *substance dependency.*

Age of onset was assessed by asking respondents how old they were the first time they had a fear of or started avoiding social situations.

Duration of symptoms was calculated by subtracting age of onset from the age that symptoms last occurred (or current age for those who still had the disorder).

Four *age groups* were established for this analysis: 15 to 24, 25 to 34, 35 to 54, and 55 or older. The 35-to-54 group was used as the reference category to highlight the age gradient for social anxiety disorder.

Marital status was categorized as: married or common-law; widowed; divorced or separated; and never married.

Respondents were grouped into four *education* categories based on the highest level attained: less than secondary graduation, secondary graduation, some postsecondary, and postsecondary graduation.

Household income was based on the number of people in the household and total household income from all sources in the 12 months before the 2002 interview.

Household income group	People in household	Total household income
Low	1 to 4	Less than $10,000
	5 or more	Less then $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
High	1 or 2	$60,000 or more
	3 or more	$80,000 or more

Respondents were classified as *currently working at a job or business* if they worked in the week before the interview or they had a job or business from which they were absent.

To measure *social support,* CCHS respondents were asked: "How often is each of the following kinds of social support available to you if you need it? Someone:

1. to help you if you were confined to bed?"
2. you can count on to listen when you need to talk?"
3. to give you advice about a crisis?"
4. to take you to the doctor if you needed it?"
5. who shows you love and affection?"
6. to have a good time with?"
7. to give you information in order to help you understand a situation?"
8. to confide in or talk to about yourself or your problems?"
9. who hugs you?"
10. to get together with for relaxation?"
11. to prepare your meals if you were unable to do it yourself?"
12. whose advice you really want?"
13. to do things with to help you get your mind off things?"
14. to help with daily chores if you were sick?"
15. to share your most private worries and fears with?"
16. to turn to for suggestions about how to deal with a personal problem?"
17. to do something enjoyable with?"
18. who understands your problems?"
19. to love you and make you feel wanted?"

For each item, respondents were asked to indicate if such support was available "none of the time," "a little of the time," "some or the time," "most of the time" or "all of the time." Based on these questions,

Definitions—concluded

four dimensions of social support were measured: *tangible support* (items 1, 4, 11 and 14), *affection* (items 5, 9 and 19), *positive social interaction* (items 6, 10, 13 and 17) and *emotional or informational support* (items 2, 3, 7, 8, 12, 15, 16 and 18).[37] For each dimension, a respondent was classified as having low social support if the answer was "none of the time" or "a little of the time" for at least one of the items measuring the dimension.

Long-term activity limitation due to a long-term physical or mental condition or health problem was based on a response of "often" or "sometimes" to any of the following: "Does a long-term physical or mental condition or health problem reduce the amount of kind of activity you can do: at home? at school? at work? in other activities?"

Number of disability days was measured in terms of bed-days and "cut-down" days over the past two weeks. Respondents were asked about days they stayed in bed because of illness or injury (including nights in hospital) and about days they had cut down on normal activities because of illness or injury. *Two-week disability due to mental health* was measured by asking this follow-up question: "Was that due to your emotional or mental health or your use of alcohol or drugs?"

Self-perceived physical health was measured by asking, "In general, would you say your physical health is: excellent? very good? good? fair? poor?" Virtually the same question was used to measure *self-perceived mental health.*

Dissatisfaction with life was based on the question, "How satisfied are you with your life in general: very satisfied? satisfied? neither satisfied nor dissatisfied? dissatisfied? very dissatisfied?" The last two categories were used to classify respondents as being dissatisfied with life.

To measure *physical chronic conditions*, individuals were asked about long-term conditions that had lasted or were expected to last six months or longer that had been diagnosed by a health care professional. Interviewers read a list of conditions. In total, 18 physical chronic conditions were considered in this analysis: asthma, fibromyalgia, arthritis or rheumatism, back problems, high blood pressure, migraine, chronic bronchitis, emphysema, diabetes, epilepsy, heart disease, cancer, ulcers, the effects of a stroke, bowel disorder, thyroid disorder, chronic fatigue syndrome, and multiple chemical sensitivities.

For the CCHS, *professional treatment* was defined as consulting a medical doctor or other professional about their social fears. Respondents were told that "other professional" includes psychologists, psychiatrists, social workers, counsellors, spiritual advisors, homeopaths, acupuncturists and self-help groups.

Measuring the burden

The relationships between social anxiety disorder and social support, disability, perceptions of physical and mental health, and satisfaction with life persisted when potentially confounding effects of socio-economic characteristics (sex, age, marital status, education and income) were taken into account (Table 4). When measures of major depressive disorder, panic disorder, substance dependency and other physical chronic conditions were introduced, the strength of the relationships did diminish, but in most cases, the associations remained statistically significant (Table 4, Appendix Tables B through D).

The appropriateness of controlling for other conditions and disorders when attempting to measure the burden of social anxiety disorder has been debated. Because the disorder often occurs in conjunction with other mental disorders, failure to control for them may limit assessments of the association between social anxiety disorder and impairment.[6] However, if there is a causal relationship between social anxiety disorder and other mental disorders, the impact should be included (not controlled for) when assessing the total burden of the disease.[13] In most cases, social anxiety disorder develops before other mental disorders, although a cause-and-effect relationship has not been established.[7,10] Nonetheless, some researchers have hypothesized that causal pathways may exist. For example, many people with social anxiety disorder use alcohol or drugs to help them cope, and this may lead to abuse or dependency.[7,19,30,33,38] In addition, the social isolation associated with social anxiety disorder and failure to achieve education and employment goals may increase the risk of depression.[7,18,32,39]

The findings based on CCHS data are particularly relevant because, even when other mental and physical health problems are taken into account, the odds for all 10 outcome variables were elevated among people with current social anxiety disorder.

Table 4
Adjusted odds ratios relating social anxiety disorder to selected outcomes, without and with controlling for other aspects of mental and physical health, household population aged 15 or older, Canada excluding territories, 2002

Outcome	Social anxiety disorder	Controlling for sex, age group, marital status, education and household income		Controlling for sex, age group, marital status, education, household income *and* major depressive disorder, panic disorder, substance dependency and physical chronic conditions	
		Odds ratio	95% confidence interval	Odds ratio	95% confidence interval
Low tangible support	Current (past 12 months)	2.3*	1.9, 2.8	1.8*	1.4, 2.2
	Lifetime excluding current	1.5*	1.2, 1.7	1.3*	1.1, 1.6
	Never†	1.0	...	1.0	...
Low affection	Current (past 12 months)	2.2*	1.8, 2.8	1.7*	1.4, 2.2
	Lifetime excluding current	1.4*	1.1, 1.9	1.3	1.0, 1.7
	Never†	1.0	...	1.0	...
Low positive social interaction	Current (past 12 months)	2.9*	2.3, 3.5	2.1*	1.7, 2.7
	Lifetime excluding current	1.4*	1.1, 1.8	1.3	1.0, 1.7
	Never†	1.0	...	1.0	...
Low emotional or informational support	Current (past 12 months)	2.8*	2.3, 3.4	2.1*	1.7, 2.6
	Lifetime excluding current	1.3*	1.1, 1.6	1.2	0.9, 1.4
	Never†	1.0	...	1.0	...
Long-term activity limitation	Current (past 12 months)	3.6*	3.0, 4.3	2.2*	1.7, 2.8
	Lifetime excluding current	1.6*	1.4, 1.9	1.3*	1.1, 1.5
	Never†	1.0	...	1.0	...
At least one disability day in past 2 weeks	Current (past 12 months)	2.4*	2.0, 2.8	1.4*	1.1, 1.7
	Lifetime excluding current	1.5*	1.2, 1.7	1.2*	1.0, 1.4
	Never†	1.0	...	1.0	...
At least one mental health disability day in past 2 weeks	Current (past 12 months)	9.9*	7.2, 13.5	3.5*	2.5, 5.0
	Lifetime excluding current	1.8*	1.1, 2.9	1.1	0.6, 1.9
	Never†	1.0	...	1.0	...
Fair/Poor self-perceived physical health	Current (past 12 months)	3.4*	2.8, 4.3	1.8*	1.4, 2.4
	Lifetime excluding current	1.6*	1.3, 1.9	1.2*	1.0, 1.5
	Never†	1.0	...	1.0	...
Fair/Poor self-perceived mental health	Current (past 12 months)	10.7*	8.8, 12.9	5.4*	4.4, 6.7
	Lifetime excluding current	3.5*	2.9, 4.4	2.6*	2.0, 3.3
	Never†	1.0	...	1.0	...
Dissatisfied with life	Current (past 12 months)	6.6*	5.3, 8.3	3.3*	2.5, 4.4
	Lifetime excluding current	2.4*	1.9, 3.1	1.8*	1.4, 2.3
	Never†	1.0	...	1.0	...

Date source: 2002 Canadian Community Health Survey: Mental Health and Well-being
Note: Presents results of 20 separate regression models; complete results for the second set of models can be found in Appendix Tables B through D.
† Reference category
** $p < 0.05$*
··· Not applicable

Limitations

Although previous versions of the Composite International Diagnostic Interview (CIDI) have been validated, the World Mental Health version used in the Canadian Community Health Survey (CCHS): Mental Health and Well-being has not yet been validated. Therefore, it is not known to what extent clinical assessments made by health care professionals would agree with assessments based on CCHS data.

According to the definitions stipulated in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM®-IV-TR),[1] one of the criteria required for the diagnosis of social anxiety disorder is that the fear or avoidance of social situations "is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition and is not better accounted for by another mental disorder." It was felt that this information could not be accurately reported by respondents based on questions posed by lay interviewers, so this criterion was not used in assessing social anxiety disorder in the CCHS, which may have inflated prevalence estimates. This also may have altered associations between social anxiety disorder and other variables.

Age of onset of social anxiety disorder, duration of symptoms and the temporal ordering of social anxiety disorder relative to other mental disorders was assessed using retrospective data provided by survey respondents. The extent to which recall problems may have reduced the accuracy of this information is unknown.

Non-response is of particular concern in a survey designed to measure a condition such as social anxiety disorder. Fear of social situations may cause people with the disorder to refuse to answer the door and spend time speaking to someone they do not know. The overall response rate to the CCHS 1.2 was 77%. Although the application of survey weights ensures that estimates represent the total population, little is known about the characteristics of non-respondents, and certain segments of the population may be underrepresented. It is possible that people who did not respond may have been more likely to have social anxiety disorder, leading to a downward bias in survey estimates. There were 381 people (approximately 1%) who did respond to the CCHS, but who had a "not stated" value for social anxiety disorder because they did not answer enough questions to permit an assessment. All but 5 of these people answered the question on self-perceived mental health and 22% indicated they had fair or poor mental health. This is substantially higher than the rate of 7% for respondents for whom it was possible to assign social anxiety disorder status. This probably resulted in a further downward bias in prevalence estimates, but the bias is not likely to be large because of the small number of records involved (only 1% of responding records).

The associations observed between social anxiety disorder and low levels of social support, activity limitations, disability, reduced perceptions of physical and mental health, and dissatisfaction with life are all based on cross-sectional findings; therefore, the results must be interpreted with caution. A causal link between social anxiety disorder and these outcome variables has not been established, nor was the ordering of events. It is possible that these problems existed before social anxiety symptoms developed.

Two types of formal treatment are available to people with social anxiety disorder: pharmacotherapy (medication) and psychotherapy (psychological counselling). The CCHS did not ask specific questions about treatment for social anxiety disorder.

Majority do not seek treatment

People with a lifetime history of social anxiety disorder were asked if they had ever seen or talked on the telephone to a doctor, psychologist, psychiatrist, social worker or other professional about their fear or avoidance of social situations (see *Definitions* and *Limitations)*. The majority had not. Only 37% reported that they had sought professional treatment (Table 5), far below the rates for major depressive disorder (71%) or panic disorder (72%) (data not shown). Just 27% of individuals with current social anxiety disorder (those who reported having symptoms in the past 12 months) had received professional help in the past year. Those who did seek treatment often waited years before doing so. Among CCHS respondents with a lifetime history of social anxiety disorder, help was sought, on average, 14 years after the age of onset. These low treatment rates for social anxiety disorder are consistent with findings from other studies.[3,6,7,12,35,40]

Failure to seek treatment may be directly related to the nature of social anxiety disorder. Because of their extreme social fears, people may be reluctant or embarrassed to discuss their symptoms with a health care professional;[6,8,31,41] in fact, the effort of contacting and meeting such a professional face-to-face may be extremely difficult for someone with social anxiety disorder. As well, individuals with the disorder often attribute their intense fears to shyness. Because they are not aware that they have a recognized mental disorder, they do not consider professional help.[6,7,19,41]

Table 5
Professional treatment for social anxiety disorder, by presence of other mental health condition, household population aged 15 or older, Canada excluding territories, 2002

	Total	Other mental health condition	
		Yes	No
Lifetime history of social anxiety disorder			
Ever sought professional treatment for fear/avoidance of social situations (%)	37	51†	25‡
Received helpful/effective treatment (%)§	69	73†	64‡
Average number of years before seeking help (from age of onset)§	14	13	14
12-month history of social anxiety disorder			
Received professional treatment for fear/avoidance of social situations in past 12 months (%)	27	43†	16‡

Data source: 2002 Canadian Community Health Survey: Mental Health and Well-being
Notes: "Professional" includes medical doctors, psychologists, psychiatrists, social workers, counsellors, spiritual advisors, homeopaths, acupunturists and self-help groups. For the lifetime estimates, other conditions include panic disorder and major depressive disorder; for the 12-month rates, panic disorder, major depressive disorder and substance dependency are included.
† Significantly higher than estimate for total
‡ Significantly lower than estimate for total
§ Based on those who sought help

CCHS results, like those of other studies,[3,6,7,42] indicate that seeking treatment for social anxiety disorder was far more likely if the person had another mental disorder. Among individuals with a lifetime history of both social anxiety and another mental disorder, 51% had sought professional treatment for their social fears—more than twice the rate for those with social anxiety alone (25%). The gap was even broader among those who had sought treatment in the past year: 43% of people with social anxiety and another disorder reported receiving professional treatment versus 16% of individuals with social anxiety disorder on its own.

The low treatment rates for social anxiety disorder and the number of years people wait before seeking treatment are troublesome given that, in many cases, the disorder can be treated successfully. In fact, among CCHS respondents who did have professional help, the majority (69%) felt that their treatment was helpful and effective.

Concluding remarks

Social anxiety disorder has been described as an "illness of lost opportunities."[11] Results from the 2002 Canadian Community Health Survey: Mental Health and Well-being provide further evidence supporting this description. The disorder often begins in childhood or early adolescence: the self-reported average age of onset established using the CCHS data is 13. And symptoms persist—an average of two decades among CCHS respondents with a lifetime history of the condition.

This study of national data found that social anxiety disorder is related to lower educational attainment, reduced employment opportunities, low income and dependence on welfare or social assistance, decreased likelihood of marriage or of having a successful marriage, and social isolation. It is also associated with higher rates of disability, rather negative perceptions of physical and mental health, and dissatisfaction with life.

Although effective treatment is available, most people with social anxiety disorder do not seek professional help to deal with their fears. The effort and commitment required to start and maintain a formal treatment program can be extremely challenging for patients with social anxiety disorder,[19] and if that can be overcome, finding a trained professional may be difficult.[11,19,43] However, other studies suggest that early intervention and treatment may not only allow people with this disorder to realize their full potential, but it may also even prevent subsequent mental disorders.[3,6,20]

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Appendix

Table A
Adjusted odds ratios relating social anxiety disorder and selected characteristics to major depressive disorder, panic disorder and substance dependency over past 12 months, household population aged 15 or older, Canada excluding territories, 2002

	Major depressive disorder		Panic disorder		Substance dependency	
	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval
Social anxiety disorder						
Current (past 12 months)	10.5*	8.4, 13.1	9.4*	6.9, 12.6	3.0*	2.3, 4.1
Lifetime, excluding current	3.2*	2.5, 3.9	3.1*	2.2, 4.5	2.0*	1.5, 2.7
Never†	1.0	...	1.0	...	1.0	...
Sex						
Men	0.7*	0.6, 0.8	0.6*	0.4, 0.7	2.9*	2.4, 3.4
Women†	1.0	...	1.0	...	1.0	...
Age group						
15-24	0.9	0.7, 1.1	0.8	0.6, 1.2	2.6*	2.0, 3.5
25-34	1.0	0.8, 1.2	1.0	0.7, 1.3	1.9*	1.5, 2.4
35-54†	1.0	...	1.0	...	1.0	...
55+	0.6*	0.5, 0.7	0.6*	0.4, 0.8	0.3*	0.2, 0.5
Marital status						
Married/Common-law†	1.0	...	1.0	...	1.0	...
Widowed	1.6*	1.1, 2.3	0.6	0.3, 1.2	0.8	0.3, 1.9
Divorced/Separated	2.7*	2.2, 3.3	1.7*	1.2, 2.4	2.6*	1.9, 3.5
Never married	1.7*	1.4, 2.2	1.3	1.0, 1.8	2.2*	1.7, 2.8
Education						
Less than secondary graduation	0.9	0.7, 1.1	1.1	0.8, 1.5	1.3	1.0, 1.6
Secondary graduation	1.0	0.8, 1.2	1.5*	1.1, 2.1	1.6*	1.3, 2.0
Some postsecondary	1.0	0.8, 1.3	1.4	1.0, 2.0	1.8*	1.3, 2.4
Postsecondary graduation†	1.0	...	1.0	...	1.0	...
Household income						
Low/Lower-middle	1.7*	1.4, 2.1	2.1*	1.5, 2.9	1.5*	1.1, 2.0
Middle	1.2*	1.0, 1.4	1.4*	1.0, 1.9	0.8	0.6, 1.1
Upper middle/High†	1.0	...	1.0	...	1.0	...
Model information						
Sample size	36,212		35,603		36,116	
Sample with other mental disorder/problem	1,869		600		1,191	
Records dropped because of missing values	772		1,381		868	

Date source: 2002 Canadian Community Health Survey: Mental Health and Well-being
Notes: A "missing" category for household income was included in the models to maximize sample size, but the respective odds ratios are not shown. All models are based on weighted data.
† Reference category
** $p < 0.05$*
··· Not applicable

Table B
Adjusted odds ratios relating social anxiety disorder and selected characteristics to low levels of social support, household population aged 15 or older, Canada excluding territories, 2002

	Low tangible support		Low affection		Low positive social interaction		Low emotional or informational support	
	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval
Social anxiety disorder								
Current (past 12 months)	1.8*	1.4, 2.2	1.7*	1.4, 2.2	2.1*	1.7, 2.7	2.1*	1.7, 2.6
Lifetime excluding current	1.3*	1.1, 1.6	1.3	1.0, 1.7	1.3	1.0, 1.7	1.2	0.9, 1.4
Never†	1.0	...	1.0	...	1.0	...	1.0	...
Sex								
Men	0.9	0.8, 1.0	1.8*	1.5, 2.0	1.3*	1.1, 1.5	1.6*	1.4, 1.7
Women†	1.0	...	1.0	...	1.0	...	1.0	...
Age group								
15-24	0.3*	0.3, 0.4	0.3*	0.2, 0.3	0.3*	0.2, 0.3	0.4*	0.3, 0.5
25-34	0.7*	0.6, 0.8	0.8*	0.6, 0.9	0.7*	0.6, 0.9	0.7*	0.6, 0.8
35-54†	1.0	...	1.0	...	1.0	...	1.0	...
55 or older	1.0	0.9, 1.2	1.3*	1.1, 1.5	1.1	0.9, 1.3	1.2*	1.0, 1.3
Marital status								
Married/Common-law†	1.0	...	1.0	...	1.0	...	1.0	...
Widowed	2.6*	2.2, 3.1	5.0*	4.0, 6.3	2.5*	2.1, 3.1	1.9*	1.6, 2.2
Divorced/Separated	3.2*	2.8, 3.7	5.9*	5.0, 7.1	2.6*	2.2, 3.1	2.4*	2.0, 2.7
Never married	3.3*	2.9, 3.7	8.5*	7.2, 10.1	3.0*	2.5, 3.5	2.5*	2.2, 2.8
Education								
Less than secondary graduation	0.8*	0.7, 0.9	1.3*	1.1, 1.5	1.3*	1.1, 1.5	1.2*	1.1, 1.4
Secondary graduation	1.0	0.9, 1.1	1.2*	1.0, 1.4	1.2	1.0, 1.4	1.2*	1.0, 1.3
Some postsecondary	1.0	0.8, 1.2	1.2	0.9, 1.4	1.0	0.8, 1.3	1.1	1.0, 1.4
Postsecondary graduation†	1.0	...	1.0	...	1.0	...	1.0	...
Household income								
Low/Lower-middle	2.1*	1.8, 2.4	2.2*	1.9, 2.6	2.4*	2.0, 2.8	1.8*	1.6, 2.1
Middle	1.5*	1.3, 1.7	1.6*	1.4, 1.9	1.9*	1.6, 2.2	1.5*	1.3, 1.7
Upper middle/High†	1.0	...	1.0	...	1.0	...	1.0	...
Major depressive disorder/Panic disorder/ Substance dependency								
Past 12 months	1.7*	1.5, 2.0	1.8*	1.5, 2.1	1.9*	1.6, 2.3	1.9*	1.7, 2.2
Lifetime, excluding past 12 months	1.1	1.0, 1.3	1.1	0.9, 1.3	1.1	0.9, 1.4	1.2*	1.0, 1.5
Never†	1.0	...	1.0	...	1.0	...	1.0	...
Number of physical chronic conditions	1.1*	1.0, 1.1	1.1*	1.0, 1.1	1.1*	1.1, 1.1	1.1*	1.1, 1.2
Model information								
Sample size	34,509		34,510		34,519		34,435	
Sample with low social support	5,556		3,424		3,130		5,401	
Records dropped because of missing values	2,475		2,474		2,465		2,549	

Date source: 2002 Canadian Community Health Survey
Notes: A "missing" category for household income was included in the models to maximize sample size, but the respective odds ratios are not shown. All models are based on weighted data.
† Reference category
** $p < 0.05$*
··· Not applicable

Table C
Adjusted odds ratios relating social anxiety disorder and selected characteristics to long-term activity limitation and two-week disability, household population aged 15 or older, Canada excluding territories, 2002

	Long-term activity limitation		At least one disability day in past two weeks		At least one disability day in past two weeks due to mental health	
	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval
Social anxiety disorder						
Current (past 12 months)	2.2*	1.7, 2.8	1.4*	1.1, 1.7	3.5*	2.5, 5.0
Lifetime excluding current	1.3*	1.1, 1.5	1.2*	1.0, 1.4	1.1	0.6, 1.9
Never†	1.0	...	1.0	...	1.0	...
Sex						
Men	1.1*	1.0, 1.2	0.8*	0.8, 0.9	0.8	0.6, 1.0
Women†	1.0	...	1.0	...	1.0	...
Age group						
15-24	0.7*	0.6, 0.8	1.4*	1.2, 1.7	0.8	0.5, 1.3
25-34	0.7*	0.6, 0.8	1.3*	1.1, 1.5	1.1	0.7, 1.7
35-54†	1.0	...	1.0	...	1.0	...
55 or older	1.4*	1.2, 1.5	0.7*	0.6, 0.8	0.5*	0.3, 0.7
Marital status						
Married/Common-law†	1.0	...	1.0	...	1.0	...
Widowed	1.4*	1.2, 1.6	1.1	0.9, 1.3	1.0	0.5, 1.8
Divorced/Separated	1.0	0.9, 1.1	1.1	0.9, 1.3	1.5*	1.0, 2.1
Never married	1.2*	1.1, 1.4	1.1	1.0, 1.3	1.7*	1.2, 2.5
Education						
Less than secondary graduation	1.1	1.0, 1.2	0.9	0.8, 1.1	1.4*	1.0, 2.0
Secondary graduation	0.9	0.8, 1.1	1.0	0.8, 1.1	1.3	0.9, 1.9
Some postsecondary	1.1	1.0, 1.3	1.1	0.9, 1.3	1.2	0.7, 1.9
Postsecondary graduation†	1.0	...	1.0	...	1.0	...
Household income						
Low/Lower-middle	1.3*	1.2, 1.5	1.0	0.9, 1.2	1.2	0.9, 1.8
Middle	1.1*	1.0, 1.2	0.9	0.8, 1.0	1.3	0.9, 1.9
Upper middle/High†	1.0	...	1.0	...	1.0	...
Major depressive disorder/Panic disorder/ Substance dependency						
Past 12 months	2.1*	1.8, 2.4	2.0*	1.8, 2.3	8.4*	6.1, 11.7
Lifetime excluding past 12 months	1.2*	1.0, 1.4	1.3*	1.1, 1.5	0.9	0.5, 1.7
Never†	1.0	...	1.0	...	1.0	...
Number of physical chronic conditions	1.9*	1.9, 2.0	1.5*	1.4, 1.5	1.3*	1.2, 1.4
Model information						
Sample size	35,129		35,083		35,077	
Sample with activity limitation/disability	8,677		5,020		438	
Records dropped because of missing values	1,855		1,901		1,907	

Date source: 2002 Canadian Community Health Survey: Mental Health and Well-being
Notes: A "missing" category for household income was included in the models to maximize sample size, but the respective odds ratios are not shown. All models are based on weighted data.
† Reference category
** $p < 0.05$*
··· Not applicable

Table D
Adjusted odds ratios relating social anxiety disorder and selected characteristics to self-reported physical and mental health status, household population aged 15 or older, Canada excluding territories, 2002

	Fair/Poor self-perceived physical health		Fair/poor self-perceived mental health		Dissatisfaction with life	
	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval	Odds ratio	95% confidence interval
Social anxiety disorder						
Current (past 12 months)	1.8*	1.4, 2.4	5.4*	4.4, 6.7	3.3*	2.5, 4.4
Lifetime excluding current	1.2*	1.0, 1.5	2.6*	2.0, 3.3	1.8*	1.4, 2.3
Never†	1.0	...	1.0	...	1.0	...
Sex						
Men	1.2*	1.1, 1.3	1.0	0.9, 1.1	1.2*	1.0, 1.4
Women†	1.0	...	1.0	...	1.0	...
Age group						
15-24	0.9	0.8, 1.1	0.6*	0.5, 0.7	0.4*	0.3, 0.5
25-34	1.0	0.8, 1.2	0.9	0.7, 1.0	0.9	0.7, 1.1
35-54†	1.0	...	1.0	...	1.0	...
55 or older	1.3*	1.2, 1.5	0.7*	0.6, 0.8	0.7*	0.6, 0.9
Marital status						
Married/Common-law†	1.0	...	1.0	...	1.0	...
Widowed	1.0	0.8, 1.1	1.2	0.9, 1.5	1.2	0.9, 1.6
Divorced/Separated	1.3*	1.1, 1.5	1.9*	1.5, 2.3	2.5*	2.1, 3.1
Never married	1.1	0.9, 1.3	1.4*	1.2, 1.7	2.1*	1.7, 2.5
Education						
Less than secondary graduation	1.6*	1.5, 1.9	1.5*	1.2, 1.7	1.1	0.9, 1.3
Secondary graduation	1.3*	1.1, 1.4	1.2	1.0, 1.4	1.0	0.8, 1.3
Some postsecondary	1.2*	1.0, 1.4	1.1	0.9, 1.4	1.2	0.9, 1.6
Postsecondary graduation†	1.0	...	1.0	...	1.0	...
Household income						
Low/Lower-middle	2.1*	1.7, 2.4	1.8*	1.5, 2.2	2.1*	1.7, 2.5
Middle	1.5*	1.3, 1.7	1.4*	1.2, 1.7	1.7*	1.4, 2.0
Upper middle/High†	1.0	...	1.0	...	1.0	...
Major depressive disorder/Panic disorder/ Substance dependency						
Past 12 months	2.4*	2.0, 2.8	6.3*	5.3, 7.4	4.5*	3.7, 5.5
Lifetime excluding past 12 months	1.3*	1.1, 1.5	1.7*	1.4, 2.1	1.3	1.0, 1.6
Never†	1.0	...	1.0	...	1.0	...
Number of physical chronic conditions	1.8*	1.8, 1.9	1.4*	1.3, 1.4	1.3*	1.2, 1.4
Model information						
Sample size	35,149		35,137		35,135	
Sample with fair/poor health/dissatisfaction with life	5,494		2,720		1,890	
Records dropped because of missing values	1,835		1,847		1,849	

Date source: 2002 Canadian Community Health Survey: Mental Health and Well-being
Notes: A "missing" category for household income was included in the models to maximize sample size, but the respective odds ratios are not shown. All models are based on weighted data.
† Reference category
** $p < 0.05$*
... Not applicable


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Annex


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Definitions of mental disorders in the Canadian Community Health Survey: Mental health and well-being

The Canadian Community Health Survey (CCHS) cycle 1.2: Mental Health and Well-being was conducted in the 10 provinces in 2002. The survey used the World Mental Health version of the Composite International Diagnostic Interview (WMH-CIDI) to estimate the prevalence of various mental disorders in the Canadian household population aged 15 or older. The WMH-CIDI was designed to be administered by lay interviewers and is generally based on diagnostic criteria outlined in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV®-TR).[1] Based on the advice of experts in the field of mental health, the WMH-CIDI and the algorithms used to identify mental disorders were revised over a period of time. The questionnaire used for the CCHS is available at www.statcan.ca/English/concepts/health/cycle1.2/index.htm. This Annex provides the details of the specific algorithms used to define mental disorders for the CCHS.

For some disorders, a set of screening questions was asked to determine if it would be appropriate to ask the respondent the more detailed questions designed to assess a particular disorder. This was done to reduce the number of questions posed to respondents without mental disorders. In some cases, these screening questions were also used in the algorithm to categorize respondents as having a disorder.

Alcohol dependence

Alcohol dependence, past 12 months

Alcohol dependence was determined using a *short-form measure* containing a series of questions measuring seven different symptoms. CCHS respondents who had *five or more drinks during one occasion at least once a month during the past 12 months* were asked the following seven questions to determine how their drinking affected everyday activities:

"During the past 12 months:

- have you ever been drunk or hung-over while at work, school or while taking care of children?"
- were you ever in a situation while drunk or hung-over which increased your chances of getting hurt? (for example, driving a boat, using guns, crossing against traffic, or during sports)?"
- have you had any emotional or psychological problems because of alcohol use, such as feeling uninterested in things, depressed or suspicious of people?"
- have you had such a strong desire or urge to drink alcohol that you could not resist it or could not think of anything else?"
- have you had a period of a month or more when you spent a great deal of time getting drunk or being hung-over?"
- did you ever drink much more or for a longer period of time than you intended?"
- did you ever find that you had to drink more alcohol than usual to get the same effect or that the same amount of alcohol had less effect on you than usual?"

This short-form was developed to reproduce a measure that operationalized both Criteria A and B of the DSM-III-R diagnosis for psychoactive substance use disorder.[2] Respondents who reported three or more symptoms were considered to have ***alcohol dependence***.[3]

Bipolar I disorder

Screening questions:

Respondents were "screened in" before they were asked detailed questions about ***bipolar I disorder***. To be screened in, the following responses were required:

YES to: **Question 1**
"Some people have periods lasting several days or longer when they feel much more excited and full of energy than usual. Their minds go too fast. They talk a lot. They are very restless or unable to sit still and they sometimes do things that are unusual for them. For example, they may drive too fast or spend too much money. During your life, have you ever had a period like this lasting several days or longer?"

OR

YES to: **Question 2**
"Have you ever had a period lasting several days or longer when most of the time you were very irritable, grumpy or in a bad mood?"

AND

Question 3
"Have you ever had a period lasting several days or longer when most of the time you were so irritable that you either started arguments, shouted at people or hit people?"

Respondents who answered "yes" to Question 1 or "yes" to Questions 2 and 3 were asked the more detailed questions in the "mania" section of the questionnaire.

Manic episode, lifetime history

Criterion 1, lifetime

To meet the criteria for ***lifetime manic episode***, respondents must have had: (1A) a distinct period of abnormally and persistently elevated, expansive or irritable mood lasting at least one week; (1B) three or more of seven symptoms (or four or more if mood is irritable only) present during the mood disturbance; and (1C) marked impairment in normal daily activities, occupational functioning or usual social activities or relationships with others (1Ci), or mood disturbance including psychotic features (1Cii), or mood disturbance serious enough to require hospitalization (1Ciii).

1A

Respondents who answered "yes" to Screening Question 1 were asked:

> "Earlier you mentioned having a period lasting several days or longer when you felt much more excited and full of energy than usual. During this same period, your mind also went too fast. People who have periods like this often have changes in their thinking and behaviour at the same time, like being more talkative, needing very little sleep, being very restless, going on buying sprees, and behaving in ways they would normally think are inappropriate. Tell me, did you ever have any of these changes during the period when you were excited and full of energy?"

Respondents who answered "no" were not asked any more questions in the mania section, regardless of their response to Screening Questions 2 and 3.

Those who said "no" to Screening Question 1, but "yes" to Screening Questions 2 and 3 were asked:

> "Earlier you mentioned having a period lasting several days or longer when you became so irritable or grouchy that you either started arguments, shouted at people or hit people. People who have periods of irritability like this often have changes in their thinking and behaviour at the same time, like being more talkative, needing very little sleep, being very restless, going on buying sprees, and behaving in ways they would normally think are inappropriate. Tell me, did you ever have any of these changes during the periods when you were very irritable or grouchy?"

Respondents who answered "no" were not asked any more questions in the mania section.

For both questions in 1A, duration of at least one week was established by asking: "How long did that episode last (in terms of hours, days, weeks, months or years)?"

1B

At least three of the following seven symptoms were required to meet this criterion (or at least four of seven if mood was irritable/grouchy only):

1. *Inflated self-esteem or sense of grandiosity*
   - "Did you have a greatly exaggerated sense of self-confidence or believe that you could do things that you really couldn't do?"

   or

   - "Did you have the idea that you were actually someone else, or that you had a special connection with a famous person that you really didn't have?"

2. *Decreased need for sleep*
   - "Did you sleep far less than usual and still not get tired or sleepy?"

3. *More talkative than usual or pressure to keep talking*
   - "Did you talk a lot more than usual or feel a need to keep talking all the time?"

4. *Flight of ideas or subjective experience that thoughts are racing*
   - "Did your thoughts seem to jump from one thing to another or race through your head so fast that you couldn't keep track of them?"

5. *Distractibility*
   - "Did you constantly keep changing your plans or activities?"

   or

   - "Were you so easily distracted that any little interruption could get your thinking 'off track'?"

6. *Increase in goal-oriented activity or psychomotor agitation*
   - "Did you become so restless or fidgety that you paced up and down or couldn't stand still?"
   - "Did you become overly friendly or outgoing with people?"
   - "Were you a lot more interested in sex than usual, or did you want to have sexual encounters with people you wouldn't ordinarily be interested in?"
   - "Did you try to do things that were impossible to do, like taking on large amounts of work?"

7. *Excessive involvement in pleasurable activities that have a high potential for painful consequences*
   - "Did you get involved in foolish investments or schemes for making money?"

   or

   - "Did you spend so much more money than usual that it caused you to have financial trouble?"

   or

   - "Were you interested in seeking pleasure in ways that you would usually consider risky, like having casual or unsafe sex, going on buying sprees or driving recklessly?"

1C

There were three ways to meet this sub-criterion: 1Ci, 1Cii or 1Ciii.

1Ci: *To be considered as having marked impairment in normal activities, occupational functioning or usual social activities or relationships with others, respondents had to meet one of the following:*

- "You just mentioned that you had an episode/ episodes when you were very excited and full of energy/irritable or grouchy . . . . How much did that episode/these episodes ever interfere with either your work, your social life or your personal relationships?"

  Respondents who answered "not at all," or "a little" were asked no further questions in the mania section. Those who replied with "a lot" or "extremely" were considered to meet this criterion.

  or

- "During that episode/these episodes, how often were you unable to carry out your normal daily activities?"

  Response categories were: "often," "sometimes," "rarely" and "never"; responses of "often" or "sometimes" met this criterion.

or

- A high level of interference with activities (a score between 7 and 10):
  - "How much did your episode interfere with your home responsibilities, like cleaning, shopping and taking care of the house or apartment?"
  - "How much did your episode interfere with your ability to attend school?"
  - "How much did it interfere with your ability to work at a job?"
  - "Again thinking about that period of time lasting one month or longer when your episode(s) was/were most severe, how much did it/they interfere with your ability to form and maintain close relationships with other people?"
  - "How much did it/they interfere with your social life?"

Scores had to fall in the 7-to-10 range, scored on an 11-point scale, with 0 representing "no interference" and 10, "very severe interference."

or

Respondents who gave a number between 5 and 365 in response to, "In the past 12 months, about how many days out of 365 were you totally unable to work or carry out your normal activities because of your episode(s) of being very excited and full of energy/irritable or grouchy?" were considered to have marked impairment in occupational functioning.

or

A response of "yes" to: "Did you ever in your life see, or talk on the telephone to, a medical doctor or other professional about your episode(s) of being very excited and full of energy/irritable or grouchy? (By other professional, we mean psychologists, psychiatrists, social workers, counsellors, spiritual advisors, homeopaths, acupuncturists, self-help groups or other health professionals.)

1Cii: *A "yes" response to: "Did you have the idea that you were actually someone else, or that you had a special connection with a famous person that you really didn't have?" established a psychotic feature.*

1Ciii: *To establish mood disturbance severe enough to require hospitalization, an answer of "yes" to "Were you ever hospitalized overnight for your episode(s) of being very excited and full of energy/irritable or grouchy?"*

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Illicit drug dependence

Illicit drug dependence, past 12 months

The CCHS 1.2 asked about use of the following illicit drugs: cannabis, cocaine, speed (amphetamines), ecstasy (MDMA) or other similar drugs, hallucinogens, heroin, and sniffing solvents such as gasoline or glue. Follow-up questions measuring symptoms of dependence were posed to respondents who had used such illicit drugs at least monthly in the past year.

Individuals were considered to have an ***illicit drug dependence*** if they experienced at least three symptoms related to aspects of tolerance, withdrawal, loss of control and social or physical problems related to their illicit drug use in the past 12 months. Six symptoms were measured:

1. *Tolerance, meaning a need for markedly increased amounts of the drug to achieve intoxication or desired effect or by markedly diminished effect with continued use of the same amount of drug.*

   - "During the past 12 months, did you ever need to use more drugs than usual in order to get high, or did you ever find that you could no longer get high on the amount you usually took?"

2. *Withdrawal manifested by withdrawal syndrome or by taking the same (or a closely related) substance to relieve or avoid withdrawal symptoms.*

   Interviewers read the following:
   - "People who cut down their substance use or stop using drugs altogether may not feel well if they have been using steadily for some time. These feelings are more intense and can last longer than the usual hangover."

   Then respondents were asked:
   - "During the past 12 months, did you ever have times when you stopped, cut down or went without drugs and then experienced symptoms like fatigue, headaches, diarrhea, the shakes or emotional problems?"

   or

   - "During the past 12 months, did you ever have times when you used drugs to *keep* from having such symptoms?"

3. *The drug is often taken in larger amounts or over a longer period than was intended, or drugs are used even though respondent promised not to use them.*

   - "During the past 12 months, did you ever have times when you used drugs even though you promised yourself you wouldn't, or times when you used a lot more drugs than you intended?"

   and

   - "During the past 12 months, were there ever times when you used drugs more frequently, or for more days in a row than you intended?"

4. *A great deal of time is spent obtaining the drug (for example, visiting multiple doctors or driving long distances), using the drug, or recovering from its effects.*

   - "During the past 12 months, did you ever have periods of several days or more when you spent so much time using drugs or recovering from the effects of using drugs that you had little time for anything else?"

5. *Important social, occupational, or recreational activities are given up because of drug use.*

   - "During the past 12 months, did you ever have periods of a month or longer when you gave up or greatly reduced important activities because of your use of drugs?"

6. *Drug use continues despite recognizing a persistent or recurrent physical or psychological problem likely caused or exacerbated by the drug.*

   - "During the past 12 months, did you ever continue to use drugs when you knew you had a serious physical or emotional problem that might have been caused by or made worse by your use?"

Major depressive disorder

Screening questions:

Respondents were "screened in" to (or out of) the module on ***major depressive disorder*** based on their replies to the following three questions. At least one "yes" response was required:

Yes to: **Question 1**
"Have you ever in your life had a period lasting several days or longer when most of the day you felt sad, empty or depressed?"

OR

Question 2
"Have you ever had a period lasting several days or longer when most of the day you were very discouraged about how things were going in your life?"

OR

Question 3
"Have you ever had a period lasting several days or longer when you lost interest in most things you usually enjoy, like work, hobbies and personal relationships."

CCHS respondents were accepted for the module as soon as they answered "yes" to a question in this series.

Major depressive disorder, lifetime history

Criterion 1, lifetime

To meet this criterion, respondents must have had the following symptoms during the same two-week period: depressed mood or loss of interest or pleasure in most things usually enjoyed (1A) and five of nine additional symptoms associated with depression that represented a change from previous functioning (1B).

1A

Note: The questions asked in this section depended on how the screening questions were answered.

At least one "yes" to the following series of questions:

1. 'Earlier, you mentioned having periods that lasted several days or longer when you lost interest in most things like work, hobbies or other things you usually enjoy. Did you ever have such a period that lasted for most of the day, nearly every day, for two weeks or longer?"

2. "Did you ever have a period of being sad or discouraged that lasted for most of the day, nearly every day, for two weeks or longer?"

3. "Did you feel sad, empty or depressed most of the day, nearly every day, during that period of two weeks?"

4. "Nearly every day, did you feel so sad that nothing could cheer you up?"

5. "During that period of two weeks, did you feel discouraged most of the day, nearly every day, about how things were going in your life?"

6. "Did you feel hopeless about the future nearly every day?"

7. "During that period of two weeks, did you lose interest in almost all things like work, hobbies and things you like to do for fun?"

8. "Did you feel like nothing was fun even when good things were happening?"

1B

Five of nine symptoms were required to meet this criterion:

1. *Depressed mood*
   - "Did you feel sad, empty or depressed most of the day, nearly every day, during that period of two weeks?"
   - "Nearly every day, did you feel so sad that nothing could cheer you up?"
   - "During that period of two weeks, did you feel discouraged most of the day, nearly every day, about how things were going in your life?"
   - "Did you feel hopeless about the future nearly every day?"

2. *Diminished interest/pleasure in most activities*
   - "During that period of two weeks, did you lose interest in almost all things like work, hobbies and things you like to do for fun?"
   - "Did you feel like nothing was fun even when good things were happening?"

3. *Significant weight loss/gain or change in appetite*
    - "During that period of two weeks, did you, nearly every day, have a *much smaller* appetite than usual?"
    - "Did you have a *much larger* appetite than usual nearly every day?"
    - "During that period of two weeks, did you gain weight without trying to?"
    - "Was this weight gain due to a physical growth or a pregnancy?"
    - "Did you *lose* weight without trying to?"
    - "Was this weight loss a result of a diet or a physical illness?"
    - "How much did you lose?"

4. *Insomnia/Hypersomnia*
    - "During that period of two weeks, did you have a lot more trouble than usual either falling asleep, staying asleep or waking up too early *nearly every night*?"
    - "During that period of two weeks, did you sleep a lot more than usual *nearly every night*?"

5. *Psychomotor agitation/retardation*
    - "Did you talk or move more slowly than is normal for you nearly every day?"
    - "Did anyone else notice that you were talking or moving slowly?"
    - "Were you so restless or jittery nearly every day that you paced up and down or couldn't sit still?"
    - "Did anyone else notice that you were restless?"

6. *Fatigue/Loss of energy*
    - "During that period of two weeks, did you feel tired or low in energy nearly every day, even when you had not been working very hard?"

7. *Feelings of worthlessness*
    - "Did you feel totally worthless nearly every day?"

8. *Diminished ability to think/concentrate*
    - "During that period of two weeks, did your thoughts come much more slowly than usual or seem mixed up nearly every day?"
    - "Nearly every day, did you have a lot more trouble concentrating than is normal for you?"
    - "Were you unable to make up your mind about things you ordinarily have no trouble deciding about?"

9. *Recurrent thoughts of death*
    - "During that period, did you ever think that it would be better if you were dead?"
    - "Three experiences are listed, EXPERIENCE A, B and C. Think of the period of *two weeks or longer* [when your feelings of being sad or discouraged or when you lost interest in most things you usually enjoy] and other problems were most severe and frequent. During that time, did Experience A happen to you? (You seriously thought about committing suicide or taking your own life.)
      Now, look at the second experience on the list, Experience B. Did Experience B happen to you? (You made a plan for committing suicide.)
      Now, look at the third experience on the list, Experience C. During that period of *two weeks or longer*, did Experience C happen to you? (You attempted suicide or tried to take your own life.)"

Criterion 2, lifetime

Respondents were asked four questions to establish that their lifetime depressive symptoms caused clinically significant distress. This criterion was fulfilled by meeting one of these four items (2A or 2B or 2C or 2D).

2A

A response of "moderate," "severe" or "very severe" to: "During those periods, how severe was your emotional distress?"

2B

A response of "often" or "sometimes" to: "During those periods, how often was your emotional distress so severe that nothing could cheer you up?"

2C

A response of "often" or "sometimes" to: "During those periods, how often was your emotional distress so severe that you could not carry out your daily activities?"

2D

A "yes" to: "Nearly every day, did you feel so sad that nothing could cheer you up?"

Criterion 3, lifetime

To meet this final criterion, the lifetime depressive episodes were *not* always accounted for by bereavement (i.e., preceded by the death of someone close), as established by a "no" response to 3A or 3B.

3A

A "no" to: "Did your episodes of feeling sad or discouraged ever occur just after someone close to you died?"

3B

A "no" to: "Did your episodes of feeling a loss of interest in most things you usually enjoy always occur just after someone close to you died?

Major depressive disorder, Current (past 12 months)

The following three criteria were used to assess ***current major depressive episode***; that is, whether the respondent had had symptoms in the 12 months before the CCHS interview. All three had to be met for a respondent to be categorized as having a major depressive episode in the past year.

Criterion 1, current

The respondent had to meet the criteria for a lifetime history of major depressive disorder.

Criterion 2, current

A report of a major depressive episode within the past 12 months was required.

Criterion 3, current

This criterion assessed clinically significant distress or impairment in social, occupational or other important areas of functioning. Respondents were asked to think about a period *during the past 12 months* when their feelings of being sad or discouraged or losing interest in things usually enjoyed were *most severe and frequent*. They were then asked a series of questions:

"During this period [two weeks or longer]*, how often:*

- did you feel cheerful?"
- did you feel as if you were slowed down?"
- could you enjoy a good book or radio or TV program?"

Response options: often, sometimes, occasionally, never; at least one response of "occasionally" or "never" required.

"During this period [two weeks or longer]*, how often:*

- did you still enjoy the things you used to enjoy?"
- could you laugh and see the bright side of things?"
- did you take interest in your physical appearance?"
- did you look forward to enjoying things?"

Response options: as much as usual, not quite as much as usual, only a little, not at all; at least one response of "only a little" or "not at all" required.

"Please tell me what number best describes how much these feelings interfered with each of the following activities [period of one month or longer]*:*

- your home responsibilities, like cleaning, shopping and taking care of the house or apartment?"
- your ability to attend school?"
- your ability to work at a job?"
- your ability to form and maintain *close* relationships with other people?"
- your social life?"

Responses: 0 = no interference; 10 = very severe interference. A score in the 4-to-10 range was required.

"How many days out of 365 were you totally unable to work or carry out your normal activities because of your feelings?"

Response: Any number between 0 and 365; a reply between 5 and 365 required.

"During the past 12 months, did you receive professional treatment for your feelings?"

Response: A "yes" response was required.

Panic disorder

Screening questions:

CCHS respondents were either "screened in" to (or out of) the ***panic disorder*** module of the questionnaire based on their replies to the following two questions:

YES to: "During your life, have you ever had an attack of fear or panic when all of a sudden you felt very frightened, anxious or uneasy?"

OR

"Have you ever had an attack when all of a sudden, you became very uncomfortable, you either became short of breath, dizzy, nauseous or your heart pounded, or you thought that you might lose control, die or go crazy?"

These questions established the presence of ***panic attacks***; that is, whether respondents had ever experienced a discrete period of intense fear or discomfort. Those who answered "yes" to one of them were then asked the more detailed questions in the panic disorder module about the symptoms they experienced during their attacks of fear or panic.

1. *Heart pounding/racing*
   - "Did your heart pound or race?"
2. *Shortness of breath*
   - "Were you short of breath?"
3. *Nauseous/Abdominal distress*
   - "Did you feel nauseous or sick to your stomach?"
4. *Dizzy, unsteady, light-headed or faint*
   - "Did you feel dizzy or faint?"
   - "Were you afraid that you might pass out?"
5. *Sweating*
   - "Did you sweat?"
6. *Trembling/Shaking*
   - "Did you tremble or shake?"
7. *Dry mouth*
   - "Did you have a dry mouth?"
8. *Feeling of choking*
   - "Did you feel like you were choking?"
9. *Chest pain/discomfort*
   - "Did you have pain or discomfort in your chest?"
10. *Fear of losing control/going crazy*
    - "Were you afraid that you might lose control of yourself or go crazy?"
11. *Derealization/Depersonalization*
    - "Did you feel that you were 'not really there', like you were watching a movie of yourself?"
    - "Did you feel that things around you were not real or like a dream?"
12. *Fear of dying*
    - "Were you afraid that you might die?"
13. *Hot flushes/Chills*
    - "Did you have hot flushes or chills?"
14. *Numbness/Tingling sensations*
    - "Did you feel numbness or have tingling sensations?"

Respondents who had at least four "yes" responses and four symptoms were then asked if the symptoms they identified began suddenly and reached their peak within 10 minutes after the attack(s) began. If they said "yes," they were considered to meet the criteria for ***lifetime panic attacks***.

Panic disorder, lifetime history

Respondents who were screened in and met the more detailed criteria for lifetime panic attacks were further assessed to determine if they met the following two criteria, establishing a ***lifetime history of panic disorder***.

Criterion 1

To meet this criterion, a respondent must have had at least four recurrent and unexpected panic attacks. Respondents who had stated that their attacks began suddenly and peaked within 10 minutes (criterion 3

for panic attacks) were asked how many of these sudden attacks they had had in their "entire lifetime." Those who had had at least four were then asked if they ever had "an attack that occurred unexpectedly, 'out of the blue'." If they said "yes," they were asked about the number of such attacks.

Criterion 2
Respondents were asked a series of questions about worrying, behaviour changes, and physical associations related to attacks. Either 1A or 1B was required to meet this criterion for lifetime panic disorder.

1A
At least one "yes" response when asked if, after one of these attacks, "you ever had any of the following experiences":

- "A *month or more* when you often worried that you might have another attack?"
- "A *month or more* when you worried that something terrible might happen because of the attacks, like having a car accident, having a heart attack, or losing control?"
- "A *month or more* when you changed your everyday activities because of the attacks?"
- "A *month or more* when you avoided certain situations because of fear about having another attack?"

1B
A "yes" response to: "In the *past 12 months*, did you get upset by any physical sensations that reminded you of your attacks?"

and

A response of "all of the time" or "most of the time" to: "In the *past 12 months*, how often did you avoid situations or activities that might cause these physical sensations?"

Panic disorder, current (past 12 months)

The following three criteria were used to assess ***current panic disorder***; that is, whether the respondent had had symptoms in the 12 months before the CCHS interview. All three had to be met for a respondent to be categorized as having panic disorder in the past year.

Criterion 1
The respondent had to meet the criteria for a lifetime history of panic disorder.

Criterion 2
Respondents who said they had had a sudden and unexpected panic attack that peaked within 10 minutes "at any time in the *past 12 months*"

or

who said their age at the time of their first or most recent panic attack was the same as their age at the time of the interview met this criterion.

Criterion 3
For this criterion, respondents were asked to think about an attack during the past 12 months and define the level of emotional distress they experienced. Responses of "moderate," "severe" or "so severe that you were unable to concentrate and had to stop what you were doing" met this third criterion.

Social anxiety disorder

Screening questions:

Respondents were "screened in" to (or out of) the ***social anxiety disorder*** module of the CCHS based on their replies to the following five "yes"/"no" questions:

YES to: **Question 1**
"Was there ever a time in your life when you felt very afraid or *really, really* shy with people; for example, meeting new people, going to parties, going on a date or using a public bathroom?"

OR

Question 2
"Was there *ever* a time in your life when you felt very afraid or uncomfortable when you had to do something in front of a group of people, like giving a speech or speaking in class?"

AND

YES to: **Question 3**
"Was there *ever* a time in your life when you became *very upset or nervous* whenever you were in social situations or when you had to do something in front of a group?"

AND

YES to: **Question 4**
"Because of your fear, did you *ever* stay away from social situations or situations where you had to do something in front of a group whenever you could?"

OR

Question 5
"Do you think your fear was *ever* much stronger than it should have been?"

Respondents who answered "yes" to Questions 1 or 2 and then "yes" to 3 and "yes" to 4 or 5 were asked the questions in the ***social anxiety disorder*** section of the questionnaire. Otherwise, they were defined as having no history of social anxiety disorder.

Social anxiety disorder, lifetime history

Respondents who met the screening criteria and met all six of the following criteria were considered to have a ***lifetime history of social anxiety disorder***.

Criterion 1, lifetime
Criteria 1A and 1B indicate a marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The respondent fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing. In the CCHS, both 1A and 1B were required.

1A
At least one "yes" when respondents were asked if there was ever a time in their life when they felt "very shy, afraid or uncomfortable" with the following situations:

1. Meeting new people.
2. Talking to people in authority.
3. Speaking up in a meeting or class.
4. Going to parties or other social gatherings.
5. Performing or giving a talk in front of an audience.
6. Taking an important exam or interviewing for a job, even though you were well prepared.
7. Working while someone watches you.
8. Entering a room when others are already present.
9. Talking with people you don't know very well.
10. Expressing disagreement to people you don't know very well.
11. Writing, eating or drinking while someone watches.
12. Using a public bathroom or a bathroom away from home.
13. When going on a date.
14. In any *other* social or performance situation where you could be the centre of attention or where something *embarrassing* might happen.

1B
At least one "yes" response to the following:

1. "When you were in this/these situation(s), were you afraid you might do something *embarrassing* or *humiliating*?"
2. "Were you afraid that you might embarrass other people?"
3. "Were you afraid that people might *look* at you, *talk* about you or think negative things about you?"
4. "Were you afraid that you might be the focus of attention?"

Criterion 2, lifetime
A "yes" response to: "Was there *ever* a time in your life when you became *very upset or nervous* whenever you were in social situations or when you had to do something in front of a group?" (Screening Question 3.)

Criterion 3, lifetime
A "yes" response to: "Do you think your fear was *ever* much stronger than it should have been?" (Screening Question 5.)

Criterion 4, lifetime
At least one of the following requirements—4A, 4B, 4C, 4D or 4E must have been met:

4A
A "yes" response to: "Because of your fear, did you *ever* stay away from social situations or situations where you had to do something in front of a group whenever you could?" (Screening Question 4.)

4B
A response of "all of the time," "most of the time" or "sometimes" to: "During the *past 12 months*, how often did you avoid any of these situations?"

4C
A "yes" response to at least two of the following reactions when faced with feared situations:

1. "Did your heart ever pound or race?"
2. "Did you sweat?"
3. "Did you tremble?"
4. "Did you feel sick to your stomach?"
5. "Did you have a dry mouth?"
6. "Did you have hot flushes or chills?"
7. "Did you feel numbness or have tingling sensations?"
8. "Did you have trouble breathing normally?"
9. "Did you feel like you were choking?"
10. "Did you have pain or discomfort in your chest?"
11. "Did you feel dizzy or faint?"
12. "Were you afraid that you might die?"
13. "Did you ever fear that you might lose control, go crazy or pass out?"
14. "Did you feel like you were "not really there," like you were watching a movie of yourself or did you feel that things around you were not real or like a dream?"

4D
A response of "severe" or "very severe" to: "What if you were faced with *this/one of these situation(s) today*—how strong would your fear be?"

4E
A "yes" response to: "When you were in this/these situation(s), were you ever afraid that you might have a panic attack?"

Criterion 5, lifetime
This criterion stipulates that the fear or avoidance of social or performance situations must interfere significantly with the individual's normal routine, occupational or academic functioning, or social activities or relationships. At least one of four conditions—5A, 5B, 5C or 5D—had to be true.

5A
Respondents who had experienced symptoms in the past 12 months were asked to indicate how much their fear or avoidance of situations had interfered with various activities. They were asked to think about the period of time over the last year that had lasted one *month or longer* when their fear or avoidance of social or performance situations was most severe. Responses were coded on an 11-point scale, with 0 meaning "no interference" and 10, "very severe interference." A score of 5 or higher for at least one of these situations was required:

1. "How much did your fear or avoidance of social or performance situations interfere with your home responsibilities, like cleaning, shopping and taking care of the house or apartment?"
2. "How much did it interfere with your ability to attend school?"
3. "How much did it interfere with your ability to work at a job?"
4. "How much did this fear or avoidance interfere with your ability to form and maintain *close* relationships with other people?"
5. "How much did it interfere with your social life?"

5B
A response of "some," "a lot" or "extremely" when respondents were asked how much their fear or avoidance of social or performance situations *ever* interfered with their work, social life or personal relationships.

5C
A response of five or more days when asked: "In the past 12 months, about how many days out of 365 were

you totally unable to work or carry out normal activities because of your fear or avoidance of situations?"

5D

A "yes" response to: "Did you *ever* in your life see, or talk on the telephone to, a medical doctor or other professional about your fear or avoidance of social or performance situations?"

Note: Respondents were told that "other professional" meant psychologist, psychiatrist, social worker, counsellor, spiritual advisor, homeopath, acupuncturist, self-help group or other health professionals.

Criterion 6

For people younger than 18 or for people whose symptoms all occurred before they were 18, symptoms must have persisted for at least six months. There is no minimum duration for respondents who experienced symptoms after age 18. Duration of symptoms was calculated by subtracting the age at which the respondent reported strongly fearing or avoiding social or performance situations for the first time from the age this last occurred (or current age for those who still had the disorder).

Social anxiety disorder, current (past 12 months)

Three criteria were used to assess ***current social anxiety disorder***; that is, whether the respondent had had symptoms in the 12 months before the survey interview. All three had to be met for a respondent to be categorized as having social anxiety disorder in the past year.

Criterion 1, current

The respondent had to meet the criteria for a lifetime history of social anxiety disorder.

Criterion 2, current

Respondents who said that the last time they had strongly feared or avoided social or performance situations occurred in the 12 months before the survey interview. Respondents were also asked the ages at which they first and last had fear of or avoided a social or performance situation. If they reported their age at the time of the interview, this was also accepted as evidence of the disorder in the past year.

Criterion 3, current

The fear or avoidance of social or performance situations must have interfered significantly with the individual's normal routine, occupational or academic functioning, or social activities or relationships in the 12 months before the interview. (This criterion is quite similar to criterion 5 for lifetime and, in some cases, exactly the same conditions were used; i.e., the conditions involving items with a 12-month reference period.) At least one of the four conditions considered (3A, 3B, 3C or 3D) had to be true.

3A

(Identical to criterion 5A, lifetime.)

Respondents who had experienced symptoms in the past 12 months were asked to indicate how much their fear or avoidance of situations interfered with five separate activities. They were asked to think about the period of time over the last year that lasted *one month or longer* when their fear or avoidance of social and performance situations was most severe. Responses were coded on an 11-point scale, with 0 meaning "no interference," and 10, "very severe interference."

1. "How much did your fear or avoidance of social or performance situations interfere with your home responsibilities, like cleaning, shopping and taking care of the house or apartment?"
2. "How much did it interfere with your ability to attend school?"
3. "How much did it interfere with your ability to work at a job?"
4. "How much did this fear or avoidance interfere with your ability to form and maintain close relationships with other people?"
5. "How much did it interfere with your social life?"

A score of 5 or higher for at least one of these situations was required, indicating that symptoms of social anxiety disorder interfered with activities over the past 12 months.

3B

A response of "all of the time," "most of the time" or "sometimes" when respondents were asked how often they avoided social or performance situations *in the past 12 months.*

3C

(Identical to criterion 5C, lifetime.)

A response of "five or more days" when asked: "In the past 12 months, about how many days out of 365 were you totally unable to work or carry out normal activities because of your fear or avoidance of situations?"

3D

A "yes" response to: "At any time in the *past 12 months*, did you receive professional treatment for your fear?"

References

1 American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*. Washington, DC: American Psychiatric Association, 2000.

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3 Walters EE, Kessler RC, Nelson CB, et al. Scoring the World Health Organization's Composite International Diagnostic Interview Short Form (CIDI-SF). www.who.int/msa/cidi/CIDISFScoringMemo12-03-02.pdf.