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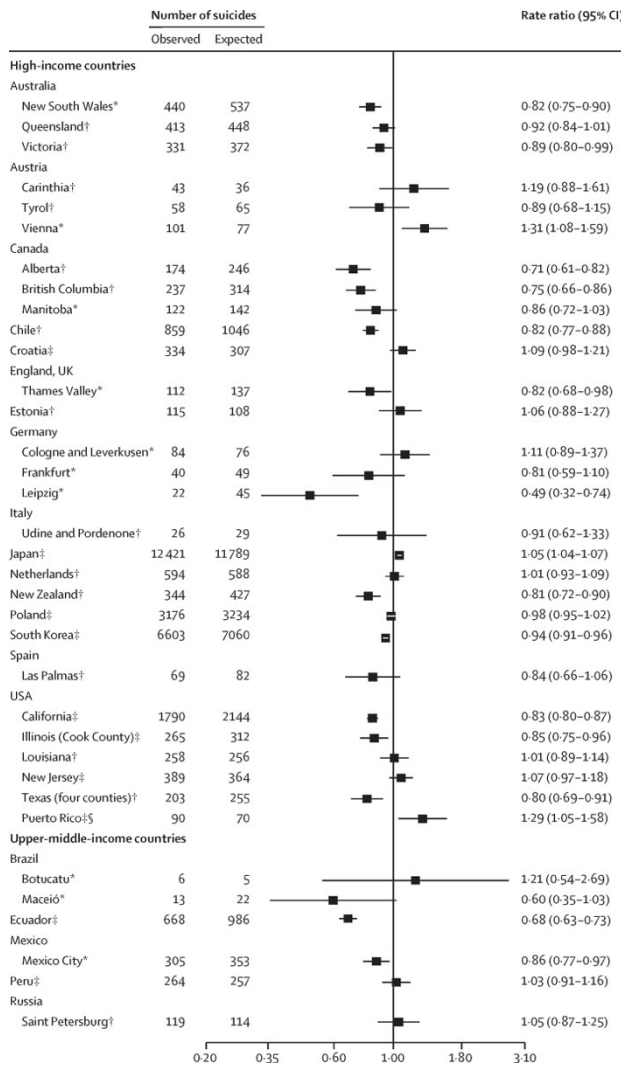
"A perfect storm?" Disparities in pandemic-related stressors and suicidal thinking during the COVID-19 pandemic

"A perfect storm?"

COVID-19 pandemic, and associated public health orders, observed or assumed to cause:
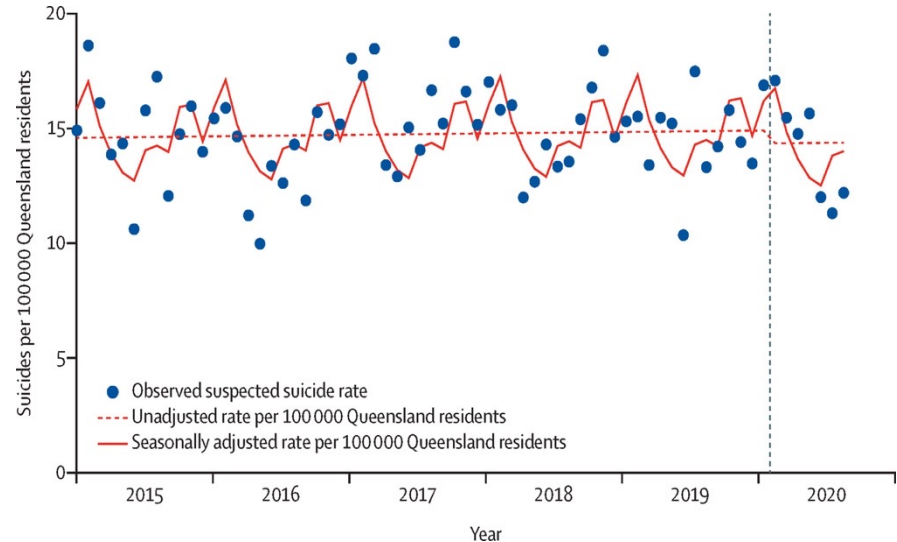
- Financial hardship and insecurity;

- Isolation, loneliness, and weakened social ties;

- Elevated rates of depression and anxiety;

- Increased substance use;

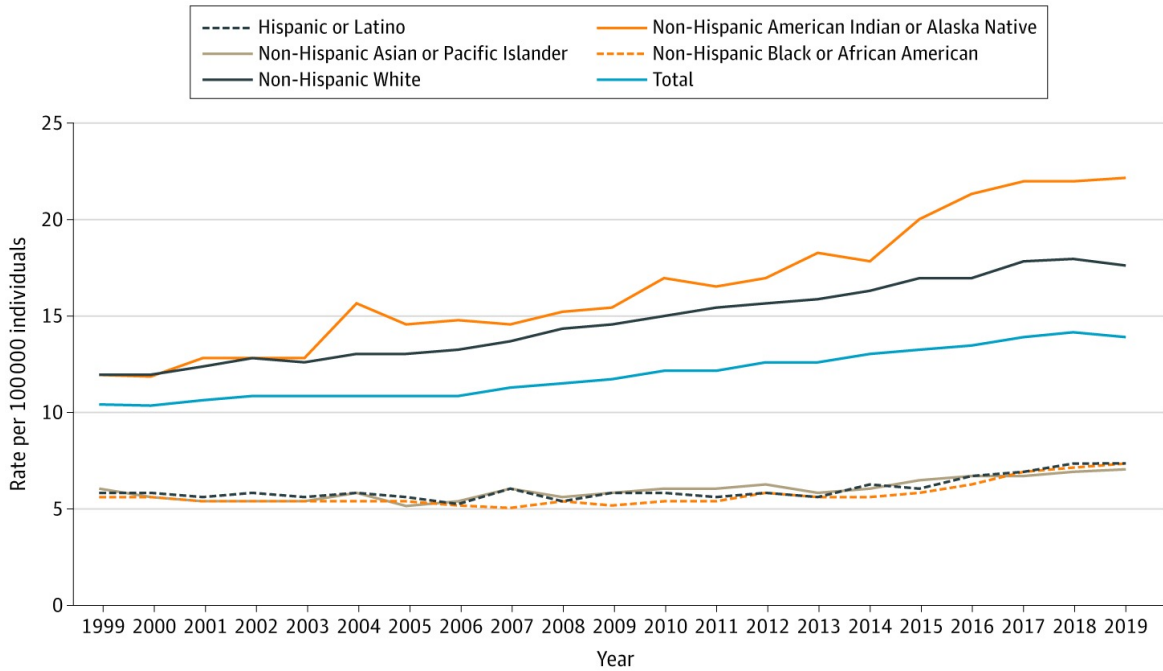- Difficulty accessing services and supports.

Suicide mortality data

	Number of suicides Observed	Number of suicides Expected	Rate ratio (95% CI)
High-income countries			
Australia			
New South Wales*	440	537	0·82 (0·75–0·90)
Queensland†	413	448	0·92 (0·84–1·01)
Victoria†	331	372	0·89 (0·80–0·99)
Austria			
Carinthia†	43	36	1·19 (0·88–1·61)
Tyrol†	58	65	0·89 (0·68–1·15)
Vienna*	101	77	1·31 (1·08–1·59)
Canada			
Alberta†	174	246	0·71 (0·61–0·82)
British Columbia†	237	314	0·75 (0·66–0·86)
Manitoba*	122	142	0·86 (0·72–1·03)
Chile†	859	1046	0·82 (0·77–0·88)
Croatia‡	334	307	1·09 (0·98–1·21)
England, UK			
Thames Valley*	112	137	0·82 (0·68–0·98)
Estonia†	115	108	1·06 (0·88–1·27)
Germany			
Cologne and Leverkusen*	84	76	1·11 (0·89–1·37)
Frankfurt*	40	49	0·81 (0·59–1·10)
Leipzig*	22	45	0·49 (0·32–0·74)
Italy			
Udine and Pordenone†	26	29	0·91 (0·62–1·33)
Japan‡	12421	11789	1·05 (1·04–1·07)
Netherlands†	594	588	1·01 (0·93–1·09)
New Zealand†	344	427	0·81 (0·72–0·90)
Poland‡	3176	3234	0·98 (0·95–1·02)
South Korea‡	6603	7060	0·94 (0·91–0·96)
Spain			
Las Palmas†	69	82	0·84 (0·66–1·06)
USA			
California‡	1790	2144	0·83 (0·80–0·87)
Illinois (Cook County)‡	265	312	0·85 (0·75–0·96)
Louisiana†	258	256	1·01 (0·89–1·14)
New Jersey‡	389	364	1·07 (0·97–1·18)
Texas (four counties)†	203	255	0·80 (0·69–0·91)
Puerto Rico‡§	90	70	1·29 (1·05–1·58)
Upper-middle-income countries			
Brazil			
Botucatu*	6	5	1·21 (0·54–2·69)
Maceió*	13	22	0·60 (0·35–1·03)
Ecuador‡	668	986	0·68 (0·63–0·73)
Mexico			
Mexico City*	305	353	0·86 (0·77–0·97)
Peru‡	264	257	1·03 (0·91–1·16)
Russia			
Saint Petersburg†	119	114	1·05 (0·87–1·25)

0·20 0·35 0·60 1·00 1·80 3·10

Suicides per 100 000 Queensland residents

- Observed suspected suicide rate
- Unadjusted rate per 100 000 Queensland residents
- Seasonally adjusted rate per 100 000 Queensland residents

2015 2016 2017 2018 2019 2020

Year

Rate per 100000 individuals — Year

Legend:
- Hispanic or Latino
- Non-Hispanic Asian or Pacific Islander
- Non-Hispanic White
- Non-Hispanic American Indian or Alaska Native
- Non-Hispanic Black or African American
- Total

Disparities in suicide mortality

Subgroups with higher risk

- Japanese women (vs. men) and young adults (vs. older adults) (Tanaka, Okamoto, 2021)

- Black (vs. White) adults in Maryland (Bray et al., 2020)

Seriously considered suicide in the past 30 days (%)...

Non-Hispanic Black	Hispanic	Asian	Non-Hispanic White
15.1	18.6	6.6	7.9

Czeisler et al., 2020

Suicidal ideation during the Pandemic

▷ Meta-analysis of 54 studies suggested 100% increase in rates of SI during COVID-19 pandemic versus pre-pandemic (Dubé et al., 2021)

Figure 1: Transitions Among Employed Workers by Race, March–April

	Still employed	Temporary layoff	Permanent layoff	No longer in the labor force
Black workers	76%	11%	5%	7%
White workers	82%	8%	5%	5%
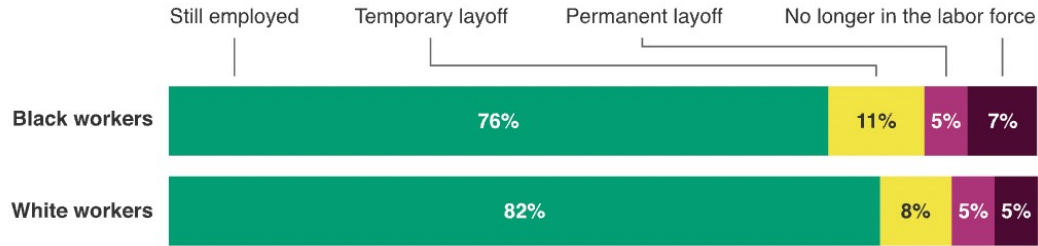
Source: Current Population Survey, March–April Basic Monthly data from IPUMS-CPS.

Disparities in Pandemic Impacts

Excess all-cause mortality per 10,000 (Polyakova et al., 2021)

Black	Hispanic	Asian	White
6.7	4.3	2.7	1.5

Protests against racism and police violence per day

Source: Crowd Counting Consortium

BLM and Social Justice movements in 2020

▷ Killing of Aumaud Arbery on February 23, 2020

▷ Killing of Breonna Taylor on March 13, 2020

▷ Killing of George Floyd on May 25, 2020

▷ June 6, 2020 – nearly 500,000 people protest around the US, with additional protests happening internationally

Objectives

Within a Canadian survey tracking rates of **suicidal ideation** during the COVID-19 pandemic, we examined…

- 1. Racial differences in rates of SI, as well as other mental health experiences, at various times in the pandemic.

- 2. Whether inequities in pandemic-linked stressors (e.g., risk of COVID-19 exposure; job loss) accounted for any observable differences in SI.

Methods
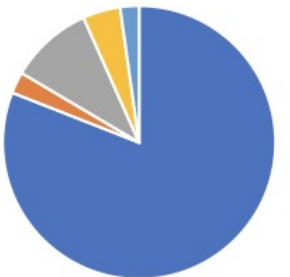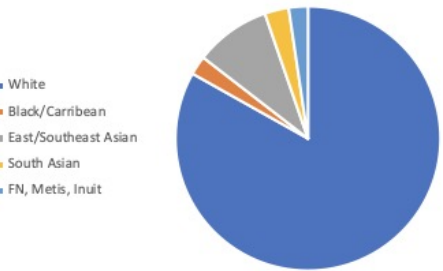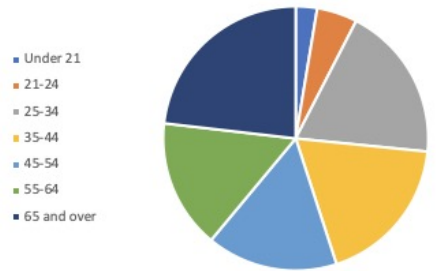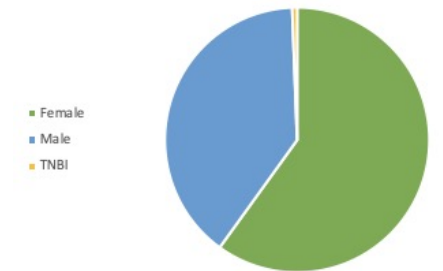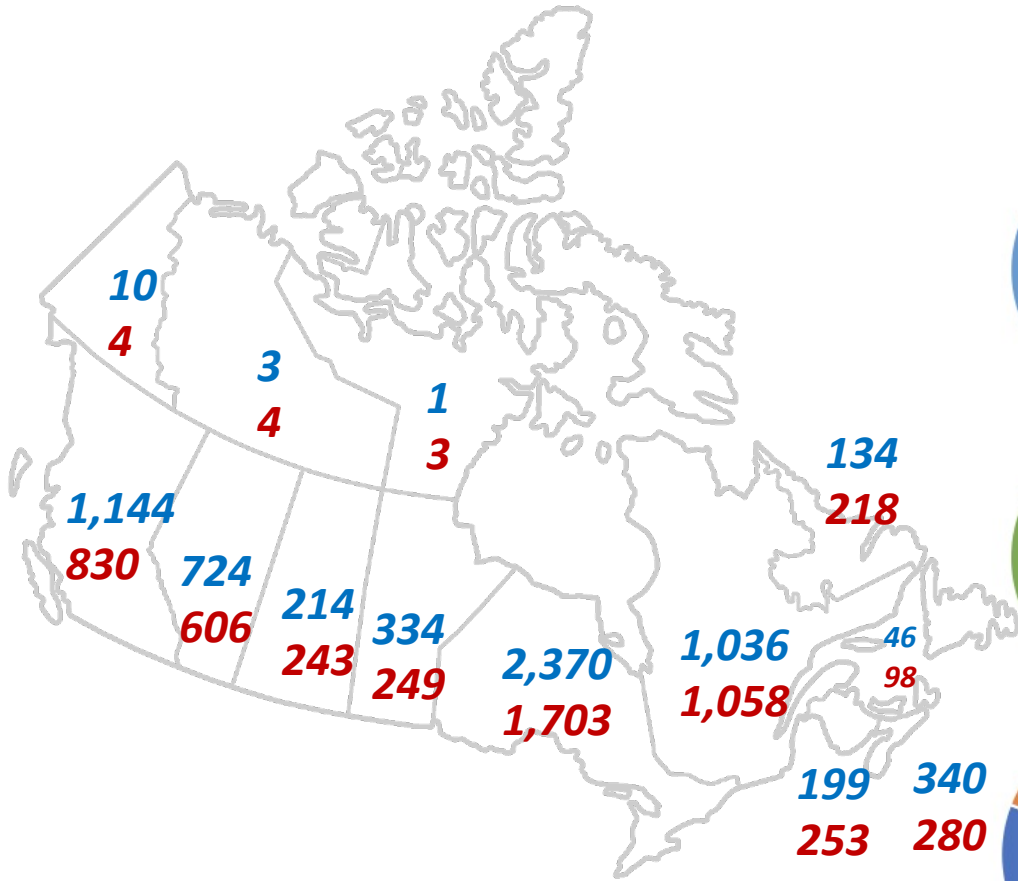
Measures

Suicidal Ideation - PHQ-9: "Thoughts of hurting yourself or that you would be better off dead"

Mental Health – Depression (PHQ-8), Anxiety (GAD-7), Impact of Events Scale Revised (IESR-22), UCLA loneliness scale (3 items) and pre-existing MH condition (1 item)

Employment Concerns – Laid off or lost job; worry about job loss; working remotely.

COVID-related Concerns – 11 items, 3 domains: illness, employment, and social.

Caregiving Responsibilities – providing care to someone (child, elderly person, neighbor or friend).

Results

Results – Suicidal Ideation

Wave 1: $\chi^2(3) = 69.72$, *p* < .001, OR = 1.90 [*1.61, 2.25*]

Wave 2: $\chi^2(3) = 79.63$, *p* < .001, OR = 1.96 [*1.67, 2.30*]

Legend: ■ W1 White ■ W1 BIPOC ▨ W2 White ▨ W2 BIPOC

Categories: Not at all, Several days, More than half the days, Nearly every day
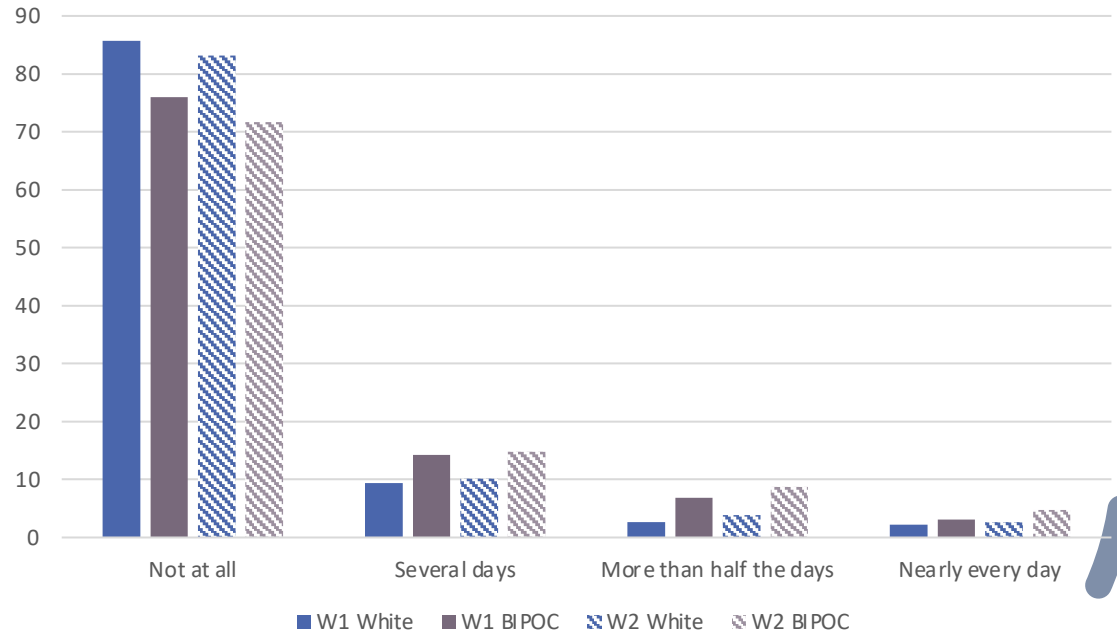
Results – Other mental health

Wave 1: $F_{(4,5694)} = 7.47$, $p < .001$, partial η^2s = <.002

Wave 2: $F_{(4,5408)} = 10.66$, $p < .001$, partial η^2s = <.003
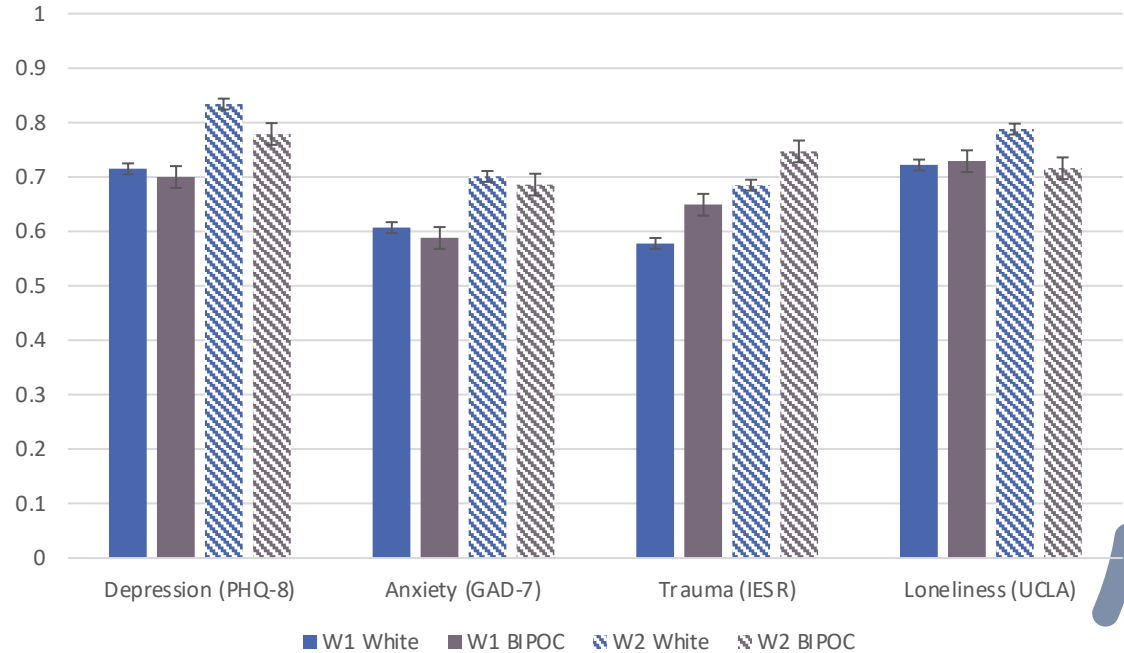
Results – COVID related concerns

Wave 1: $F_{(3,5867)} = 30.38$, $p < .001$, partial η^2s = .015

Wave 2: $F_{(3,5453)} = 47.67$, $p < .001$, partial η^2s = .026
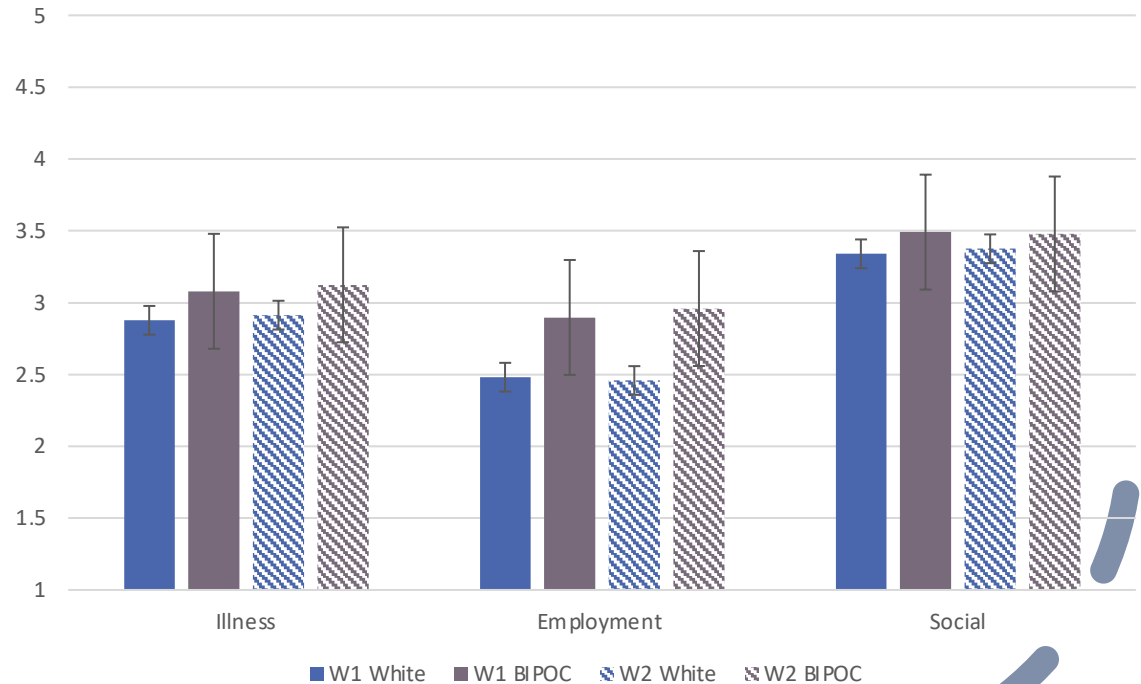
Results – Other pandemic stressors?

Odds ratios, controlling for age and education, for BIPOC (vs. White) respondents:

	W1 OR [95% CI]	W2 OR [95% CI]
Underlying medical condition	.74 [.61, .90]	1.04 [.85, 1.10]
Pre-existing MH condition	.60 [.51, .71]	.36 [.29, .44]
Working in-person	.69 [.58, .83]	.90 [.71, 1.15]
Laid off or lost job	1.57 [1.23, 2.00]	1.77 [1.47, 2.13]
Job fears	2.48 [2.07, 2.97]	2.96 [2.47, 3.55]
Caregiving	1.42 [1.21, 1.66]	1.69 [1.42, 2.00]

Results

Step-wise regression predicting suicidal ideation in each participant group

	White	BIPOC
W1: Mental Health (set)	$R^2 = .47$	$R^2 = .56$
W1: COVID Experiences (set)	$R^2 \triangle = .02$	$R^2 \triangle = .03$
W2: Mental Health (set)	$R^2 = .43$	$R^2 = .50$
W2: COVID Experiences (set)	$R^2 \triangle = .07$	$R^2 \triangle = .04$
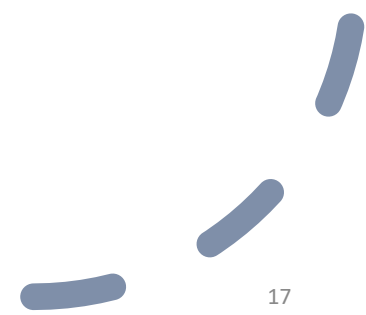
Discussion

Conclusions

Higher-than-usual rates of suicidal ideation are observed in surveys conducted during the pandemic.

BIPOC Canadians reporting more suicidal thinking, and more negative impacts of the pandemic, despite broadly equivalent mental health.

Stressors that may be particularly important for BIPOC Canadians in the pandemic context include trauma-related symptoms, employment insecurity, and caregiving responsibilities.
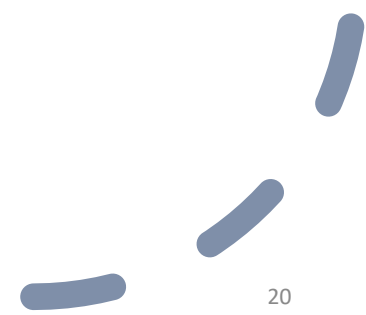
Limitations

PHQ-9 item has good sensitivity but moderate to low specificity versus multi-item screenings.

Some important potential moderators (e.g., impact of structural inequities in healthcare) may not be well assessed by individual surveys.

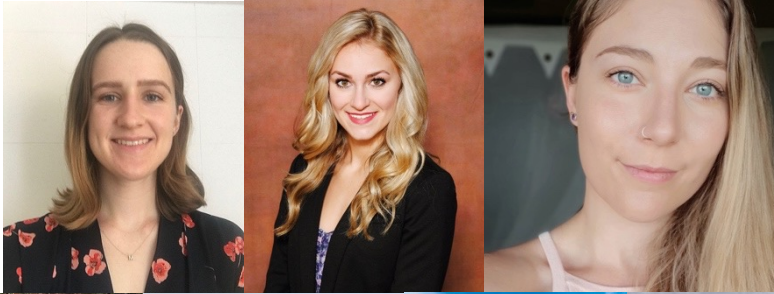Some themes (e.g., grief, resilience) not explored in this survey.

Cross-sectional, convenience survey.

Thank you to our wonderful team!

Research Assistants

UVic Collaborators

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Questions?