PSYCHOSOCIAL IMPACTS OF THE COVID-19 PANDEMIC:
RESULTS OF A BROAD SURVEY IN QUÉBEC
Phase 4

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BRIEF DESCRIPTION OF THE SURVEY

Context: This survey is part of a two-year international project financed by the Canadian Institutes of Health Research and carried out by an interdisciplinary team from the Université de Sherbrooke and other national and international partners.[1] The Québec portion is a supplement to the project, financed by a variety of sources and comprised of four phases: the first was carried out in September 2020 in seven regions of Québec, while the next three phases were carried out in all regions of Québec in November 2020, February 2021 and May–June 2021.

Why: Like other types of catastrophes, the pandemic is likely to trigger serious consequences in the population in the short, medium and long terms. It is important to fully grasp the nature, scope, distribution and evolution of the psychosocial impacts of the pandemic and the related factors, to support decision-making and public health interventions. Phase 4 of the Québec survey (May–June 2021) also seeks to understand how the consequences of the COVID-19 pandemic (psychosocial impacts, changes in attitudes and beliefs, etc.) are affecting future communications related to climate change.

What: The psychological and behavioural response related to the pandemic and climate change is being studied, as well as its associations with various risk and protection factors. The questionnaire, available in French and English, contains just over 80 closed questions (average completion time: 19 minutes).

Who: The respondents are from a non-probability sample of 11,321 adults living in Québec. For information purposes, the margin of error associated with a probability sample of the same size is ±0.92%, with a confidence interval of 95% (19 times out of 20). A recruitment target of 750 to 2,000 participants was set for the most populous social-health regions (Capitale-Nationale, Mauricie-Centre-du-Québec, Estrie, Montréal, Outaouais, Laval, Lanaudière, Laurentides, Montérégie). Adults from the other regions of Québec were also sampled, but with lower recruitment targets.

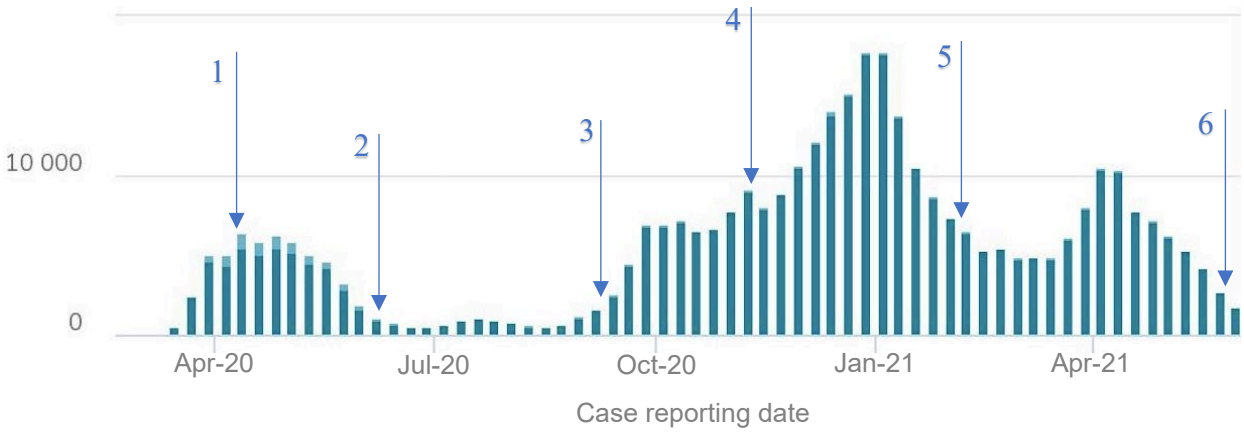
Distribution of the sample[2] by phase and region

[1] https://www.usherbrooke.ca/actualites/nouvelles/nouvelles-details/article/42628/
[2] The non-weighted distribution of the 11,321 respondents based on sociodemographic characteristics can be found in Appendix 1.

	November 2020	February 2021	May–June 2021
Social health region	**n**	**n**	**n**
Bas-Saint-Laurent	245	350	360
Saguenay-Lac-Saint-Jean (LSJ)	351	600	601
Capitale-Nationale	500	1001	1000
Mauricie-Centre-du-Québec (CDQ)	777	750	751
Estrie	758	750	751
Montréal	1040	1501	2004
Outaouais	256	751	752
Abitibi-Témiscamingue	186	276	275
Côte-Nord	153	160	160
Gaspésie/Îles-de-la-Madeleine	118	145	146
Chaudière-Appalaches	280	451	462
Laval	759	751	752
Lanaudière	1017	1002	1000
Laurentides	1032	1000	1003
Montérégie	1026	1005	1284
Nord-du-Québec, Nunavik, Terres-Cries-de-la-Baie-James	20	20	20
All of Québec	**8518**	**10,513**	**11,321**

When: The most recent data collection took place between May 21 and June 13, 2021, in all regions of Québec, at the end of the third wave and the beginning of the reopening.[3] This survey builds on:

1. A survey conducted from April 8 to 11, 2020, with 600 Canadian adults (n=300 in Québec), during the first wave of COVID-19 (**pilot phase of the international portion**).
2. A survey conducted from May 29 to June 12, 2020, with 1,501 Canadian adults (n=435 in Québec), toward the end of the first wave of COVID-19 (**phase 1 of the international portion**).
3. A survey conducted from September 4 to 14, 2020, in seven regions of Québec (n=6,261), at the beginning of the second wave of COVID-19 (**phase 1 of the Québec portion**).
4. A survey conducted from November 6 to 18, 2020, in all regions of Québec (n=8,518) and with 1,003 other Canadian adults, in the midst of the second wave of COVID-19 (**phase 2 of the Québec portion and the international portion**).
5. A survey conducted from February 5 to 16, 2021, in seven regions of Québec (n=10,513), toward the end of the second wave of COVID-19 (**phase 3 of the Québec portion**).



[3] https://www.Québec.ca/en/health/health-issues/a-z/2019-coronavirus/reopening-plan

Figure 1. Data collection periods (vertical arrows) on the epidemiological graph of the number of confirmed cases of COVID-19 in Québec
Source: https://www.inspq.qc.ca/covid-19/donnees

How: The sample was drawn randomly from Léger's web panels. The web users on the panels were recruited using a variety of strategies (random recruitment, in social media or through campaigns or partners), in order to accurately represent the general population. For maximum representativity, the data were also weighted by age, sex, language and region of residence.

STUDY VARIABLES

Several psychological health indicators were examined, including moderate to severe symptoms of generalized anxiety disorder (also called probable anxiety), moderate to severe symptoms of major depression (also called probable depression), probable anxiety or depression, post-traumatic stress related to the COVID-19 pandemic and serious suicidal ideation in the last 12 months.

A variety of risk and protection factors were also examined and correlated with the psychological health indicators. These factors were divided into five categories:

1. Sociodemographic factors
2. Factors related to the pandemic
3. Factors related to climate change
4. Factors related to the infodemic (i.e., an overabundance of information related to the epidemic/pandemic[4])
5. Psychosocial protection factors

All the study variables are described in Appendix 2 of this report.

[4] https://www.who.int/news/item/23-09-2020-managing-the-covid-19-infodemic-promoting-healthy-behaviours-and-mitigating-the-harm-from-misinformation-and-disinformation

SURVEY RESULTS

1- Psychological health

In Québec, it is estimated that at the end of the third wave (May–June 2021), 21% of the adult population presented symptoms consistent with generalized anxiety disorder or major depression. This is a slight improvement compared to estimates last November and February (23%). According to the data collected during the various phases of the survey, after a deterioration in psychological health during the second wave, there is now a reduction in the levels of anxiety, depression and post-traumatic stress (Table 1). It has also been observed that at the same time last year (May–June 2020), which was the end of the first wave, the proportion of Québec adults with probable anxiety or depression was similar to the proportion observed at the end of the third wave.

Although post-traumatic stress was not prioritized as a psychological health indicator for the remaining analysis, the estimated level within the population of Québec, which had been high since the beginning of the pandemic (15% or more), is dropping, according to the most recent data. Serious suicidal ideation has also remained at a steady level since November 2020. In other words, although other indicators suggest a slight improvement in the psychological health of Québec adults, a smaller "kernel" of adults (about 6%) who report having seriously considered taking their own lives in the last few months has been maintained over time.

Table 1. Psychological health in the adult population of Québec, by phase of the survey

	Probable anxiety	Probable depression	Probable anxiety or depression	Serious suicidal ideation	Post-traumatic stress
April 2020	14.2%	NA	NA	NA	18.8%
May–June 2020	13.1%	17.0%	21.3%	NA	17.3%
November 2020	15.9%	19.6%	23.3%	5.8%	15.3%
February 2021	15.6%	19.8%	23.2%	5.6%	16.1%
May–June 2021	13.3% (–)	17.3% (–)	20.8% (–)	5.8%	13.6% (–)

NA = not available as the item was not assessed in this period
(+) % significantly higher than in the previous survey
(–) % significantly lower than in the previous survey

If we consider only the seven southern regions of Québec that were also surveyed in September 2020,[5] the same temporal trends are revealed as those observed in Québec as a whole (Table 2). Table 2 also reveals that it was at the very beginning of the second wave (September 2020) and the end of the third wave (May–June 2021) that the psychological health of Québec adults seemed to be the least affected in southern Québec.

Table 2. Psychological health in the adult population of southern Québec,[4] by phase of the survey

	Probable anxiety	Probable depression	Probable anxiety or depression	Serious suicidal ideation	Post-traumatic stress
April 2020	16.3%*	NA	NA	NA	19.8%*
May–June 2020	15.6%	19.5%	24.1%	NA	18.9%
September 2020	14.6%	17.4% (–)	21.8% (–)	NA	14.0% (–)
November 2020	17.5% (+)	21.3% (+)	25.0% (+)	6.3%	16.3% (+)
February 2021	16.7%	20.8%	24.5%	5.7%	17.1%
May–June 2021	14.2% (–)	17.6% (–)	21.5% (–)	6.3%	14.7% (–)

NA = not available as the item was not assessed in this period
* To interpret with caution (coefficient of variation between 16.6% and 33.3%)
(+) % significantly higher than in the previous survey
(–) % significantly lower than in the previous survey

[5] Mauricie-CDQ, Estrie, Montréal, Laval, Lanaudière, Laurentides and Montérégie.

In Canada, Pelletier et al. (2017)[6] estimated the prevalence of symptoms consistent with generalized anxiety disorder in people aged 15 or over to have been 2.5% in the preceding 12 months (CCHS 2012; WHO-CIDI scale). Lukmanji et al. (2019)[7] estimated the prevalence of probable major depression in people aged 12 or over in Canada at 6.8% (CCHS 2015–2016; PHQ-9 scale with score ≥ 10). The proportion was higher in people aged 12 to 24 than those aged 25 or over (9.9% and 6.1%, respectively). Finally, according to the 2014–2015 Québec health survey (Enquête québécoise sur la santé de la population – EQSP), 2.8% of the population of Québec aged 15 or up had seriously considered suicide in the preceding year.

A comparison of the data observed in the survey conducted in May–June 2021 with the data from the pre-pandemic period suggests that the psychological health of Québec adults was deeply affected by the pandemic. Over 15 months after the beginning of the pandemic, twice as many Québec adults seem to be reporting symptoms consistent with major depression or having serious suicidal ideas as before the pandemic.

Table 3 shows the prevalence of different psychological health indicators within the adult population of Québec, by social health region. In keeping with observations from the previous surveys,[8] Montréal is the most psychologically affected region, with 25% of the adult population presenting symptoms consistent with generalized anxiety disorder or major depression. There has nevertheless been a clear improvement since the previous data collection (February 2021), when the proportion was 32%. The regions of Outaouais and Estrie also have worse outcomes in terms of symptoms of depression and suicidal ideation, respectively.

Table 3. Psychological health in the adult population of Québec, by region (May 21–June 13, 2021)[9]

	Probable anxiety	Probable depression	Probable anxiety or depression	Serious suicidal ideation
Bas-Saint-Laurent	11.9%	16.4%	19.7%	3.3%*
Saguenay-LSJ	7.7% (–)	12.8% (–)	14.5% (–)	4.2%
Capitale-Nationale	10.6% (–)	14.8%	18.4%	5.4%
Mauricie-CDQ	11.5%	14.1% (–)	17.6% (–)	6.1%
Estrie	12.4%	15.4%	19.0%	7.0% (+)
Montréal	17.1% (+)	20.7% (+)	25.0% (+)	7.1% (+)
Outaouais	14.1%	20.5% (+)	23.8% (+)	6.2%
Chaudière-Appalaches	10.2%	13.9%	15.6% (–)	3.4%* (–)
Laval	14.0%	16.6%	21.3%	6.4%
Lanaudière	10.8% (–)	14.5% (–)	18.2%	5.8%
Laurentides	14.5%	16.0%	20.1%	4.9%
Montérégie	12.8%	17.4%	20.6%	5.6%
All of Québec	**13.3%**	**17.3%**	**20.8%**	**5.8%**

* To interpret with caution (coefficient of variation between 16.6% and 33.3%)
(+) % significantly higher than elsewhere in Québec
(–) % significantly lower than elsewhere in Québec

Table 4 presents psychological health by epidemiological situation and alert level. The colour of the alert level in effect from May 21 to June 13, 2021, the cumulative incidence rate of confirmed cases (since the beginning of the pandemic) and the cumulative number of weeks spent in a red zone were determined in each region. For regions with subregions that had different colours, only the colour for the majority of the region was taken into consideration (see details by region in Appendix 3). These analyses provide two findings:

[6] Pelletier L et al. The burden of generalized anxiety disorder in Canada. *Health Promot Chronic Dis Prev Can*. 2017; 37:54-62.
[7] Lukmanji A et al. Seasonal variation in symptoms of depression: A Canadian population-based study. *J Affect Disord*. 2019;255:142-149.
[8] https://nccid.ca/publications/psychosocial-impacts-of-the-covid-19/
[9] Only the results from regions with 350 or more respondents are presented.

- Regardless of the epidemiological situation or alert level, the psychological health of Québec adults appears to have been affected by the pandemic.
- Adults living in regions with a more severe (current or past) alert level have, on average, worse psychological health.

Table 4. Psychological health in the adult population of Québec, by epidemiological situation and alert level (May 21–June 13, 2021)

	Probable anxiety	Probable depression	Probable anxiety or depression	Serious suicidal ideation
Alert level at time of data collection				
Regions already orange or yellow	11.2%	16.0%	18.8%	5.2%
Regions that turned orange on May 31	12.2%	16.2%	19.6%	5.4%
Regions still red on May 31	16.5%	19.9%	24.3%	7.0%
Cumulative incidence rate of confirmed cases, divided into tertiles				
1st tertile	13.1%	16.9%	20.4%	5.6%
2nd tertile	11.3%	15.8%	18.7%	5.1%
3rd tertile	15.5%	19.0%	23.3%	6.8%
Cumulative number of weeks spent in a red zone, divided into tertiles				
1st tertile	12.1%	15.7%	19.1%	5.4%
2nd tertile	12.0%	16.6%	19.7%	5.3%
3rd tertile	16.5%	19.9%	24.3%	7.0%
All of Québec	**13.3%**	**17.3%**	**20.8%**	**5.8%**

Note: All differences among groups are statistically significant ($p < 0.05$).

Table 5 presents the psychological response of Québec adults by sociodemographic characteristic. As in the previous surveys, young adults, students, unemployed people, tenants, Anglophones, immigrants, essential workers and women had worse psychological health outcomes during the pandemic than other adults. In particular, 41% of adults aged 18–24 and 39% of students (all ages) still report symptoms consistent with generalized anxiety disorder or major depression in May–June 2021. While older adults (age 25–44) and workers in general have experienced an improvement in psychological health since February 2021, young adults and students are stagnating. These same two groups also show higher proportions of serious suicidal ideation in May–June (10%) than they did in February 2021 (7%). Although health and social services workers have shown a slight (non-significant) improvement in probable anxiety or depression (31% in February 2021 compared to 28% in May–June 2021), the psychological health of this group is still worrisome, especially for social services workers, in whom we observe 33% probable anxiety or depression. Teleworkers also seem better adjusted psychologically now than they were earlier in the pandemic (probable anxiety or depression at 27% in February compared to 22% in May–June 2021). Finally, a new group is showing a high proportion of probable anxiety or depression during the pandemic (34%): farmers and their families (data not available in the earlier surveys).

Table 5. Psychological health in the adult population of Québec, by sociodemographic characteristic (May 21–June 13, 2021)

Sociodemographic characteristic	Probable anxiety	Probable depression	Probable anxiety or depression	Serious suicidal ideation
Gender[10]				
Female	14.9%	18.0%	22.2%	5.5% (NS)
Male	11.4%	16.2%	19.1%	5.9% (NS)
Age				
18–24	26.1%	34.5%	40.6%	9.3%

[10] The data for the "other" category cannot be shown, as the number of respondents is too low.

25–34	19.5%	22.9%	28.5%	7.2%
35–44	16.7%	19.7%	24.8%	7.1%
45–54	13.3%	17.6%	21.0%	6.1%
55–64	8.5%	12.1%	14.1%	5.2%
65 and over	5.3%	8.3%	9.8%	2.7%
Person living alone				
Yes	14.1% (NS)	19.2%	22.3%	8.5%
No	13.1% (NS)	16.7%	20.4%	5.1%
Type of residence				
Owner	11.2%	14.8%	17.9%	4.3%
Tenant	18.0%	22.7%	27.1%	9.1%
Education[11]				
High school or less	12.2% (NS)	15.5% (NS)	19.0% (NS)	6.7%
College	11.5% (NS)	16.1% (NS)	19.1% (NS)	5.6%
University	12.1% (NS)	14.9% (NS)	18.35% (NS)	4.8%
Anglophone				
Yes	20.0%	22.9%	27.9%	7.7%
No	11.9%	16.0%	19.3%	5.4%
Immigrant				
Yes	16.9%	20.3%	25.3%	4.5%
No	12.9%	16.9%	20.2%	6.0%
Occupation				
Student	24.5%	32.7%	39.2%	9.6%
Worker	14.4%	17.9%	21.8%	6.3%
Unemployed	22.5%	28.4%	34.4%	10.4%
Retired	5.2%	8.4%	9.8%	2.7%
Essential worker[12]				
Yes	15.4%	19.9%	24.1%	6.9% (NS)
No	13.7%	16.3%	19.9%	5.8% (NS)
Healthcare or social services worker[12]				
Yes	18.2%	22.9%	27.5%	6.0% (NS)
No	13.9%	17.1%	20.9%	6.3% (NS)
Healthcare worker[12]				
Yes	17.4%	21.5%	25.8%	6.3% (NS)
No	14.1%	17.5%	21.3%	6.3% (NS)
Social services worker[12]				
Yes	21.0%	28.1%	33.0%	5.1% (NS)
No	14.2%	17.6%	21.4%	6.3% (NS)
Teleworker[12]				
Yes	15.7%	18.0% (NS)	22.0% (NS)	6.0% (NS)
No	13.0%	17.8% (NS)	21.5% (NS)	6.5% (NS)
Farmer				
Yes, personally	20.3%	30.1%	33.7%	11.8%
Yes, family member	23.1%	29.3%	33.9%	7.6%
No	12.7%	16.4%	19.9%	5.6%
Medical history				
Yes	12.9%	17.5%	20.4%	6.9%
No	13.0%	16.4%	20.3%	5.3%

NS = Lack of significant differences among the groups ($p \geq 0.05$)

Table 6 provides a summary of the proportions of probable anxiety or depression from November 2020 to May–June 2021, by certain sociodemographic characteristics. Between November 2020 and February 2021, no change was observed, regardless of sociodemographic characteristic. From February to May–June 2021, we note a significant improvement among women, people aged 25–44, more educated people and workers.

[11] 18–24 group excluded, as studies are often underway in this age group.

[12] Among respondents who declared themselves to be a full- or part-time worker, a self-employed worker or a seasonal worker.

Table 6. Psychological health in the adult population of Québec, by certain sociodemographic characteristics and by phase of the survey

Sociodemographic characteristic	Probable anxiety or depression		
	November 2020	February 2021	May–June 2021
Gender			
Female	24.7%	25.6%	22.2% (–)
Male	21.6%	20.6%	19.1%
Age			
18–24	45.8%	43.3%	40.6%
25–34	33.0%	33.2%	28.5% (–)
35–44	29.2%	29.6%	24.8% (–)
45–54	23.2%	23.6%	21.0%
55–64	14.0%	14.0%	14.1%
65 and over	10.2%	10.1%	9.8%
Education			
High school or less	21.5%	20.2%	19.0%
College	20.6%	21.3%	19.1% (–)
University	20.3%	20.8%	18.3% (–)
Occupation			
Student	NA	41.3%	39.2%
Worker	NA	25.8%	21.8% (–)
Unemployed	NA	32.5%	34.4%
Retired	NA	9.7%	9.8%
Total	**23.3%**	**23.2%**	**20.8% (–)**

NA = not available as the item was not assessed in this period
(–) % significantly lower than in the previous survey

2- Risk and protection factors

The epidemiological situation and sociodemographic characteristics alone do not explain the population's psychological response to the COVID-19 pandemic. Other factors explain these different reactions. Many risk and protection factors that could influence well-being during a pandemic were examined.

Multivariate logistic regression analyses were used to examine the relationships between the various factors under study and psychological health. The final model was adjusted for all the variables presented in Table 7 and for age, gender, language spoken at home, occupation and medical history (chronic diseases). This table therefore presents, for each risk or protection factor retained in the final model, raw and adjusted odds ratios (OR), with their confidence intervals (CI) at 95%.

Table 7. Raw and adjusted associations between certain risk/protection factors and psychological health in the adult population of Québec (May 21–June 13, 2021)

Risk or protection factor	Probable anxiety or depression	Raw odds ratio		Adjusted odds ratio[13]	
		OR	[CI 95%]	OR	[CI 95%]
Perceived threat for self/family					
High perceived threat	27.0%	1.72	[1.56; 1.89]	1.70	[1.51; 1.91]
Low perceived threat	17.7%	1	Reference	1	Reference
Financial losses					
Significant losses	40.2%	3.32	[2.98; 3.70]	1.97	[1.72; 2.24]
Little or no loss	16.9%	1	Reference	1	Reference
Victim of stigmatization					

[13] Adjusted odds ratios for the following variables: gender, age, language spoken, occupation, medical history.

Yes	43.1%	3.28	[2.82; 3.81]	1.69	[1.41; 2.04]
No	18.8%	1	Reference	1	Reference
Isolation					
COVID-19 diagnosis	32.7%	2.29	[1.86; 2.81]	1.46	[1.14; 1.87]
COVID-19 symptoms (without diagnosis)	31.4%	2.16	[1.88; 2.48]	1.39	[1.18; 1.65]
Contact with a case of COVID-19	26.5%	1.69	[1.44; 2.00]	1.17	[0.96; 1.43]
Return from travel or health reason	20.6%	1.22	[1.05; 1.41]	1.18	[0.98; 1.41]
No isolation	17.6%	1	Reference	1	Reference
Loneliness					
High	40.8%	6.19	[5.60; 6.83]	2.78	[2.47; 3.13]
Low	10.0%	1	Reference	1	Reference
Online sources of information					
Yes	27.4%	1.83	[1.66; 2.02]	1.25	[1.11; 1.41]
No	17.0%	1	Reference	1	Reference
Level of information					
High	19.8%	0.90	[0.82; 0.99]	1.15	[1.02; 1.29]
Low or average	21.5%	1	Reference	1	Reference
Conspiracy theorist					
Yes	31.1%	2.10	[1.91; 2.32]	1.42	[1.25; 1.61]
No	17.7%	1	Reference	1	Reference
Political polarization					
Extreme (left or right)	29.5%	1.74	[1.55; 1.96]	1.17	[1.06; 1.29]
Centre	19.4%	1	Reference	1	Reference
Sense of coherence					
Low	31.6%	6.09	[5.40; 6.88]	3.01	[2.62; 3.45]
High	7.0%	1	Reference	1	Reference
Level of social support					
Low	46.2%	4.90	[4.12; 5.82]	2.20	[1.77; 2.74]
Moderate	33.4%	2.86	[2.58; 3.17]	1.71	[1.51; 1.95]
High	14.9%	1	Reference	1	Reference
Sense of community belonging					
Low	36.4%	3.55	[3.14; 4.02]	1.75	[1.51; 2.04]
Fairly low	20.9%	1.64	[1.46; 1.83]	1.17	[1.02; 1.34]
High	13.9%	1	Reference	1	Reference

The five main factors, other than age, most strongly associated with the presence of symptoms consistent with generalized anxiety disorder or major depression are (in decreasing order):

1. Low sense of coherence (adjusted odds ratio [AOR] 3.01)
2. Loneliness (AOR 2.78)
3. Low (AOR 2.20) or moderate (AOR 1.71) level of social support
4. Significant financial losses (AOR 1.97)
5. Low sense of community belonging (AOR 1.75)

People with a high sense of coherence (that is, the capacity to understand and make sense of stressful situations and feel able to mobilize resources to face them) are three times less likely to present symptoms consistent with generalized anxiety disorder or major depression than those with a low sense of coherence.

It is interesting to note that the main factors identified here are similar to the factors most strongly associated with probable anxiety or depression in the previous data collection, with the exception of sense of community belonging, which appears to be more strongly related to psychological health in May–June 2021 than it was in February 2021 (AOR 1.28, CI 95% 1.10–1.50)

The two following tables (Table 8 and Table 9) allow us to examine the frequency, distribution by sociodemographic group and time period in the five main factors associated with probable anxiety or depression. In May–June 2021, 35% of the adult population felt lonely, an improvement compared to observations in February 2021 (41%). A

Canadian study conducted in 2008–2009 with people aged 65 or older in Canada[14] revealed that 12% of them reported feeling lonely at that time (using the same measurement scale used in this survey), which is considerably lower than the proportion currently observed in this age group in the pandemic (23%).

Loneliness is more often reported by young adults and students (about six in ten), a phenomenon also observed in February 2021. While isolation refers to the low quantity and quality of social contacts (real situation), loneliness refers to the subjective experience stemming from the perception of a low quantity and quality of social contacts (perceived situation). In other words, young people appear more inclined to feel deprived of social contacts during the pandemic, regardless of whether or not they are more isolated.[15]

Sense of coherence is also deemed to be low in nearly three young adults in four (a proportion similar to that of students). In these highly unusual times, young adults and students have, on average, weaker individual psychological resources for dealing with stress and making sense of what is happening to them, compared to older adults.

Table 8. Distribution of the five main factors associated with probable anxiety or depression in the adult population of Québec, by certain sociodemographic characteristics (May 21–June 13, 2021)

	Low sense of coherence	Loneliness	Low to moderate level of social support	Significant financial losses	Low sense of belonging
Gender					
Female	55.4% (NS)	36.8%	23.8%	15.3%	19.3% (NS)
Male	56.7% (NS)	33.3%	32.9%	17.2%	18.9% (NS)
Age					
18–24	73.1%	56.2%	30.8%	20.4%	23.6%
25–34	66.0%	44.4%	23.9%	18.8%	23.2%
35–44	59.3%	39.2%	29.0%	19.6%	20.9%
45–54	56.4%	35.0%	31.3%	20.1%	21.1%
55–64	47.7%	28.3%	31.3%	14.8%	18.0%
65 and over	46.5%	23.1%	25.6%	9.0%	12.9%
Occupation					
Student	72.1%	57.0%	30.2%	20.8%	24.4%
Worker	57.1%	36.3%	27.5%	17.7%	19.8%
Unemployed	69.9%	47.8%	37.0%	29.2%	28.8%
Retired	45.2%	23.2%	26.7%	7.7%	13.7%
Total	**56.1%**	**35.2%**	**28.4%**	**16.3%**	**19.1%**

NS = Lack of significant differences among the groups ($p \geq 0.05$)

Table 9. Change in prevalence of the five main factors associated with probable anxiety or depression in the adult population of Québec, by phase of the survey

	Low sense of coherence	Loneliness	Low to moderate level of social support	Significant financial losses	Low sense of belonging
November 2020	54.7%	NA	NA	19.6%	NA
February 2021	56.5% (+)	40.5%	26.8%	18.4% (–)	20.2%
May–June 2021	56.1%	35.2% (–)	28.4% (+)	16.3% (–)	19.1% (–)

NA = not available as the item was not assessed in this period

(+) % significantly higher than in the previous survey

(–) % significantly lower than in the previous survey

[14] https://www150.statcan.gc.ca/n1/pub/82-003-x/2020003/article/00003-eng.htm#n27

[15] https://www.inspq.qc.ca/publications/3104-solitude-jeunes-adultes-pandemie-covid19

3- Use of healthcare services

The next table (Table 10) presents the proportion of adults who consulted with a professional about their psychological health in the last year, by psychological health profile and sociodemographic characteristic. As noted in February 2021, only a third of people with symptoms consistent with a generalized anxiety disorder or a major depression consulted with a professional about their psychological health during this period, as did half of those experiencing serious suicidal ideation. We see, however, that women, young adults and students with psychological difficulties are more inclined to consult with a professional than other adults are.

Table 10. Professional psychological consultation among the adult population of Québec, by sociodemographic characteristic (May 21–June 13, 2021)

	People with probable anxiety or depression	People with serious suicidal ideation	Entire population
Gender			
Female	36.6%	53.5%	19.0%
Male	31.4%	43.3%	12.8%
Age			
18–24	41.1%	62.9%	27.4%
25–34	39.4%	52.8%	23.3%
35–44	35.4%	47.1%	20.5%
45–54	32.4%	52.7%	17.2%
55–64	28.5%	37.8%	10.9%
65 and over	23.1%	38.1%	6.6%
Education[16]			
High school or less	32.4% (NS)	47.1% (NS)	13.5%
College	33.9% (NS)	46.4% (NS)	14.7%
University	33.0% (NS)	46.7% (NS)	15.8%
Occupation			
Student	41.4%	53.4% (NS)	28.2%
Worker	33.7%	48.9% (NS)	17.5%
Unemployed	41.6%	55.3% (NS)	25.1%
Retired	26.4%	38.7% (NS)	7.5%
Total	**34.6%**	**49.2%**	**15.9%**

NS = Lack of significant differences among the groups ($p \geq 0.05$)

4- Effect of exposure to prior catastrophes

The Québec survey in May–June 2021 also looked at the effect of cumulative exposure to different types of disasters or catastrophes, especially extreme weather events (EWE) and the COVID-19 pandemic. Table 11 reveals that over one third (35%) of the adult population of Québec has already faced at least one EWE (at any time), such as a flood, tornado/hurricane, forest fire, ice storm or landslide. One person in ten (10%) said they had already been exposed to more than two EWEs. Ice storms are the most frequently reported events, followed by floods. We also note that some regions fared worse than others, particularly the Outaouais, with 55% of its adult population reporting having been exposed to at least one EWE (ice storm, 38%; tornado/hurricane, 27%; flood, 26%).

[16] 18–24 group excluded, as studies are often underway in this age group.

Table 11. Exposure to EWEs among the adult population of Québec, by region (May 21–June 13, 2021)[17]

	Exposure to at least one EWE	Exposure to two or more EWEs	Exposure to a flood	Exposure to a tornado	Exposure to a forest fire	Exposure to an ice storm	Exposure to a landslide
Bas-Saint-Laurent	20.3% (–)	4.4%* (–)	6.4%* (–)	NA	2.9%*	14.5% (–)	NA
Saguenay-LSJ	26.8% (–)	11.3%	8.3%	2.8% (–)	12.1% (+)	15.8% (–)	2.6% (+)
Capitale-Nationale	21.3% (–)	5.3% (–)	4.5% (–)	2.5% (–)	2.7%	18.0% (–)	1.3%
Mauricie-CDQ	30.5% (–)	8.3%	6.9% (–)	2.1% (–)	3.9%	25.8% (–)	2.2%
Estrie	33.5%	7.6% (–)	7.9%	2.1% (–)	2.1% (–)	29.8%	0.8%
Montréal	34.2%	9.3%	10.2%	3.9% (–)	3.2%	29.2%	1.6%
Outaouais	55.2% (+)	27.7% (+)	26.3% (+)	26.8% (+)	1.8% (–)	37.7% (+)	1.7%
Chaudière-App.	20.8% (–)	3.7%* (–)	6.8% (–)	NA	2.3%*	16.2% (–)	NA
Laval	40.9% (+)	9.8%	11.7% (+)	3.7%	2.5%	35.4% (+)	1.2%
Lanaudière	42.4% (+)	7.1% (–)	5.6% (–)	4.4%	1.9% (–)	39.4% (+)	1.2%
Laurentides	40.7% (+)	12.7% (+)	12.0% (+)	5.9%	2.3% (–)	37.0% (+)	1.2%
Montérégie	41.2% (+)	10.0%	9.8%	2.6% (–)	2.2% (–)	37.9% (+)	1.4%
All of Québec	**35.1%**	**9.8%**	**9.5%**	**4.4%**	**3.6%**	**29.8%**	**1.5%**

* To interpret with caution (coefficient of variation between 16.6% and 33.3%)
NA = not available (coefficient of variation $\geq$ 33.3%)
(+) % significantly higher than elsewhere in Québec
(–) % significantly lower than elsewhere in Québec

The psychological health of adults during the pandemic was then compared based on prior exposure to an EWE (Table 12). Eco-anxiety symptoms (corresponding to the fourth quartile of the measured score; see Appendix 2) were added to the psychological health indicators taken into consideration. It appears that psychological health is systematically weaker in people who have had cumulative exposure to disasters or catastrophes (that is, one or more EWEs combined with the pandemic). There is even a gradient in terms of the five psychological health indicators based on the number of prior disasters or catastrophes to which the respondents were exposed. For example, 11% of people who had only been exposed to the pandemic report symptoms of post-traumatic stress related to the pandemic, compared to 16% and 22% of whom had also been exposed to one EWE or more than one EWE, respectively.

Table 12. Psychological health in the adult population of Québec, by exposure to EWEs (May 21–June 13, 2021)

	Probable anxiety	Probable depression	Probable anxiety or depression	Serious suicidal ideation	Post-traumatic stress	Eco-anxiety
No exposure	11.8%	15.6%	18.8%	4.7%	11.4%	21.4%
Exposure to one EWE	14.8%	18.5%	22.5%	7.5%	16.1%	31.7%
Exposure to two or more EWEs	18.0%	24.4%	29.0%	9.3%	22.1%	39.5%
Total	**13.3%**	**17.3%**	**20.8%**	**5.8%**	**13.6%**	**25.8%**

Note: All differences among groups are statistically significant ($p < 0.05$).

Table 13 presents the prevalence of post-traumatic stress symptoms related to the pandemic and eco-anxiety symptoms, by various sociodemographic characteristics. We see that the groups most psychologically affected by the pandemic are practically identical to the groups the most affected by climate change, including women, young adults, linguistic and cultural minorities, students and farmers (or their families). Further analyses reveal that post-traumatic stress symptoms are five times more common in people with a high level of eco-anxiety (29%) than people with a low level of eco-anxiety (6%; data not shown).

[17] Only the results from regions with 350 or more respondents are presented.

Table 13. Distribution of post-traumatic stress symptoms (related to the pandemic) and eco-anxiety in the adult population of Québec, by sociodemographic characteristic (May 21–June 13, 2021)

Sociodemographic characteristic	Post-traumatic stress	Eco-anxiety
Gender		
Female	14.8%	28.0%
Male	12.1%	23.6%
Age		
18–24	24.6%	49.7%
25–34	19.6%	34.5%
35–44	15.7%	23.2%
45–54	13.5%	21.9%
55–64	9.5%	20.0%
65 and over	6.6%	19.7%
Education[18]		
High school or less	11.4% (NS)	21.5%
College	12.4% (NS)	21.7%
University	13.1% (NS)	25.6%
Anglophone		
Yes	18.5%	31.1%
No	12.5%	24.8%
Immigrant		
Yes	18.4%	34.3%
No	13.0%	24.9%
Occupation		
Student	25.2%	48.4%
Worker	14.9%	26.0%
Unemployed	18.6%	29.1%
Retired	6.4%	18.7%
Farmer		
Yes, personally	18.5%	50.2%
Yes, family member	21.6%	41.4%
No	13.0%	24.5%
All of Québec	**13.6%**	**25.8%**

NS = Lack of significant differences among the groups ($p \geq 0.05$)

Highlights

Psychological health

- At the end of the third wave, 21% of Québec adults still present symptoms consistent with a generalized anxiety disorder or major depression, which is slightly better than in February 2021, when the prevalence was 23%.
- While anxiety and depression are slightly down, serious suicidal ideation has remained steady at a level two times higher than observed before the pandemic.
- Three regions (Montréal, Outaouais and Estrie) reveal worse outcomes than the other regions for certain psychological health indicators.
- Adults aged 25–44 and workers have seen an improvement in their psychological health, unlike adults aged 18–24 and students, of whom about four in ten are still suffering from probable anxiety or depression.
- Serious suicidal ideation is also up since February among young adults and students (10%).
- More people who are unemployed are experiencing probable anxiety or depression (34%). Their situation has not improved since last February.

[18] 18–24 group excluded, as studies are often underway in this age group.

- Psychological health appears to be less favourable in regions that were still red zones on May 31, those that stayed red for longer and those with a higher number of cases of COVID-19 (per 100,000 inhabitants) since the beginning of the pandemic.

Risk or protection factor

- Of all the factors considered, low sense of coherence and loneliness are the two main factors most strongly associated with probable anxiety or depression.
- More young adults and students report a low sense of coherence (about three out of four) and loneliness (about six out of ten), which partly explains their higher levels of anxiety and depression.
- The prevalence of several risk factors has declined since February, particularly loneliness, financial losses and low sense of community belonging.

Use of healthcare services

- Only a third of people with probable anxiety or depression consulted a professional for their psychological health in the last year.
- Young adults and students with psychological difficulties are more inclined to consult a professional than other adults.

Effect of exposure to prior catastrophes

- More than a third (35%) of Québec adults have already been exposed to an extreme weather event, such as a flood, tornado or forest fire. The proportion in Outaouais is 55%.
- People with cumulative exposures to catastrophes (that is, extreme weather events and the pandemic) have two times more post-traumatic stress as those only exposed to the pandemic (22% vs. 11%).
- Eco-anxiety was measured for the first time in Québec in a huge sample of adults. We see that the groups most psychologically affected by the pandemic are identical to the groups most affected by climate change, including young people, Anglophones and immigrants.
- Farmers (and their families) are experiencing a double psychological burden that should be closely monitored, as they are more affected by both the pandemic and climate change than other adults.

Courses of Action

Based on the findings revealed through this survey, we believe that the following courses of actions could contribute to the psychosocial recovery of the adult population of Québec in the post-pandemic period:

1) **Monitoring:** To avoid deepening social gaps
    a. Closely track the psychological health of at-risk groups (e.g., young people, students, the unemployed, Anglophones, immigrants, certain types of workers)
    b. Involve them in understanding the issues and seeking solutions

2) **Planning:** Encourage the development of medium- and long-term psychosocial recovery plans adapted to the culture and local context, in every environment (schools, workplaces, neighbourhoods, cultural communities, etc.). Such plans will help strengthen the social fabric and ultimately help the various environments face different forms of adversity (past or future), not only the pandemic.

3) **Preparation:** Identify what was learned from the pandemic and include it in practices for future crises or catastrophes, including extreme weather events, which are expected to increase in frequency and intensity.

4) **Mobilization:** Involve the local population more, and more inclusively, in planning and preparation exercises. Not only will this generate better results, but the participatory process will also strengthen personal and community resiliency.

5) **Communications:** In the post-pandemic era
    a. Try to re-establish the bonds of trust between certain groups and the authorities.
    b. Strengthen their sense of coherence by helping them make sense of what they are experiencing and developing a sense of control over their difficulties.
    c. Seize the opportunity provided by this unique situation to refine crisis communications strategies, which may help in the battle against climate change.

6) **Collaboration:** Encourage the development of a shared vision among local stakeholders with regard to the major psychological health challenges that await them in the months and years ahead and with regard to the priority actions to take to face them.

7) **Innovation:** In light of the extraordinary nature of the situation, dare to leave the beaten paths in order to implement novel actions to reinforce people's sense of coherence,[19] reduce loneliness and foster social support, particularly through artistic and cultural activities, which are widely recognized for their benefits on the individual and collective levels.

8) **Research:** Pursue the study of the impacts of the pandemic on the social determinants of health for the long term and the evaluation of interventions to counter them.

[19] https://refips.org/wp-content/uploads/2020/12/COVID19_SOC_UIPES_REFIPS_final.pdf

Appendix 1

Unweighted distribution of respondents, by sociodemographic characteristic

Sociodemographic characteristic	Distribution (n and %)
Gender	
Female	5,797 (51.2%)
Male	5,483 (48.4%)
Other	33 (0.3%)
Age	
18–24	1,023 (9.0%)
25–34	1,825 (16.1%)
35–44	1,796 (15.9%)
45–54	1,970 (17.4%)
55–64	2,108 (18.6%)
65 and over	2,599 (23.0%)
Person living alone	2,450 (21.6%)
Type of residence	
Owner	7,887 (69.7%)
Tenant	3,434 (30.3%)
Education	
High school or less	2,684 (23.7%)
College	3,752 (33.1%)
University	4,824 (42.6%)
Anglophone	1,695 (15.0%)
Immigrant	1,049 (9.3%)
Occupation	
Student	797 (7.0%)
Worker	6,305 (55.7%)
Unemployed	844 (7.5%)
Retired	3,191 (28.2%)
Farmer	
Personally	272 (2.4%)
Family member	442 (3.9%)
Essential worker	2,890 (25.5%)
Healthcare or social services worker	847 (7.5%)
Healthcare worker	656 (5.8%)
Social services worker	190 (1.7%)
Teleworker	3,162 (27.9%)
Medical history	3,837 (33.9%)

Appendix 2
Description of study variables

Factors	Description
Sociodemographic characteristic	
Gender	Gender identification (male, female)
Age	Age category (18–24; 25–34; 35–44; 45–54; 55–64; 65 and up)
Type of residence	Type of residence (owner; tenant)
Household composition	Household composition (alone, with children, other)
Education	Highest level of education achieved (high school or less; college; university)
Anglophone	English as main language spoken at home (yes; no)
Immigrant	Born in Canada (yes; no)
Occupation	Type of occupation (student; worker; unemployed; retired)
Essential worker	Having a job in the healthcare or social services sector, law enforcement, emergency services, essential goods provider or teaching institution (yes; no)
Healthcare or social services worker	Being a healthcare or social services worker (yes; no)
Farmer or farmer's family	Being a farmer (yes; no) or living with a farmer (yes; no)
Teleworker	Working remotely most of the time or occasionally (yes; no). The answer "no" means that a person works only in their work environment.
Medical history	Person with one of the four following conditions: heart disease, diabetes, chronic obstructive pulmonary disease (COPD), immunosuppression (yes, no).
Psychological response	
Symptoms of generalized anxiety disorder	Assessed using the GAD-7 scale, based on the diagnostic criteria for generalized anxiety disorder described in the DSM-IV. The score ranges from 0 to 21, where a threshold of 10 or more identifies moderate to severe symptoms of generalized anxiety disorder.
Symptoms of major depression	Assessed using the Patient Health Questionnaire-9 (PHQ-9), based on the diagnostic criteria for major depression described in the DSM-IV. The score ranges from 0 to 27, where a threshold of 10 or more identifies moderate to severe symptoms of major depression.
Symptoms of post-traumatic stress	Post-traumatic stress is assessed using the PC-PTSD-5 screen. The score ranges from 0 to 5, where a score of 3 or more indicates signs of post-traumatic stress.
Symptoms of eco-anxiety	Presence of anxiety when a person thinks about climate change and other environmental problems. The respondents had to indicate the frequency for 10 statements adapted from the Hogg Eco-Anxiety Scale (HEAS-13) (almost always, often, sometimes, rarely, never). Each item corresponds to one of four subscales (affective symptoms, rumination, behavioural symptoms, and anxiety about one's negative impact on the planet). The sum of the answers to the 10 statements (total score ranging from 10 to 50) is then divided into quartiles, with the fourth quartile indicating a higher level of eco-anxiety.
Serious suicidal ideation	Assesses suicidal ideation in the last 12 months. Assessed using two questions from the Canadian Community Health Survey: 1) Have you ever seriously considered committing suicide or ending your life? 2) Has this happened in the last 12 months?
Behavioural response	
Excessive consumption of alcohol	Excessive consumption of alcohol once a month or more (yes; no)
Consumption of cannabis	Have consumed cannabis in the last year (yes; no)
Domestic violence	Violent behaviour on the part of a spouse. Physical and psychological violence was assessed using the HITS scale, a four-item scale where every item is scored from 1 (never) to 5 (often). The HITS score ranges from 4 to 20, with a score of 10 or more signifying the presence of domestic violence toward a woman whereas a score of 11 or more signifies the presence of domestic violence toward a man. The respondents also had to describe the changes in their domestic situation during the pandemic (better; stayed the same; worse).
Inclination to receive an approved COVID-19 vaccine	Intention to receive the approved vaccine against COVID-19 (yes or already vaccinated; no; hesitation).

Compliance with government measures related to the pandemic	Level of agreement with five statements about the government measures related to the pandemic (isolation measures, social distancing measures, even stricter measures, exaggerated instructions, clear instructions), measured on a scale from 1 to 10. A score of 6 or more signifies agreement and a score of 9 or more signifies strong agreement.
Climate change solutions	Level of agreement with five statements related to climate change solutions (economy, industry, technology, science, individuals), measured on a scale from 1 to 10. A score of 6 or more signifies agreement and a score of 9 or more signifies strong agreement.
Changes in behaviour	Level of change a person is prepared to make to their lifestyle to contribute to the fight against climate change (none; a few; many).
Factors related to the pandemic	
Perceived threat for self/family	Perceived level of threat posed by COVID-19 for self and/or family (very low/low; moderate; high/very high)
Perceived threat for country/world	Perceived level of threat posed by COVID-19 for the country and/or the world (very low/low; moderate; high/very high)
Victim of stigmatization	Being a victim of stigmatization or discrimination due to COVID-19 (yes; no)
Financial losses	Have suffered significant financial losses due to COVID-19 (yes; no)
Experience with COVID-19	Have had an experience related to COVID-19 (diagnosis; contact or symptoms; none). The diagnosis of COVID-19 is determined on the basis of a positive response to one of these two questions: "Have you received a medical diagnosis of COVID-19?" and "Have you been in isolation/quarantine due to a diagnosis of COVID-19?" To be considered as having contact with COVID-19 or having had symptoms of COVID-19 (without a diagnosis), the person must have been in isolation/quarantine.
Daily stress level	Perceived daily stress level measured using a question taken from the Canadian Community Health Survey: Thinking about the amount of stress in your life, would you say that most of your days are... (Not at all stressful / Not very stressful / A bit stressful / Quite a bit stressful / Extremely stressful).
Loneliness	Loneliness is based on three items from the "Three-Item Loneliness Scale," each measured on a scale of 1 to 3. The total score, which ranges from 3 to 9, was dichotomized using a standard threshold (not lonely [3–5]; lonely [6–9]).
Factors related to climate change	
Perceived threat for self/family	Perceived level of threat posed by climate change for self and/or family (very low/low/ moderate; high/very high)
Perceived threat for country/world	Perceived level of threat posed by climate change for the country and/or the world (very low/low/moderate; high/very high)
Disturbances related to climate change	Have experienced a disturbance stemming from climate change related to a) the climate, b) health, c) the economy, d) infrastructure (yes; no)
Discomfort related to heat waves	Have experienced serious discomfort during heat waves (yes; no)
Experience with extreme weather events	Have experienced an extreme weather event, including a) flood, b) forest fire, c) tornado or hurricane, d) landslide, e) ice storm (yes; no)
Financial losses	Have suffered significant financial losses due to climate change (yes; no)
Factors related to the infodemic	
Sources of information	Sources regularly used for information about a) COVID-19 and b) climate change, including news media (television, radio, newspapers); social circle (friends, family and colleagues); online (social networks, Internet). The respondents were asked to indicate the frequency of use (a lot/often; not a lot/not at all) for each source of information.
Level of information	Perceived level of information about a) COVID-19, b) climate change. The participants were asked to select a response on a scale of 1 to 10. A score of 9 or more demonstrates a high perceived level of information.
Conspiracy theorist	Conspiracy theorist scale based on five statements from the "Short Form Flexible Inventory of Conspiracy Suspicions" (FICS) related to a) COVID-19 and b) climate change. The participants were asked to select a response on a scale of 1 to 5 for each of the statements (for example, "The truth about the so-called COVID-19 pandemic is hidden from the public"). The score ranges from 5 to 25. A threshold of 15 (which indicates an average score for each answer of at least 3/5, meaning that the respondent agrees more than they disagree with the statements) demonstrates a tendency toward conspiracy theories.
Connections between climate change and COVID-19	Score on the belief that there is a connection between climate change and the COVID-19 pandemic, based on five statements measured on a scale from 1 to 10. The sum of the responses to the five statements (score ranging from 5 to 50) is then divided into quartiles, with the fourth quartile indicating a stronger belief in the connection between climate change and COVID-19.
Level of confidence in authorities	Level of confidence in authorities (scientists, doctors and health experts; national health organizations; global health organizations; government), each on a scale from 1 to 10. The sum of these four separate scores (total score ranging from 4 to 40) was then divided into quartiles, with the fourth quartile indicating greater confidence in the authorities.

Political polarization	Political ideology measured using a scale from 0 (extreme left) to 6 (extreme right). Three categories were created: left [0-2]; centre [3]; right [4-6]. The answers were recategorized to reflect political polarization (centre; extremes [left and right combined]).
Psychosocial protection factors	
Sense of coherence	Sense of coherence measured using a three-item questionnaire (the SOC-3) developed for the needs and constraints of large-scale studies and that demonstrated adequate psychometric properties. Each question corresponds to one of the three components in the sense of coherence. The total score, which ranges from 0 to 6, was dichotomized using a standard threshold (low [0–4]; high [5–6]).
Level of social support	The level of social support is measured using the "Multidimensional Scale of Perceived Support." The respondents were asked to respond to 12 statements using choices ranging from Totally agree (1 point) to Totally disagree (7 points). To calculate the score, the sum of the 12 statements was divided by 12. An average score on a scale from 1 to 2.9 is considered to be low support, a score from 3 to 5 is considered moderate support and a score from 5.1 to 7 is considered to be high support.
Sense of community belonging	Sense of attachment a person feels toward the people among whom and the neighbourhood in which they live (very strong/fairly strong; fairly weak; very weak).
Consultation for psychological health	Consultation with a healthcare professional about their psychological health in the last 12 months (yes; no). For those who did have a consultation, the type of professional was specified (family doctor; specialist; nurse; psychologist; social worker; phone line; other).

Appendix 3
History of alert levels and epidemiological situation

	Colour of alert level at time of survey[20]	Cumulative incidence rate on June 10, 2021 (per 100,000)		Dates in red zone[21]	Total number of weeks in red zone[22]	
		Rate	Tertile		n	Tertile
Bas-Saint-Laurent	Region switched to orange on May 31	1,998.6	1	December 15–February 22 and April 1–May 31	19	1
Saguenay-Lac-Saint-Jean	Region already orange or yellow	3,961.7	2	November 2–February 8	14	1
Capitale-Nationale	Region switched to orange on May 31	4,312.5	2	October 1–March 8 and April 1–May 31	32	2
Mauricie-Centre-du-Québec (CDQ)	Region already orange or yellow	2,894.5	1	October 10–March 8	21	1
Estrie	Region switched to orange on May 31	2,993.9	1	November 12–March 8 and May 10–May 31	20	1
Montréal	Region stayed red on May 31	6,363.1	3	October 1–June 7	37	3
Outaouais	Region switched to orange on May 31	3,061.0	1	October 11–February 22 and April 1–May 31	28	2
Abitibi-Témiscamingue	Region already orange or yellow	767.4	1	–	0	1
Côte-Nord	Region already orange or yellow	637.7	1	–	0	1
Gaspésie/Îles-de-la-Madeleine	Region already orange or yellow	2,265.6	1	December 15–February 8	8	1
Chaudière-Appalaches	Region switched to orange on May 31	4,439.2	2	October 1–March 8 and April 1–May 31	32	2
Laval	Region stayed red on May 31	7,050.6	3	October 1–June 7	37	3
Lanaudière	Region switched to orange on May 31	4,568.1	3	December 15–May 31	23	1
Laurentides	Region switched to orange on May 31	3,311.6	1	December 15–May 31	23	1
Montérégie	Region switched to orange on May 31	3,548.5	2	October 16–May 31	32	2
Nord-du-Québec	Region already orange or yellow	806.1	1	–	0	1
Nunavik	Region already orange or yellow	0	1	–	0	1
Terres-Cries-de-la-Baie-James	Regions already orange or yellow	0	1	–	0	1

[20] Subregions (RCMs or cities) with a different colour than the rest of the region were not taken into consideration.
[21] The regions were only classified as red when more than 50% of the population of the region was classified at this alert level.
[22] The number of weeks was rounded up after four days.