CALM: WITHIN THE STORM.
## COPING WITH STRESS AND BUILDING RESILIENCY DURING THE COVID PANDEMIC

Dr Timothy Lau,

President of the Medical Staff, Royal Ottawa Mental Health Centre.

Distinguished Teacher, Faculty of Medicine, University of Ottawa

Associate Professor of Psychiatry

A STORY

- LOUISE IS 41 YEAR OLD MOTHER OF 3 (2,8,17).

- FULLTIME TEACHER, JOHN WORKED AS A CONSULTANT FOR THE FEDERAL GOVERNMENT.

- IN MARCH OF 2020

- MOTHER IN LTC

- MOTHER HAD COVID

- LOUISE STRUGGLED. SCHOOL REOPENED FALL 2020

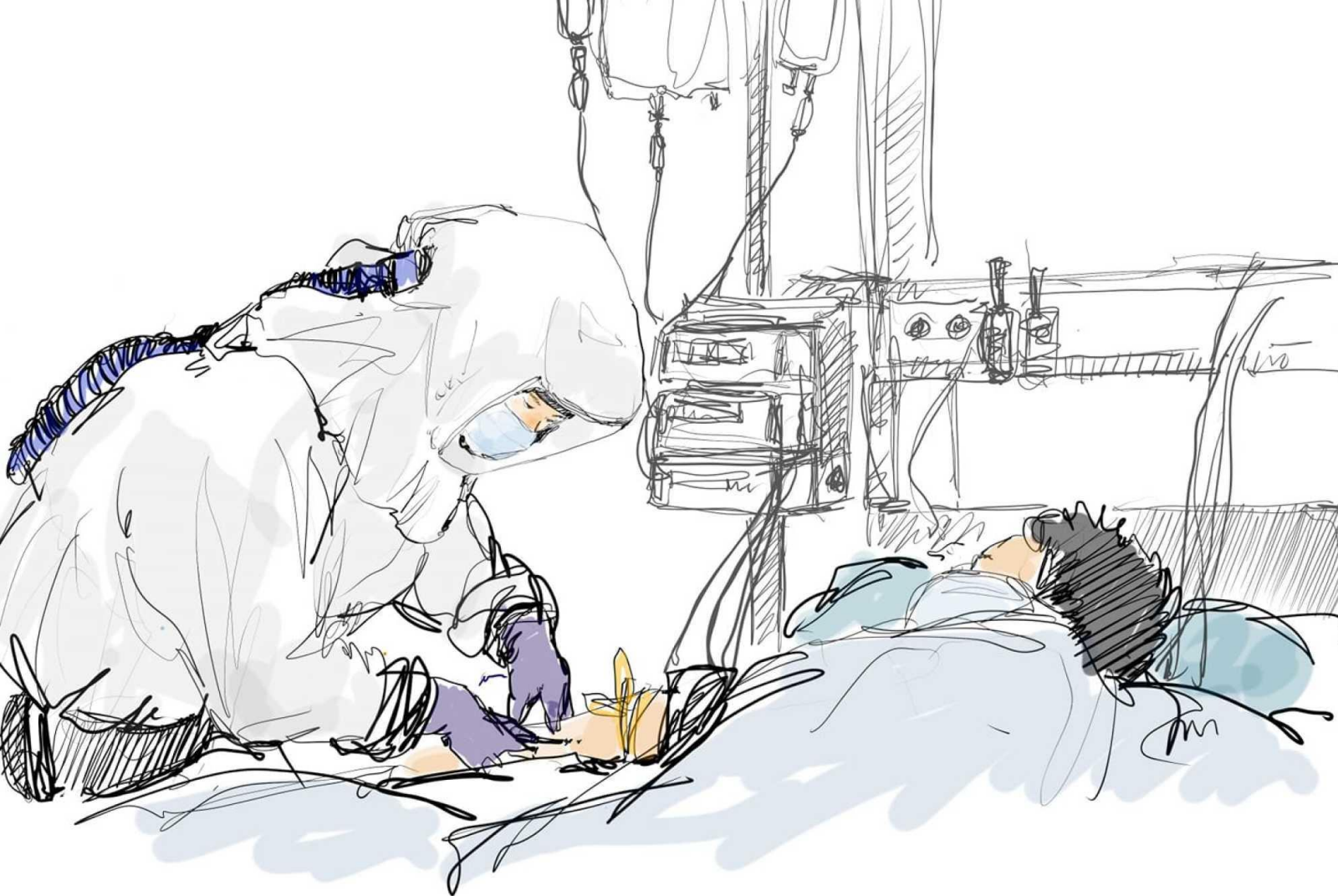- LIFE STARTED TO SEEM NORMAL

- LOCKDOWNS BEGAN AGAIN
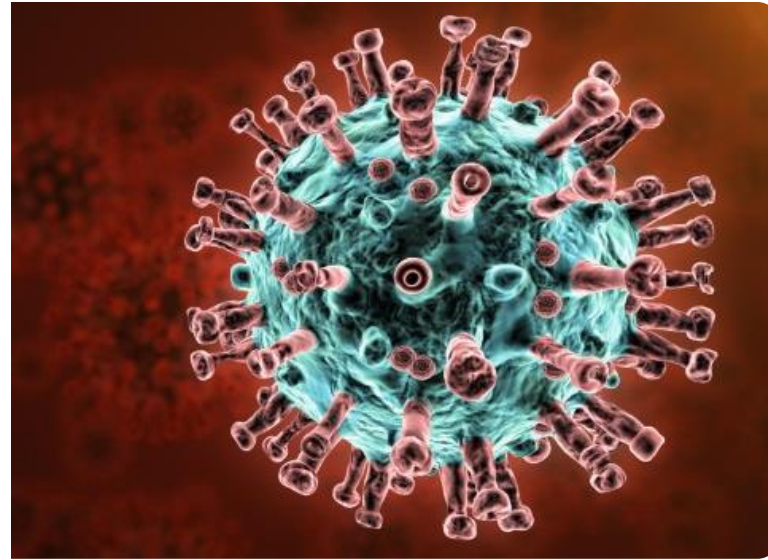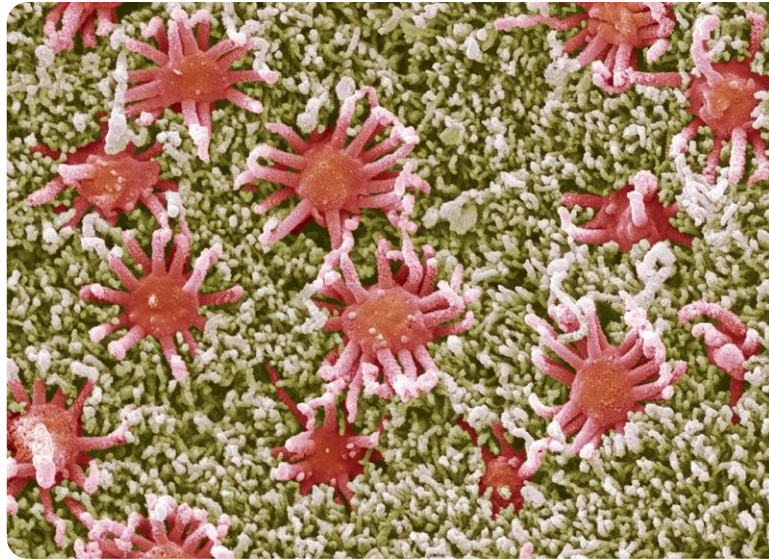
STORM

NOT ALL IN THE **SAME** BOAT

You can't calm the storm... so stop trying. What you can do is calm yourself. The storm will pass.

You can't calm
the storm... so stop
trying. What you can
do is calm yourself.
The storm will pass.

STOIC
and Eastern
perspective

Buddha's
Teaching

ataraxia or tranquility

Freedom from distress or worry even in the face of a storm

"We suffer **not from the events** in our lives but from **our judgement** about them."

— **Epictetus**

ESILIENCE

Feeling Anxious or Overwhelmed?

Try this approach:

C.A.L.M.

01

Cognitive

Step back and take a moment to assess the situation. Instead of taking an emotional approach, use a **cognitive** approach. Think it through. What are the facts? What are your priorities? Respond rationally, don't react.

02

Awareness

Be **aware** of how you're coping and **accept** that some things are out of your control. Take your own temperature. What do your mental health vitals say (sleep, tension, irritability, appetite, hope, sense of humour)? Consider asking a trusted friend, family member, colleague, or mental health professional for their perspective.

03

Lean

into the positive. Think about the things for which you are thankful and cultivate gratitude on a daily basis. Look for the hidden advantage of your situation and learn to focus on the benefits.

04

Make things better.

Reframe the way you think, the way you live (exercise, sleep, play), and the way you connect with others. Rather than comparing yourself to others, focus on your own progress. This will keep you motivated as you make positive changes in your life! Finding a reason to do what you are doing, whether through mindfulness or spirituality, can make your life meaningful and more valued. Take the time to find an approach that works best for you.

Be C.A.L.M.

The next time you feel anxious or overwhelmed, Dr. Tim Lau, a psychiatrist at The Royal, recommends a C.A.L.M. approach. This can help us put things into perspective so that we can see the whole picture and cultivate a hopeful, constructive and meaningful attitude towards living life to the fullest.

The Le
Royal
Mental Health · Care & Research
Santé mentale · Soins et recherche

CALM

Calm

Step 1: CORTICAL / COGNITIVE

Cortex vs. limbic system vs BRAINSTEM

Neocortex: REASON
Limbic system: EMOTIONS
Reptilian complex: INSTINCTS

ANXIETY

Delta = Overwhelming anxiety

Perceived danger
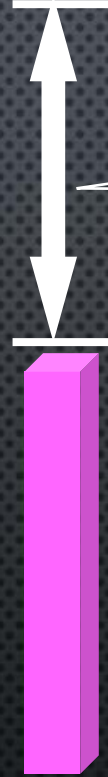
Perceived abilities

ANXIETY

*Delta = **Less** overwhelming anxiety*

Perceived danger

***Increase** abilities*

ANXIETY

Delta = *LESS* overwhelming anxiety

Overcome
IRRATIONAL *fear*
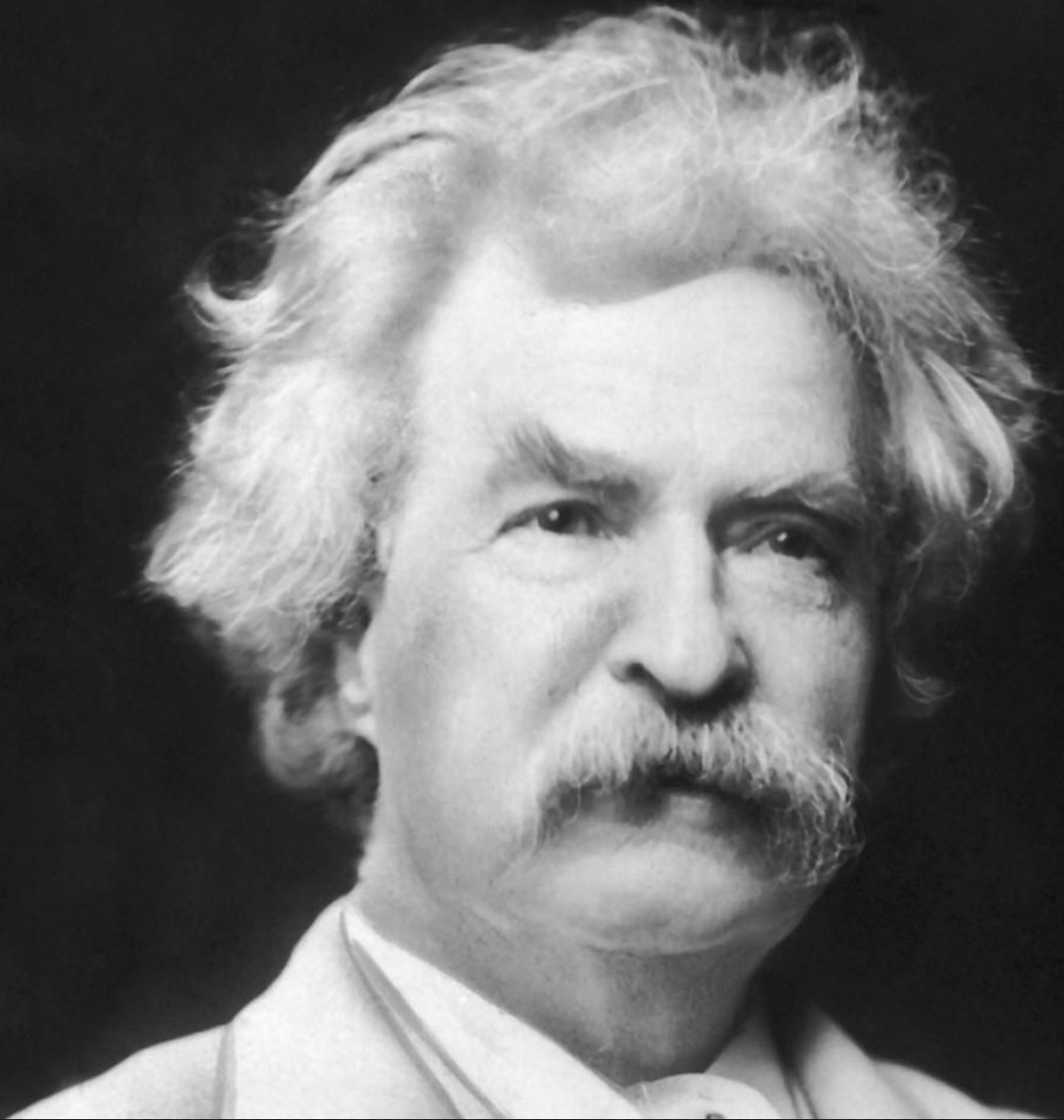
Increase abilities

MANAGEABLE ANXIETY

Perceived danger

Perceived abilities

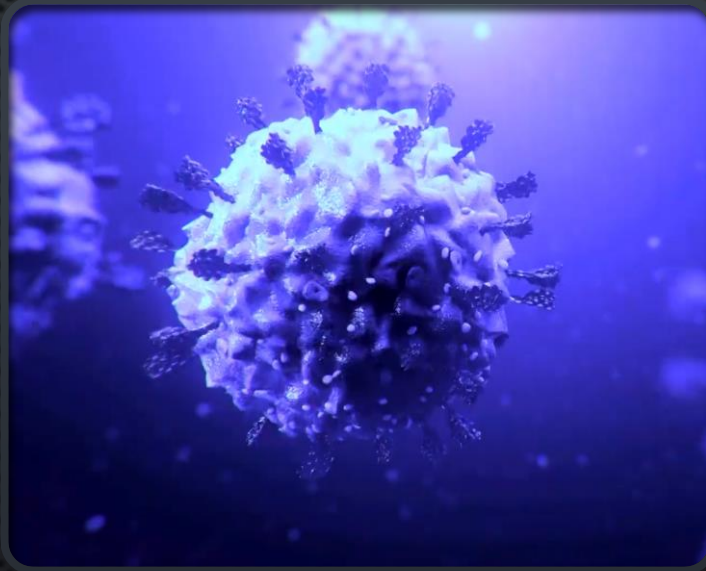"I'VE LIVED A TERRIBLE LIFE, MOST OF WHICH NEVER HAPPENED"
MARK TWAIN

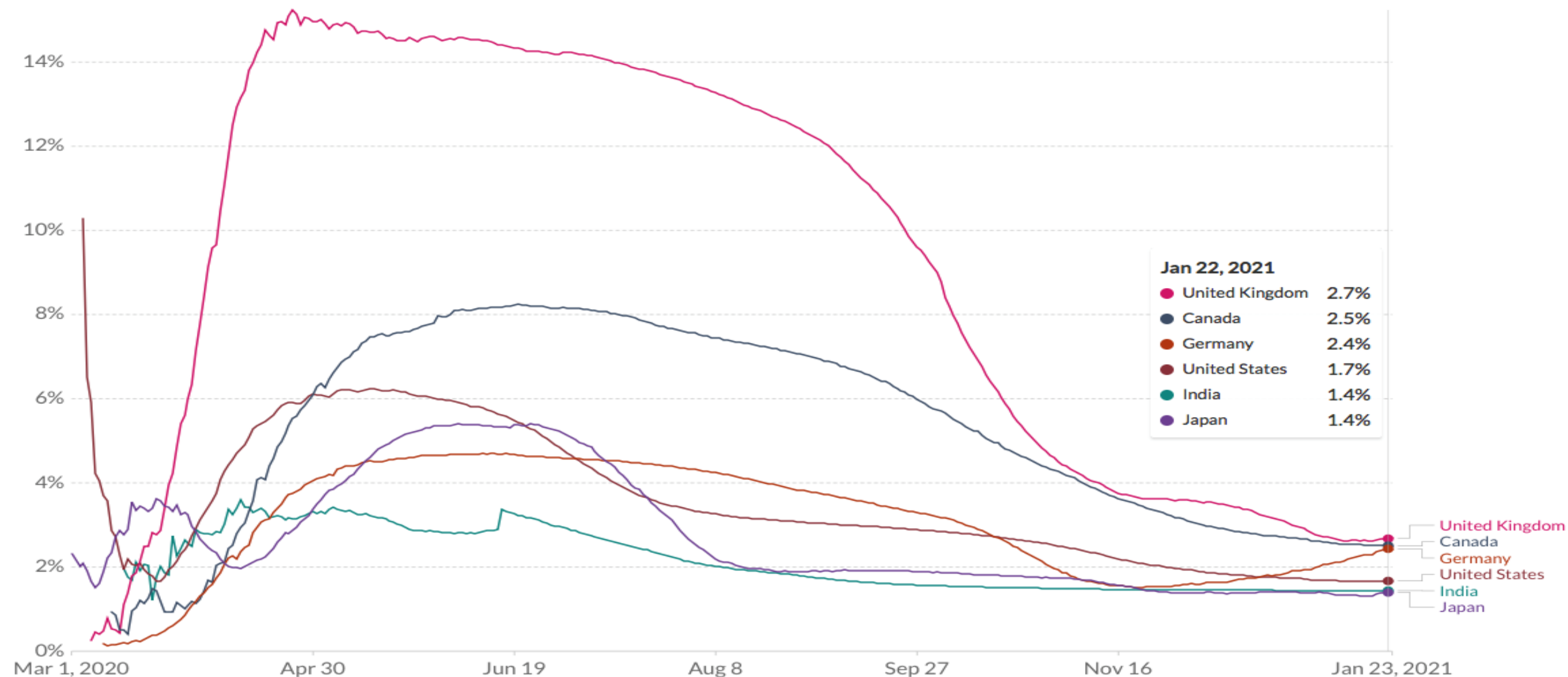# WHAT ARE THE FACTS?

INVISIBLE ENEMY

1

2

3

Invisible
ENEMY 1

Case fatality rate of the ongoing COVID–19 pandemic

The Case Fatality Rate (CFR) is the ratio between confirmed deaths and confirmed cases. During an outbreak of a pandemic the CFR is a poor measure of the mortality risk of the disease. We explain this in detail at OurWorldInData.org/Coronavirus

Jan 22, 2021

●	United Kingdom	2.7%
●	Canada	2.5%
●	Germany	2.4%
●	United States	1.7%
●	India	1.4%
●	Japan	1.4%

United Kingdom
Canada
Germany
United States
India
Japan

Source: Johns Hopkins University CSSE COVID-19 Data – Last updated 24 January, 09:02 (London time)

CC BY

▶ Feb 21, 2020 ○━━━━━━━━━━━━━━━━━━━━━━━━━━━━○ Jan 23, 2021

| CHART | MAP | TABLE | SOURCES | ⬇ DOWNLOAD | ◄ |

COVID-19 looks a lot closer to the season flu than to previous coronavirus outbreaks

■ Fatal cases   ■ Non-fatal cases
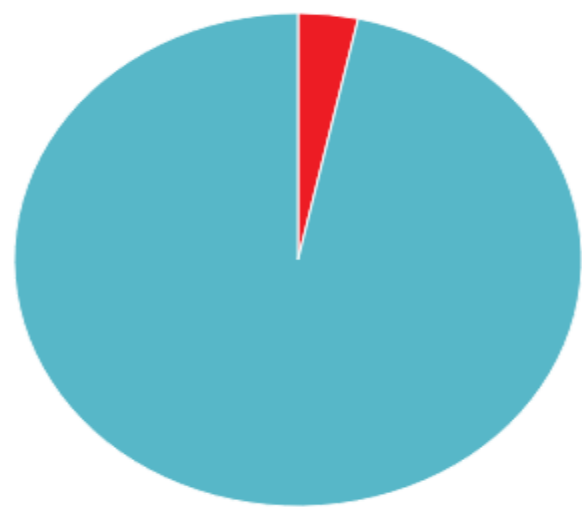
COVID-19
Fatal cases:
3.4%
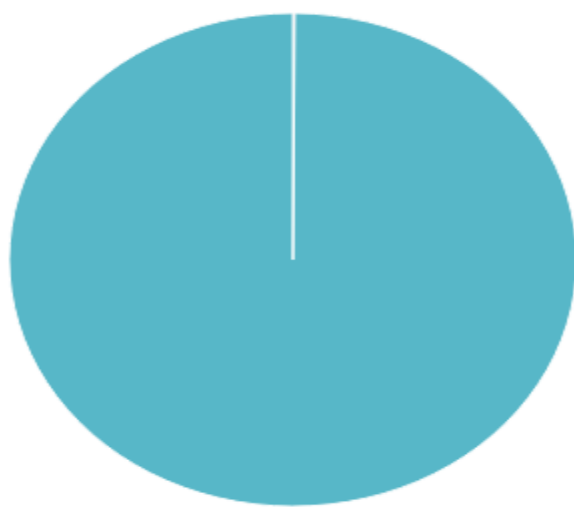
Seasonal flu
Fatal cases:
0.1%
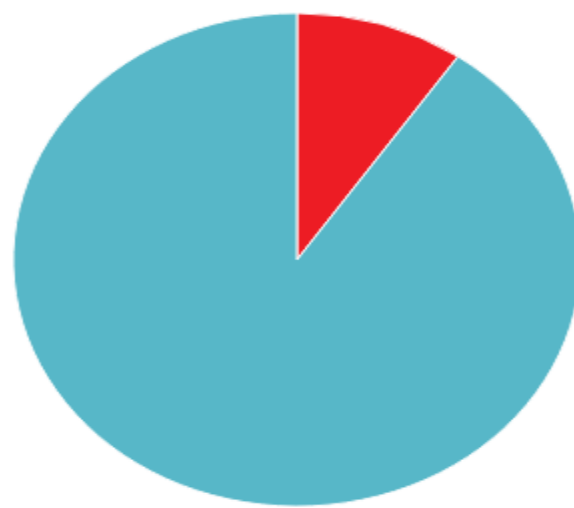
SARS
Fatal cases:
10%
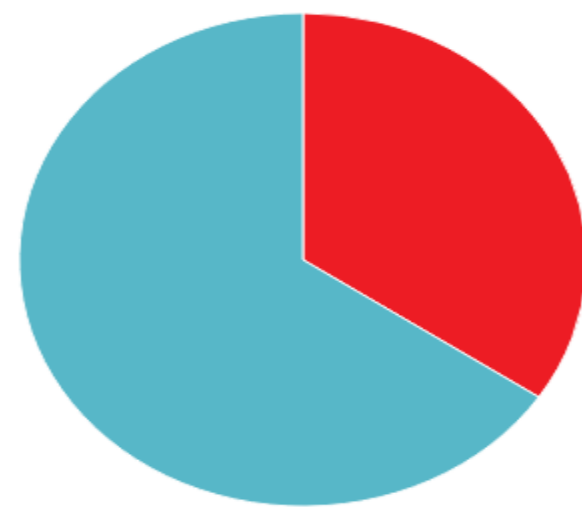
MERS
Fatal cases:
34%

COVID-19, SARS, and MERS data are global and total to date. Seasonal flu data are U.S., for the 2018-2019 season.

Chart: Elijah Wolfson for TIME • Source: CDC and WHO • Created with Datawrapper

4 UNIQUE PROBLEMS

1. ASYMPTOMATIC / PAUCISYMPTOMATIC CARRIAGE

2. VARIABLE RATE OF TRANSMISSION

3. HIGH ATTACK RATE, MEANS HEALTH CARE SYSTEM CAN BE OVERWHELMED

4. MUTATIONS

HUMAN INGENUITY

GUIDED MISSILES

Invisible
ENEMY 2:
Fear, anxiety,
depression

MENTAL HEALTH

- SINCE THE SPRING OF 2020 INCREASED DEPRESSIVE AND ANXIOUS SYMPTOMS

News | Politics ∨ | Economy ∨ | World ∨ | Key Topics ∨ | Blogs & Podcast ∨ | Media Resources ∨

WELLBEING DECEMBER 7, 2020

Americans' Mental Health Ratings Sink to New Low

BY **MEGAN BRENAN**

https://news.gallup.com/poll/327311/americans-mental-health-ratings-sink-new-low.aspx?fbclid=IwAR2uVBWscXj0ehrMv2U0hS5_Hm-mQX9_J8n0kSf95Er7SA5qqxsF2-Z-kAg

Gallup Poll in Nov
Health and Healthcare
survey
Mental health declined

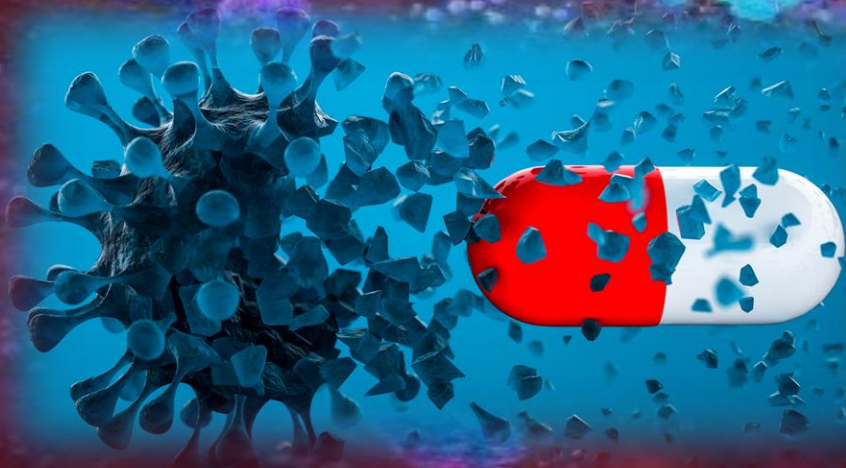## Americans' Assessment of Their Physical Health, 2001-2020

How would you describe your own physical health at this time? Would you say your physical health is -- excellent, good, only fair, or poor?

■ % Excellent   ■ % Excellent/Good

% Excellent/Good: 78, 82, 78, 81, 78, 81, 80, 79, 76, 81, 79

% Excellent: 29, 32, 28, 31, 30, 32, 31, 29, 29, 28, 29

2002 2004 2006 2008 2010 2012 2014 2016 2018 2020
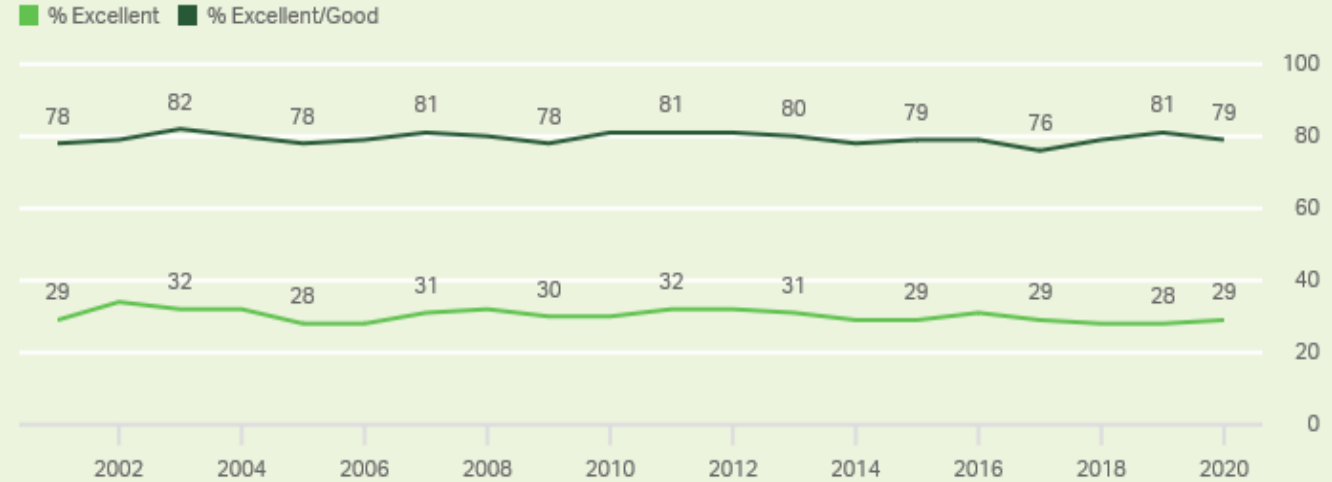
GALLUP

Americans' Assessment of Their Mental Health, 2001-2020

How would you describe your own mental health or emotional wellbeing at this time? Would you say it is -- excellent, good, only fair, or poor?

■ % Excellent   ■ % Excellent/Good

% Excellent/Good: 85, 81, 88, 85, 87, 89, 89, 84, 82, 85, 76

% Excellent: 43, 43, 51, 42, 45, 43, 48, 45, 45, 43, 34

2002 2004 2006 2008 2010 2012 2014 2016 2018 2020

GALLUP

WELLBEING DECEMBER 7, 2020

Americans' Mental Health Ratings Sink to New Low

BY MEGAN BRENAN

https://news.gallup.com/poll/327311/americans-mental-health-ratings-sink-new-low.aspx?fbclid=IwAR2uVBWscXj0ehrMv2U0hS5_Hm-mQX9_J8n0kSf95Er7SA5qqxsF2-Z-kAg

Worse for women.
Better for those that attended religious services once a week

Americans' Rating of Their Mental Health as Excellent, by Demographic Groups. 2019 vs. 2020

	2019 %	2020 %	Change pct. pts.
Gender			
Male	49	41	-8
Female	37	27	-10
Party identification			
Republican	56	41	-15
Independent	44	32	-11
Democrat	30	29	-1
Religious service attendance			
Weekly	42	46	+4
Nearly weekly/Monthly	47	35	-12
Seldom/Never	42	29	-13
Race			
White	45	35	-10
Non-White	40	32	-8
Marital status			
Married	49	41	-8
Not married	37	27	-10
Age group			
18-29	37	28	-9
30-49	40	32	-8
50-64	51	42	-9
65+	44	34	-10
Household income group			
Under $40,000	33	27	-6
$40,000-$99,999	43	31	-12
$100,000 or more	57	45	-12

GALLUP

COGNITIVE ASSESSMENT
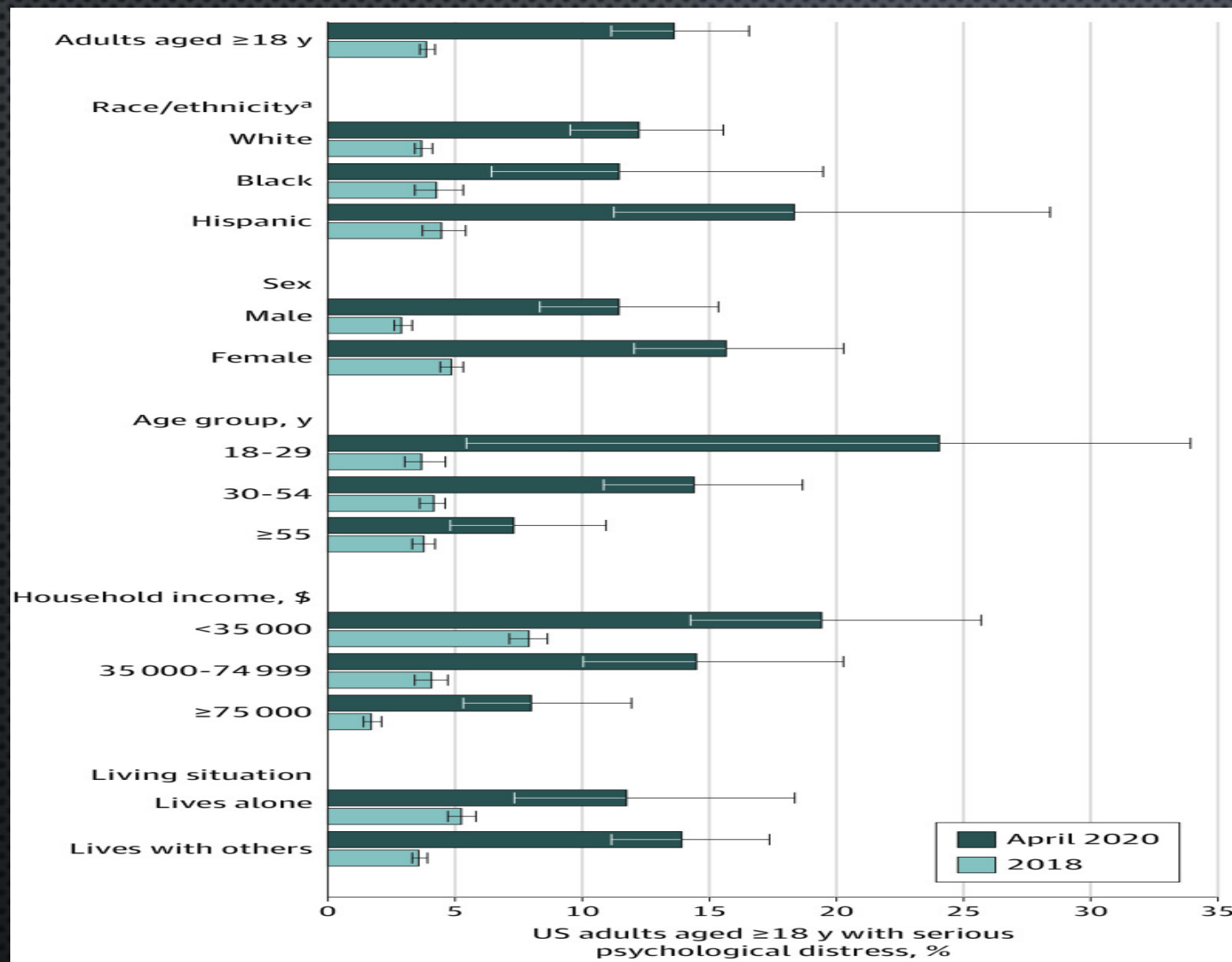
JAMA July 2020
N=1468
Kessler 6 psychological distress scale

McGinty, E. E., Presskreischer, R., Han, H., & Barry, C. L. (2020). Psychological distress and loneliness reported by U.S. adults in 2018 and April 2020. Journal of the American Medical Association, E1–E2. 2.

Running Head: MENTAL HEALTH DURING COVID-19

Emerging new psychiatric symptoms and the worsening of pre-existing mental disorders during the COVID-19 pandemic: A Canadian multi-site study.

Rebecca Robillard*, PhD[1,2]; Alexander R. Daros, PhD[3]; Jennifer L. Phillips, PhD[1,4]; Meggan Porteous, BA[1,2]; Mysa Saad, MSc[1]; Marie-Helene Pennestri, PhD[5,6]; Tetyana Kendzerska, MD[7], Jodi D. Edwards, PhD[8]; Elizaveta Solomonova, PhD[9] , Raj Bhatla, MD[4,10]; Roger Godbout, PhD[6]; Zachary Kaminsky, PhD[1]; Addo Boafo, MD[11]; Lena C. Quilty, PhD[3,12]

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Submitted to: The Canadian Journal of Psychiatry

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Figure 1. Changes in Positive Screening for Anxiety and Depression in people without a psychiatric history
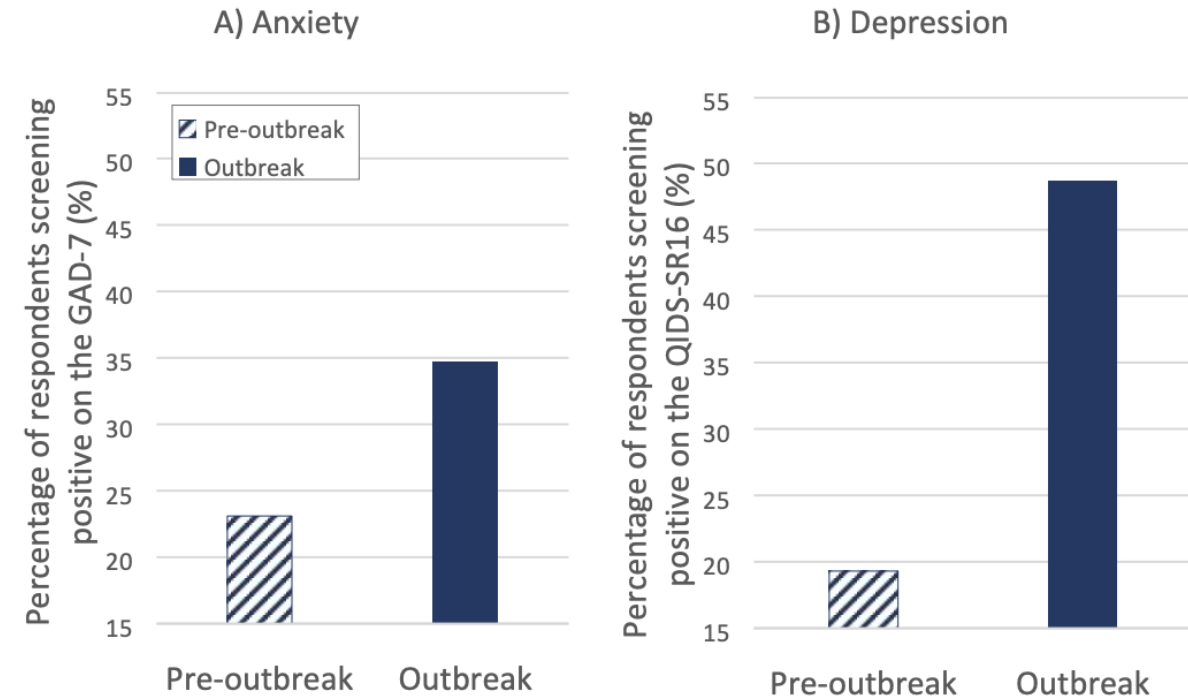
Percentage of all respondents without a psychiatric history (n= 2,562) who endorsed clinically significant anxiety symptoms on the GAD-7 (Generalized Anxiety Disorder Scale; Panel A) and depressive symptoms on the QIDS-SR16 (Quick Inventory of Depressive Symptomatology-Self Report, short version; Panel B) before the outbreak (striped bars) and since the start of the outbreak (full bars).

- Dr Robillard's study at the Royal
  - N=4294 (current vs. one month prior)
  - Subdivided into based on presence of self reported psychiatric dx.
  - Canadian Journal of Psychiatry

ANXIETY AND DEPRESSION ASSOCIATION OF AMERICA | **WILEY**

RESEARCH ARTICLE

U.S. Census Bureau-assessed prevalence of anxiety and depressive symptoms in 2019 and during the 2020 COVID-19 pandemic

Jean M. Twenge[1] | Thomas E. Joiner[2]

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Abstract

Background: The disruptions to daily life caused by the coronavirus disease 2019 (COVID-19) pandemic may have impacted mental health, particularly mood disorders. This study aimed to compare prevalence rates of anxiety disorder and depressive disorder in national samples in the U.S. before and during the pandemic.

Methods: Participants ($n = 336,525$) were from U.S. Census Bureau-administered nationally representative probability samples, one from the first half of 2019 and four during the pandemic in April and May 2020. All participants completed the Patient Health Questionnaire-2 screening for depressive disorder and the Generalized Anxiety Disorder-2 screening for anxiety disorders.

Results: Compared to U.S. adults in 2019, U.S. adults in April and May 2020 were more than three times as likely to screen positive for depressive disorders, anxiety disorders, or one or both, with more than one out of three screening positive for one or both. The prevalence of anxiety decreased slightly between the April 23–May 4, 2020 and the May 21–26, 2020 administrations, while the prevalence of depression increased slightly.

Conclusions: U.S. adults in 2020 are considerably more likely to screen positive for mood disorders than in 2019, with anxiety declining and depression increasing from April to May.

KEYWORDS

anxiety, COVID-19, depression, economic hardship, mood disorders, pandemic, social isolation, unemployment

CDC: went from 1-2x/yr sampling to 2x per month during the pandemic N=336K.

TABLE 1 Symptoms of anxiety disorder,

	2019	April 23–May 4, 2020	RR, 2019 versus April 23–May 5, 2020
Anxiety	8.2%	30.8%	3.76 (3.57, 3.96)
Depression	6.6%	23.5%	3.56 (3.36, 3.77)
One or both	11.0%	35.9%	3.26 (3.12, 3.41)

Note: Numbers in parentheses are 95% CIs for

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7405486/pdf/DA-9999-na.pdf.

Teens in Quarantine survey of 1,523 U.S. teens during May–July 2020, asking about their mental health, family time, sleep, technology use. Compared our 2020 teens' responses in the national Monitoring the Future survey.

Teens in Quarantine:
Mental Health, Screen Time, and Family Connection
2020

By: Jean M. Twenge
Sarah M. Coyne
Jason S. Carroll
W. Bradford Wilcox

Institute for **Family** Studies   **THE WHEATLEY INSTITUTION**

Figure 1. Teens' Mental Health, 2018 vs. 2020, school in session and summer break

Legend:
- Dissatisfied with Life
- Lonely
- Unhappy
- Depressed

X-axis: 2018 in School | 2020 Quarantined School | 2020 Quarantined Summer
Y-axis: Percent of All Teens Surveyed (0%–30%)
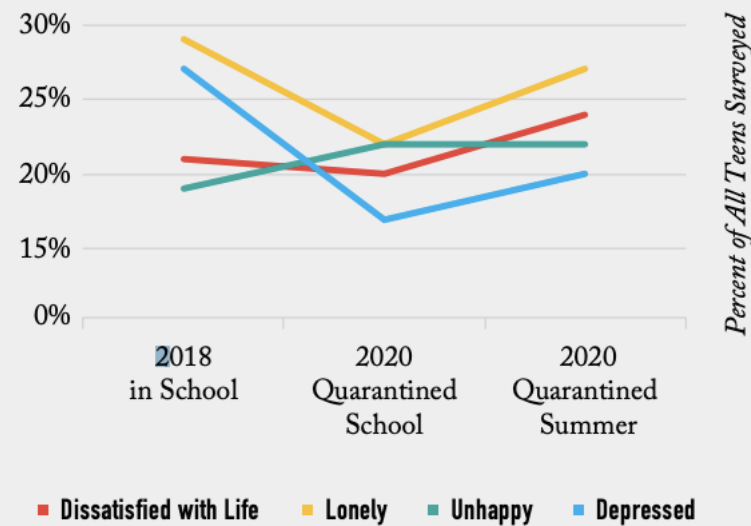
Source: Monitoring the Future; Teens in Quarantine

Institute for Family Studies/Wheatley Institution

Figure 2. Percent of U.S. Teens Depressed during Pandemic Quarantine, by regularity of seven or more hours sleep
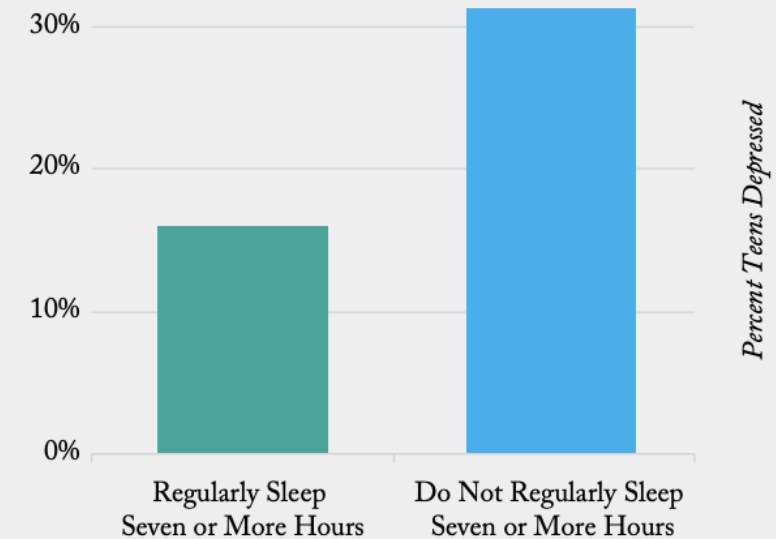
X-axis: Regularly Sleep Seven or More Hours | Do Not Regularly Sleep Seven or More Hours
Y-axis: Percent Teens Depressed (0%–30%)

Source: Teens in Quarantine

Institute for Family Studies/Wheatley Institution

https://ifstudies.org/ifs-admin/resources/final-teenquarantine2020.pdf

COGNITION

- Adolescence
  - Overall was not worse, before and after
  - Family connections mitigated some of the negative effects
- Importance of basic needs

Figure 3. Percent of Teens Depressed, among those agreeing their families had become closer during the pandemic vs. those not agreeing
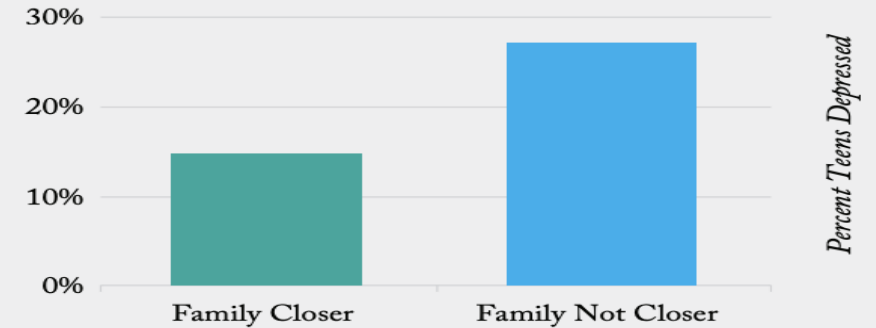
Source: Teens in Quarantine

Institute for Family Studies/Wheatley Institution

Figure 5. Percent of U.S. Teens Depressed during Quarantine, food secure vs. food insecure

Source: Teens in Quarantine

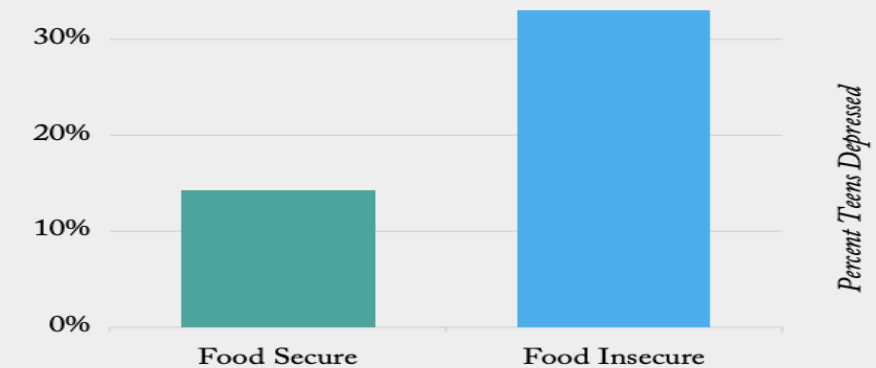Institute for Family Studies/Wheatley Institution

FULL LENGTH MANUSCRIPT

Resilience and the Role of Depressed and Anxious Mood in the Relationship Between Perceived Social Isolation and Perceived Sleep Quality During the COVID-19 Pandemic

Arwa Ben Salah[1] · Briana N. DeAngelis[2] · Mustafa al'Absi[2]

Cross sectional, international survey. N=3800, PHQ4, Brief Resilience Scale, Perceived sleep quality

Abstract

Background The aim of the study was to examine the mediating role of depressed and anxious mood in the relationship between perceived social isolation and perceived sleep quality during the COVID-19 pandemic. We also aimed to investigate the moderating role of psychological resilience in this mediation.

Methods A cross-sectional study of adults (18+ years old) was conducted using an online, multi-language, international survey between March 31 and May 15, 2020. Simple and moderated mediation analyses were performed using the PROCESS macro for SPSS, with perceived social isolation as an independent variable, change in perceived sleep quality (during vs. before the COVID-19 pandemic) as a dependent variable, depressed and anxious mood (Patient Health Questionnaire-4, PHQ-4) as a mediator, and resilience (Brief Resilience Scale, BRS) as a moderator.

Results A convenience sample of 3816 participants (2692 = female) from 94 countries (47.4% USA) met criteria for inclusion in the analyses. Results showed that depressed and anxious mood mediated the relationship between perceived social isolation and change in perceived sleep quality. This mediation was moderated by resilience; the indirect effect of perceived social isolation on change in perceived sleep quality through depressed and anxious mood decreased as the level of resilience increased (index of moderated mediation = 0.008, SE = 0.003, 95%CI [0.001; 0.014]).

Conclusions The study findings indicate benefits of psychological resilience in buffering negative effects of perceived isolation, suggesting potential benefits of developing targeted strategies to enhance resilience during times of significant crises.

Keywords Anxiety · Depression · Resilience · Sleep · Social isolation · COVID-19

Table 2 Descriptions of the dependent, independent, mediator, and moderator variables

	n	Mean	SD	Range
Perceived social isolation	3814	2.2	1.7	0–5
Depressed and anxious mood (PHQ-4[a])	3809	4.4	3.4	0–12
Perceived sleep quality before the spread of SARS-CoV-2[b]	3816	2.0	0.8	0–3
Perceived sleep quality in the time since SARS-CoV-2 began spreading	3816	1.5	0.9	0–3
Change in perceived sleep quality[c]	3816	– 0.4	1.0	– 3 to + 3
Resilience (BRS[d])	3792	3.4	0.8	1–5

For PHQ-4 and BRS, existing translations of validated measures were used when available

N number of respondents, *SD* standard deviation, *Range* observed range in the sample

[a] *PHQ-4* 4-item Patient Health Questionnaire (41)

[b] *SARS-CoV-2* severe acute respiratory syndrome coronavirus 2

[c] *Change in perceived sleep quality* perceived sleep quality since the spread of the virus minus perceived sleep quality before the spread of the virus, [d] *BRS* Brief Resilience Scale (26)

Table 3 Pearson's correlations between perceived social isolation, depressed and anxious mood, perceived sleep quality, and resilience

	(1)	(2)	(3)	(4)	(5)	(6)
Perceived social isolation	1	0.31**	– 0.13** (n = 3814)	– 0.20** (= 3790)	– 0.03 (n = 3814)	– 0.17** (n = 3814)
Depres... (PHQ...						...09)
Chang...						
Resilience (BRS)					0.08 (n = 3792) 0.21 (n = 3792)
Perceived sleep quality before the spread of SARS-CoV-2					1	0.29** (n = 3816)
Perceived sleep quality in the time since SARS-CoV-2 began spreading						1

What causes what?
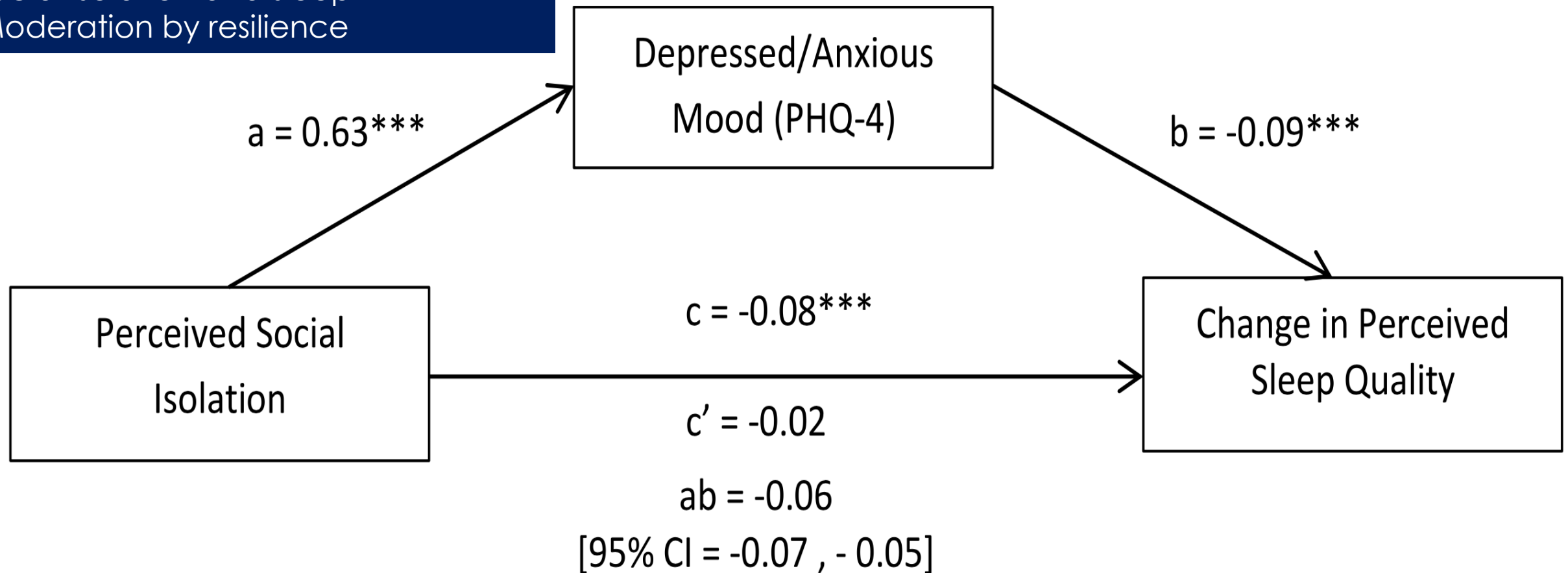
[a] *PHQ-4* 4-item Patient Health Questionnaire (41)

[b] *Change in perceived sleep quality* perceived sleep quality since the spread of the virus minus perceived sleep quality before the spread of the virus

[c] *BRS* Brief Resilience Scale (26)

**p < 0.001

N=3800, PHQ4, Brief Resilience Scale
Depressed and anxious mood mediated the relationship between social isolation and sleep
Moderation by resilience

Depressed/Anxious Mood (PHQ-4)

a = 0.63***

b = -0.09***

Perceived Social Isolation

c = -0.08***

c' = -0.02

ab = -0.06

[95% CI = -0.07 , - 0.05]

Change in Perceived Sleep Quality

Fig. 2 Simple mediation model: Indirect effect of perceived social isolation on change in perceived sleep quality through depressed and anxious mood during the COVID-19 pandemic (n = 3807). *PHQ-4* 4-item Patient Health Questionnaire (41); ***$p < 0.0001$; 95% CI (confidence interval) obtained using bootstrap method

Review article

The psychological and mental impact of coronavirus disease 2019 (COVID-19) on medical staff and general public – A systematic review and meta-analysis

Min Luo[a], Lixia Guo[b], Mingzhou Yu[c], Wenying Jiang[d], Haiyan Wang[e,*]

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[c] Department of Ophthalmology, The 965th Hospital of the Joint Logistic Support Force of the People's Liberation Army of China, Jilin, 132011 China
[d] Department of Disease Control, The 965th Hospital of the Joint Logistic Support Force of the People's Liberation Army of China, Jilin, 132011 China
[e] Department of Anesthesiology, Daping Hospital, Army Medical University, Chongqing, 400042 China

ABSTRACT

The coronavirus disease 2019 (COVID-19) pandemic has caused enormous psychological impact worldwide. We conducted a systematic review and meta-analysis on the psychological and mental impact of COVID-19 among healthcare workers, the general population, and patients with higher COVID-19 risk published between 1 Nov 2019 to 25 May 2020. We conducted literature research using Embase, PubMed, Google scholar and WHO COVID-19 databases. Among the initial search of 9207 studies, 62 studies with 162,639 participants from 17 countries were included in the review. The pooled prevalence of anxiety and depression was 33% (95% confidence interval: 28%-38%) and 28% (23%-32%), respectively. The prevalence of anxiety and depression was the highest among patients with pre-existing conditions and COVID-19 infection (56% [39%-73%] and 55% [48%-62%]), and it was similar between healthcare workers and the general public. Studies from China, Italy, Turkey, Spain and Iran reported higher-than-pooled prevalence among healthcare workers and the general public. Common risk factors included being women, being nurses, having lower socioeconomic status, having high risks of contracting COVID-19, and social isolation. Protective factors included having sufficient medical resources, up-to-date and accurate information, and taking precautionary measures. In conclusion, psychological interventions targeting high-risk populations with heavy psychological distress are in urgent need.

1. Introduction

The coronavirus disease 2019 (COVID-19) outbreak is posing a serious public health threat worldwide. According to the World Health Organization (WHO), as of 1 June 2020, 6,040,609 confirmed cases and 370,657 deaths have been reported globally (World Health Organization, 2020). A recent large-scale study has shown that multifaceted public health interventions are temporarily associated with improved control of COVID-19 pandemic (Pan et al., 2020). However, in addition to the physical health, the potential psychological and mental health impacted by the COVID-19 pandemic should also be taken seriously. Although previous research has suggested that the mental impact of a major disaster had a wider and longer effect on people compared to physical injuries, mental health attracts far fewer personnel for planning and resources (Allsopp et al., 2019).

Studies conducted on the psychological impact of previous infectious outbreaks, such as the severe acute respiratory syndrome (SARS) that is similar to the COVID-19 pandemic, have found heavy psychological burdens among healthcare workers and the general public such as anxiety, depression, panic attacks, or psychotic symptoms (Maunder et al., 2003; Xiang et al., 2020). Healthcare workers who were quarantined, worked in SARS units, or had family or friends infected with SARS, had considerably more anxiety, depression, frustration, fear, and post-traumatic stress than those who had no such experience (Xiang et al., 2020; Wu et al., 2009). Similarly, many published studies have assessed the psychological impact of COVID-19 and have also found high levels of psychological distress (Lai et al., 2020; Zhang et al., 2020; Zhu et al., 2020; Chen et al., 2020; Li et al., 2020; Lu et al., 2020; Du et al., 2020; Wang et al., 2020; Zhang et al., 2020; Cao et al., 2020; Tan et al., 2020; Chew et al., 2020; Consolo et al., 2020; Zhang et al., 2020; Guiroy et al., 2020; Wang et al., 2020; Li et al., 2020; Huang and Zhao, 2020; Lei et al., 2020; Ahmed et al., 2020;

Fig. 2. Forest plot of the prevalence of depression.
Figure legend: The square markers indicate the prevalence of depression. The size of the marker correlates to the inverse variance of the effect estimate and indicates the weight of the study. The diamond data marker indicates the pooled prevalence.
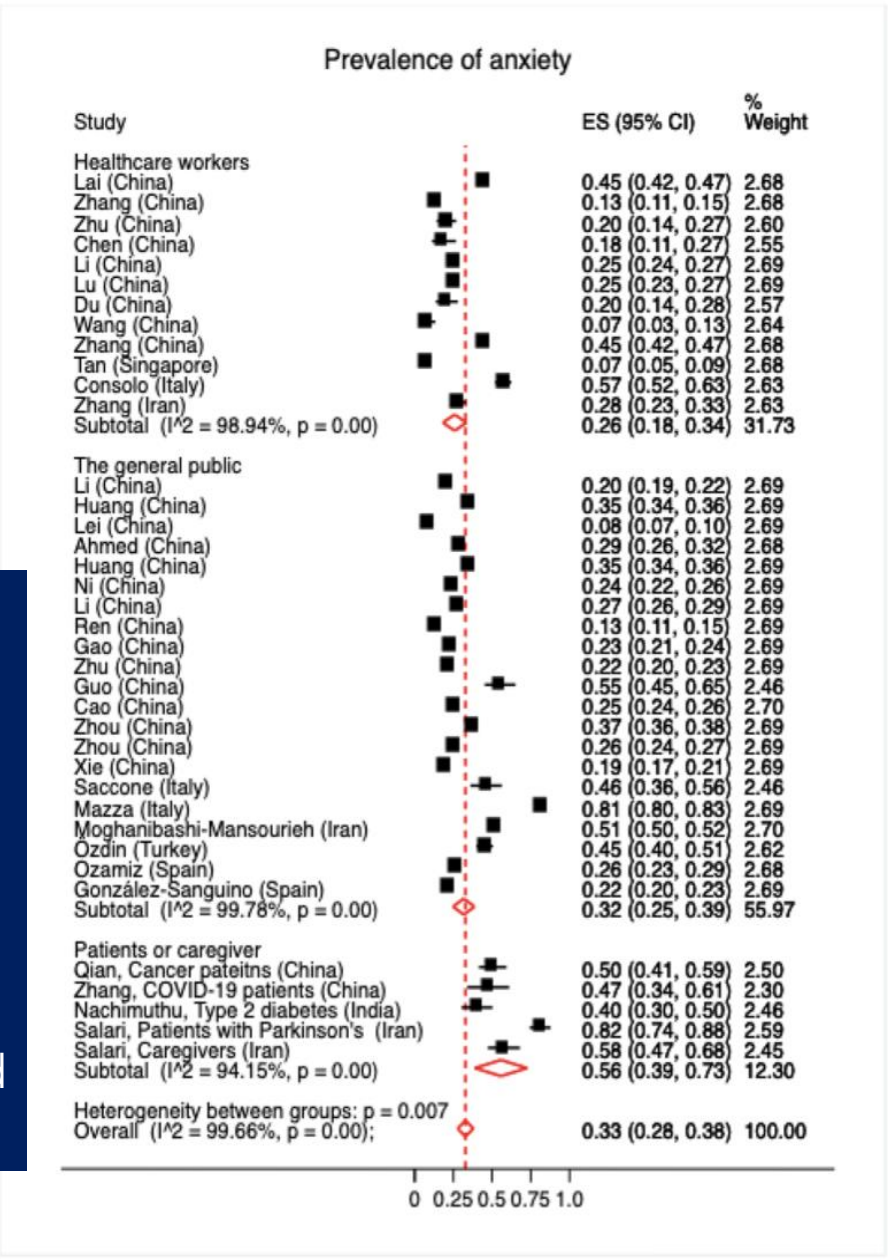
Fig. 1. Forest plot of the prevalence of anxiety.
Figure legend: The square markers indicate the prevalence of anxiety. The size of the marker correlates to the inverse variance of the effect estimate and indicates the weight of the study. The diamond data marker indicates the pooled prevalence.
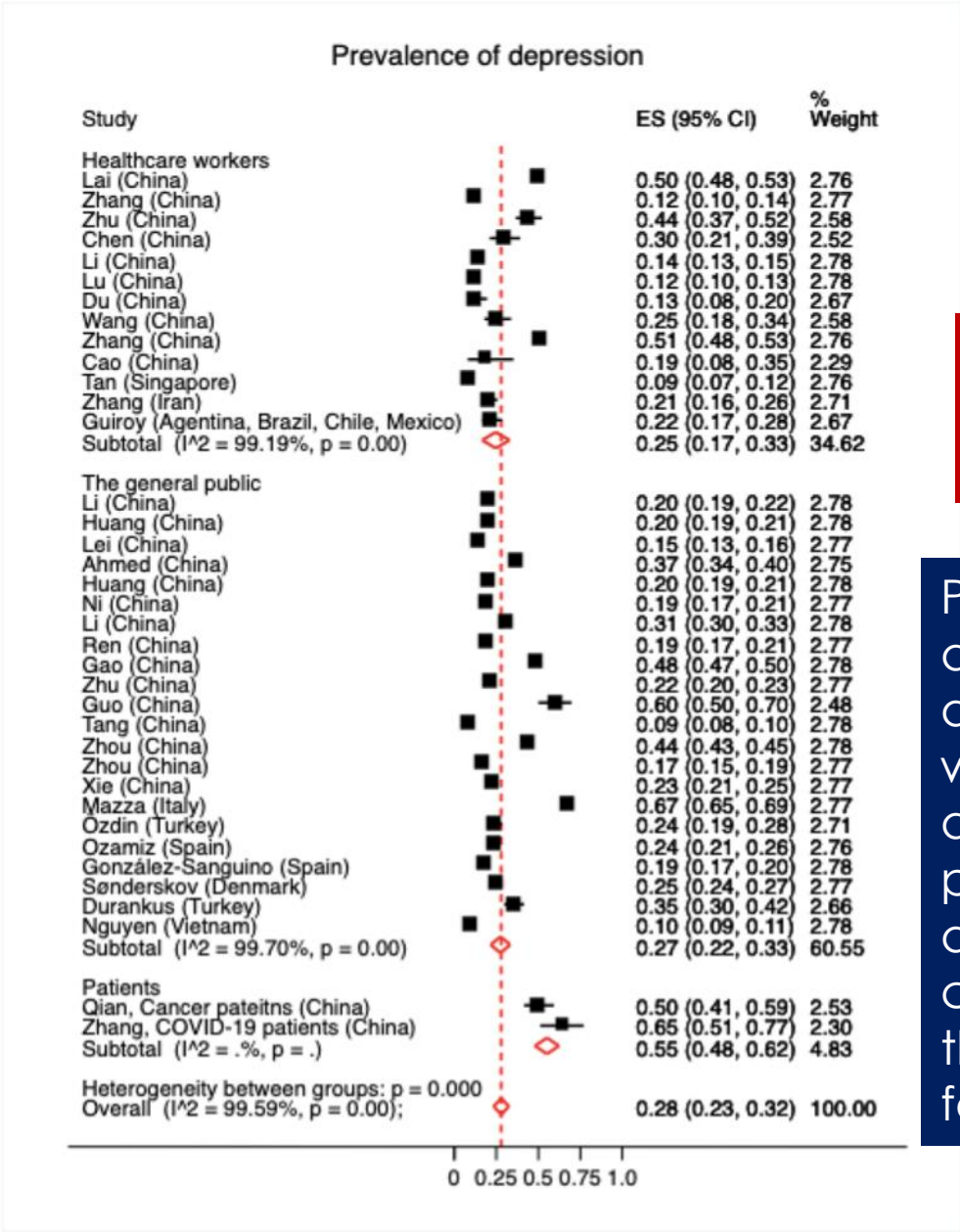
N=163k, 17 countries

Prevalence of depression and anxiety were worse after the pandemic, in different countries, for the public and for patients

The mental health impact of the COVID-19 pandemic on people with and without depressive, anxiety, or obsessive-compulsive disorders: a longitudinal study of three Dutch case-control cohorts

Kuan-Yu Pan, Almar A L Kok, Merijn Eikelenboom, Melany Horsfall, Frederike Jörg, Rob A Luteijn, Didi Rhebergen, Patricia van Oppen, Erik J Giltay*, Brenda W J H Penninx*

Summary

Background The impact of the COVID-19 pandemic on mental health in people with pre-existing mental health disorders is unclear. In three psychiatry case-control cohorts, we compared the perceived mental health impact and coping and changes in depressive symptoms, anxiety, worry, and loneliness before and during the COVID-19 pandemic between people with and without lifetime depressive, anxiety, or obsessive-compulsive disorders.

Methods Between April 1 and May 13, 2020, online questionnaires were distributed among the Netherlands Study of Depression and Anxiety, Netherlands Study of Depression in Older Persons, and Netherlands Obsessive Compulsive Disorder Association cohorts, including people with (n=1181) and without (n=336) depressive, anxiety, or obsessive-compulsive disorders. The questionnaire contained questions on perceived mental health impact, fear of COVID-19, coping, and four validated scales assessing depressive symptoms, anxiety, worry, and loneliness used in previous waves during 2006–16. Number and chronicity of disorders were based on diagnoses in previous waves. Linear regression and mixed models were done.

Findings The number and chronicity of disorders showed a positive graded dose–response relation, with greater perceived impact on mental health, fear, and poorer coping. Although people with depressive, anxiety, or obsessive-compulsive disorders scored higher on all four symptom scales than did individuals without these mental health disorders, both before and during the COVID-19 pandemic, they did not report a greater increase in symptoms during the pandemic. In fact, people without depressive, anxiety, or obsessive-compulsive disorders showed a greater increase in symptoms during the COVID-19 pandemic, whereas individuals with the greatest burden on their mental health tended to show a slight symptom decrease.

Interpretation People with depressive, anxiety, or obsessive-compulsive disorders are experiencing a detrimental impact on their mental health from the COVID-19 pandemic, which requires close monitoring in clinical practice. Yet, the COVID-19 pandemic does not seem to have further increased symptom severity compared with their pre-pandemic levels.

Department of Psychiatry, Amsterdam Public Health, Amsterdam University Medical Center, Vrije Universiteit, Amsterdam, Netherlands (K-Y Pan PhD, A A L Kok PhD, M Eikelenboom LLM, M Horsfall MSc, R A Luteijn MSc, D Rhebergen PhD, Prof P van Oppen PhD, Prof B W J H Penninx PhD); Geestelijke gezondheidszorg (GGZ) InGeest Specialized Mental Health Care, Amsterdam, Netherlands (K-Y Pan, A A L Kok, M Eikelenboom, M Horsfall, R A Luteijn, D Rhebergen, Prof P van Oppen, Prof B W J H Penninx); ... ingen, ...l Center ...sity Center ...rdisciplinary ...pathology ...lation, ...rlands ...riesland, ...ent, ...erlands ...lth Care ...raal, ...rlands (D Rhebergen); and Department of Psychiatry, Leiden University Medical Center, Leiden, Netherlands (E J Giltay MD)

...respondence to:
...Kuan-Yu Pan, Department of ...chiatry, Amsterdam Public ...lth, Amsterdam University ...dical Center, Vrije Universiteit, ...1 HJ Amsterdam, Netherlands
k.y.pan@amsterdamumc.nl

... to many other countries worldwide, nationwide measures such as quarantine, lockdown, and physical distancing were launched in the middle o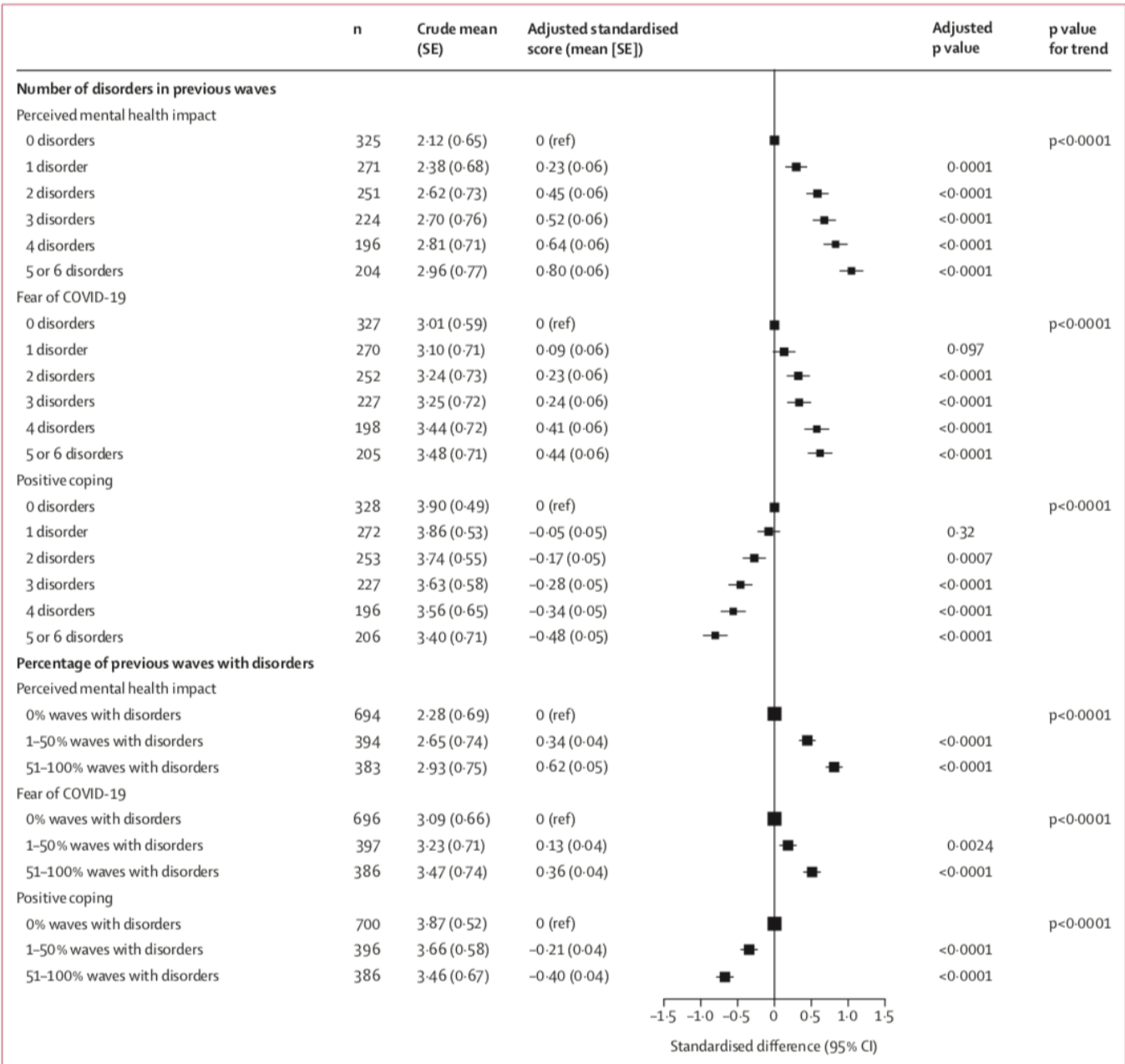f March, 2020, in response ... employment, and public health. With worries about future uncertainty, concern has been growing about the mental health sequelae of the COVID-19 crisis.[1] Most ... probability samples, a rise in psychological distress in April, 2020, compared with in 2018–19, has been reported among adults in the USA[2] and the UK.[3] ... with pre-existing psychiatric conditions. Financial instability and small social networks are common among people with mental illness; as a result of economic ...

	n	Crude mean (SE)	Adjusted standardised score (mean [SE])	Adjusted p value	p value for trend
Number of disorders in previous waves					
Perceived mental health impact					
0 disorders	325	2·12 (0·65)	0 (ref)		p<0·0001
1 disorder	271	2·38 (0·68)	0·23 (0·06)	0·0001	
2 disorders	251	2·62 (0·73)	0·45 (0·06)	<0·0001	
3 disorders	224	2·70 (0·76)	0·52 (0·06)	<0·0001	
4 disorders	196	2·81 (0·71)	0·64 (0·06)	<0·0001	
5 or 6 disorders	204	2·96 (0·77)	0·80 (0·06)	<0·0001	
Fear of COVID-19					
0 disorders	327	3·01 (0·59)	0 (ref)		p<0·0001
1 disorder	270	3·10 (0·71)	0·09 (0·06)	0·097	
2 disorders	252	3·24 (0·73)	0·23 (0·06)	<0·0001	
3 disorders	227	3·25 (0·72)	0·24 (0·06)	<0·0001	
4 disorders	198	3·44 (0·72)	0·41 (0·06)	<0·0001	
5 or 6 disorders	205	3·48 (0·71)	0·44 (0·06)	<0·0001	
Positive coping					
0 disorders	328	3·90 (0·49)	0 (ref)		p<0·0001
1 disorder	272	3·86 (0·53)	−0·05 (0·05)	0·32	
2 disorders	253	3·74 (0·55)	−0·17 (0·05)	0·0007	
3 disorders	227	3·63 (0·58)	−0·28 (0·05)	<0·0001	
4 disorders	196	3·56 (0·65)	−0·34 (0·05)	<0·0001	
5 or 6 disorders	206	3·40 (0·71)	−0·48 (0·05)	<0·0001	
Percentage of previous waves with disorders					
Perceived mental health impact					
0% waves with disorders	694	2·28 (0·69)	0 (ref)		p<0·0001
1–50% waves with disorders	394	2·65 (0·74)	0·34 (0·04)	<0·0001	
51–100% waves with disorders	383	2·93 (0·75)	0·62 (0·05)	<0·0001	
Fear of COVID-19					
0% waves with disorders	696	3·09 (0·66)	0 (ref)		p<0·0001
1–50% waves with disorders	397	3·23 (0·71)	0·13 (0·04)	0·0024	
51–100% waves with disorders	386	3·47 (0·74)	0·36 (0·04)	<0·0001	
Positive coping					
0% waves with disorders	700	3·87 (0·52)	0 (ref)		p<0·0001
1–50% waves with disorders	396	3·66 (0·58)	−0·21 (0·04)	<0·0001	
51–100% waves with disorders	386	3·46 (0·67)	−0·40 (0·04)	<0·0001	

Standardised difference (95% CI) −1·5 −1·0 −0·5 0 0·5 1·0 1·5

***Figure 1:* COVID-19-specific dimensions in relation to severity and chronicity of depressive, anxiety, or obsessive-compulsive disorders**
Severity is the number of lifetime disorders. Chronicity is the percentage of previous waves with current disorders. The crude mean refers to the mean score in each dimension by mental health disorder status. To create the forest plot, each COVID-19-specific dimension score was standardised. The adjusted standardised score was derived from linear regression, adjusted for age, gender, education, living situation, and date of response.

Slide annotations:

Lancet Feb 2021
n=1181 + 336 = 1317.
mental health impact, fear of COVID19, coping
Higher with more disorders

Scales for depression, anxiety, worry and loneliness

SUICIDES

Did they

increase?

https://www.bmj.com/content/bmj/371/bmj.m4352.full.pdf

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7313777/pdf/hcaa202.pdf

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7672361/pdf/main.pdf

https://econtent.hogrefe.com/doi/pdf/10.1027/0227-5910/a000753

Projected increases in suicide in Canada as a consequence of COVID-19

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ABSTRACT

Macroeconomic indicators, notably unemployment, are significant moderators of suicide. We projected the number of excess suicides in Canada as a consequence of the impact of COVID-19 on unemployment. Annual suicide mortality (2000-2018) and unemployment (2000-2019) data were derived from Statistics Canada. Time-trend regression models were used to evaluate and predict the number of excess suicides in 2020 and 2021 for two possible projection scenarios following the COVID-19 pandemic: 1) an increase in unemployment of 1.6% in 2020, 1.2% in 2021, or 2) an increase in unemployment of 10.7% in 2020, 8.9% in 2021. A percentage point increase in unemployment was associated with a 1.0% increase in suicide between 2000 and 2018. In the first scenario, the rise in unemployment rates resulted in a projected total of 418 excess suicides in 2020-2021 (suicide rate per 100,000: 11.6 in 2020). In the second scenario, the projected suicide rates per 100,000 increased to 14.0 in 2020 and 13.6 in 2021, resulting in 2114 excess suicides in 2020-2021. These results indicate that suicide prevention in the context of COVID-19-related unemployment is a critical priority. Furthermore, timely access to mental healthcare, financial provisions and social/labour support programs, as well as optimal treatment for mental disorders is urgently needed.
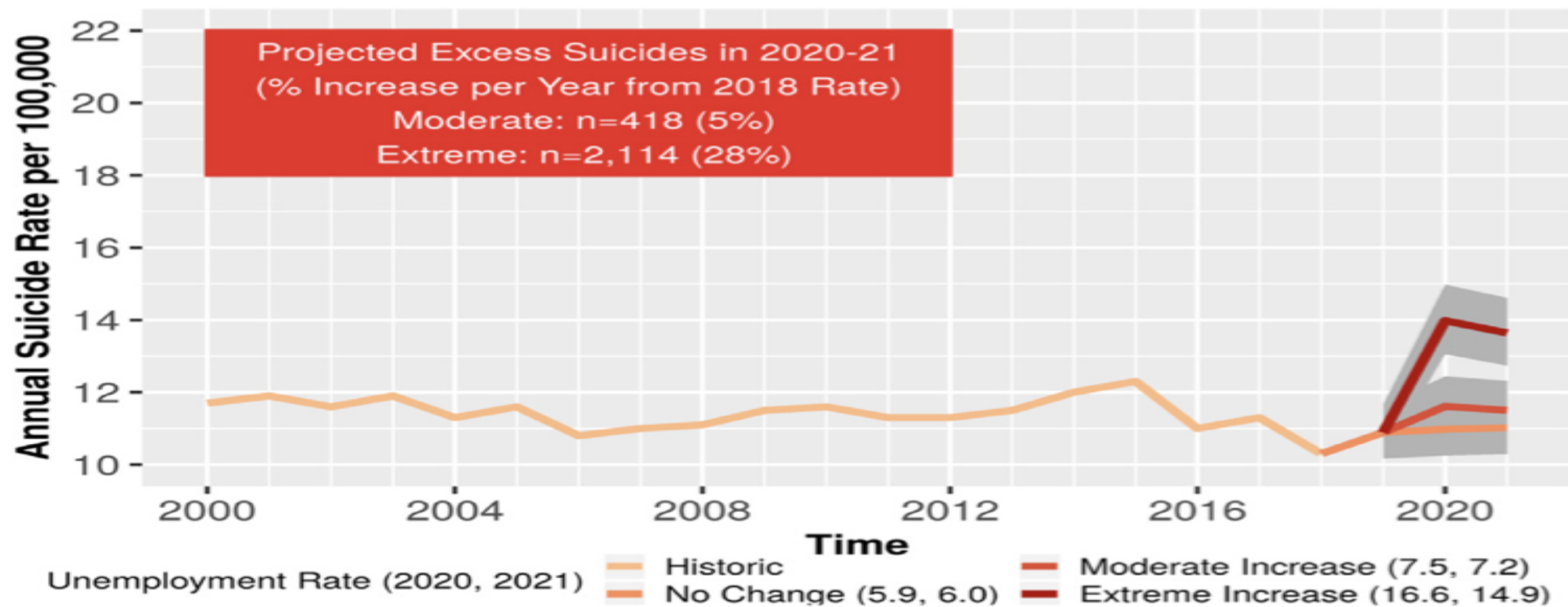
Fig. 1. We conducted a time-trend regression analysis of suicide and unemployment rates between 2000 and 2018 in Canada. Suicide mortality in 2019 was predicted using the 2019 unemployment rate of 5.7%. Suicide mortality in 2020 and 2021 were projected for three scenarios of change in unemployment rates: no change (i.e., 5.9% in 2020 and 6.0% in 2021 as published in the 2019 Federal Budget), moderate increase (i.e., 7.5% in 2020, 7.2% in 2021), and extreme increase (i.e., 16.6% in 2020, 14.9% in 2021).

From the Lancet Nov 2020, suicide rates went down at first

Articles

Real-time suicide mortality data from police reports in Queensland, Australia, during the COVID-19 pandemic: an interrupted time-series analysis

Stuart Leske, Kairi Kõlves, David Crompton, Ella Arensman, Diego de Leo

Summary

Background Deaths by suicide can increase during infectious disease outbreaks. This study analysed suspected suicide rates in 2020 relative to 2015–19 to assess any early effects of the COVID-19 pandemic in Queensland, Australia.

Methods We analysed data from the interim Queensland Suicide Register (iQSR), a state-wide real-time suicide surveillance system, using an interrupted time-series design. The data source for the iQSR is the Form 1 police report of a death to a coroner. Two QSR staff independently classed the probability of a death by suicide as possible, probable, or beyond reasonable doubt. The analysis included the probable or beyond reasonable doubt categories as suspected suicides. The primary outcome was the monthly suspected suicide rate. We applied Poisson and negative binomial regressions to assess whether Queensland's Public Health Emergency Declaration on Jan 29, 2020, affected suspected suicides from Feb 1 to Aug 31, 2020. Secondary outcomes included absolute or relative changes in police-reported motives of recent unemployment, financial problems, domestic violence, and relationship breakdown.

Findings 3793 suspected suicides were recorded with an unadjusted monthly rate of 14·85 deaths per 100 000 people (from Jan 1, 2015, to Jan 31, 2020) before the declaration, and 443 suspected suicides were recorded with an unadjusted monthly rate of 14·07 deaths per 100 000 people (Feb 1, 2020, onwards) after the declaration. An interrupted time-series Poisson regression model unadjusted (rate ratio [RR] 0·94, 95% CI 0·82–1·06) and adjusted for overdispersion, seasonality, and pre-exposure trends (RR 1·02, 95% CI 0·83–1·25) indicated no evidence of a change in suspected suicide rates. We found no absolute or relative increases in the motives for suspected suicides, including recent unemployment, financial problems, relationship breakdown, or domestic violence from February to August, 2020, compared with the pre-exposure period.

Interpretation There does not yet appear to be an overall change in the suspected suicide rate in the 7 months since Queensland declared a public health emergency. Despite this, COVID-19 has contributed to some suspected suicides in Queensland. Ongoing community spread and increasing death rates of COVID-19, and its impact on national economies and mental health, reinforces the need for governments to maintain the monitoring and reporting of suicide mortality in real time.

Funding None.

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https://www.thelancet.com/action/show
Pdf?pii=S2215-0366%2820%2930435-1
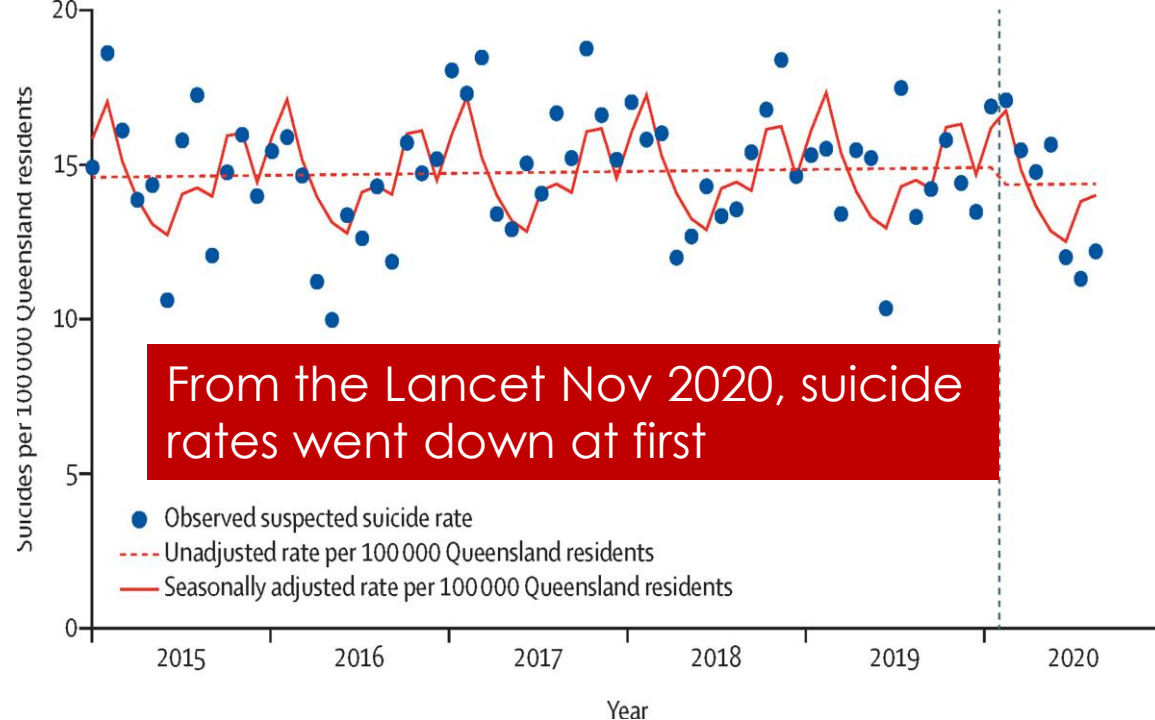
	Number		Risk		Risk difference (95% CI)	Risk ratio (95% CI)	p value*
	Pre-COVID-19†	Post-COVID-19‡	Pre-COVID-19	Post-COVID-19			
Recent unemployment	184/3063	32/434	0·06	0·07	0·01 (−0·01 to 0·04)	1·23 (0·85 to 1·76)	0·29
Financial problems	304/3063	41/434	0·10	0·10	−0·01 (−0·04 to 0·03)	0·95 (0·70 to 1·30)	0·80
Relationship breakdown	719/3063	95/434	0·24	0·22	−0·02 (−0·06 to 0·03)	0·93 (0·77 to 1·13)	0·51
Domestic violence	137/3063	24/434	0·05	0·06	0·01 (−0·01 to 0·03)	1·24 (0·81 to 1·89)	0·33

Pre-COVID-19 and post-COVID-19 refer to before and after the declaration of a public health emergency in Queensland on Jan 29, 2020. January, 2020, is included in the pre-COVID-19 data as most of January occurred before the declaration. *Two-sided Fisher's exact p value. †Cases from 2015 excluded because data on these motives were not collected. ‡Data reported from February, 2020, to August, 2020, excluding nine suspected deaths that occurred Jan 29–31, 2020.

Table 3: Proportions of post-COVID counts for motives or triggers potentially exacerbated by COVID-19 compared with 2016 up to January, 2020

○ Comment on this paper

Suicide Deaths during the Stay-at-Home Advisory in Massachusetts

ⓘ Jeremy S. Faust, Sejal B. Shah, Chengan Du, Shu-Xia Li, Zhenqiu Lin, Harlan M. Krumholz

This article is a preprint and has not been peer-reviewed [what does this mean?]. It reports new medical research that has yet to be evaluated and so should *not* be used to guide clinical practice.

Abstract | Full Text | Info/History | Metrics   🗅 Preview PDF

Abstract

Many believe that shelter-in-place or stay-at-home policies might cause an increase in so-called deaths of despair. While increases in psychiatric stressors during the COVID-19 pandemic are anticipated, whether suicide rates changed during stay-at-home periods has not been described.

This was an observational cohort study that assembled suicide death data for persons aged 10 years or older from the Massachusetts Department of Health Registry of Vital Records and Statistics from January 2015 through May 2020. Using autoregressive integrated moving average (ARIMA) and seasonal ARIMA to analyze suicide deaths in Massachusetts, we compared the observed number of suicide deaths in Massachusetts during the stay-at-home period (March through May, 2020) in Massachusetts to the projected number of expected deaths. To be conservative, we also accounted for the deaths still pending final cause determination

The incident rate for suicide deaths in Massachusetts was 0.67 per 100,000 person-month (95% CI 0.56-0.79) versus 0.81 per 100,000 person-month (95% CI 0.69-0.94) during the 2019 corresponding period (incident rate ratio of 0.83; 95% CI 0.66-1.03). The addition of the 57 deaths pending cause determination occurring from March through May 2020 and the 33 cases still pending determination from the 2019 corresponding period did not change these findings.

The observed number of suicide deaths during the stay-at-home period did not deviate from ARIMA projected expectations using either preliminary data or an alternate scenario in which deaths pending investigation (exceeding the average remaining number of deaths still pending investigation which occurred during the corresponding 2015-2019 period) were ascribed to suicide. Decedent age and sex demographics were unchanged during the pandemic period compared to 2015-2019.

The stable rates of suicide deaths during the stay-at-home advisory in Massachusetts parallel findings following ecological disasters. As the pandemic persists, uncertainty about its scope and economic impact may increase. However, our data are reassuring that an increase in suicide deaths in Massachusetts during the stay-at-home advisory period did not occur.

Stay at home advisory did not lead to a rise in suicides in Massachusetts
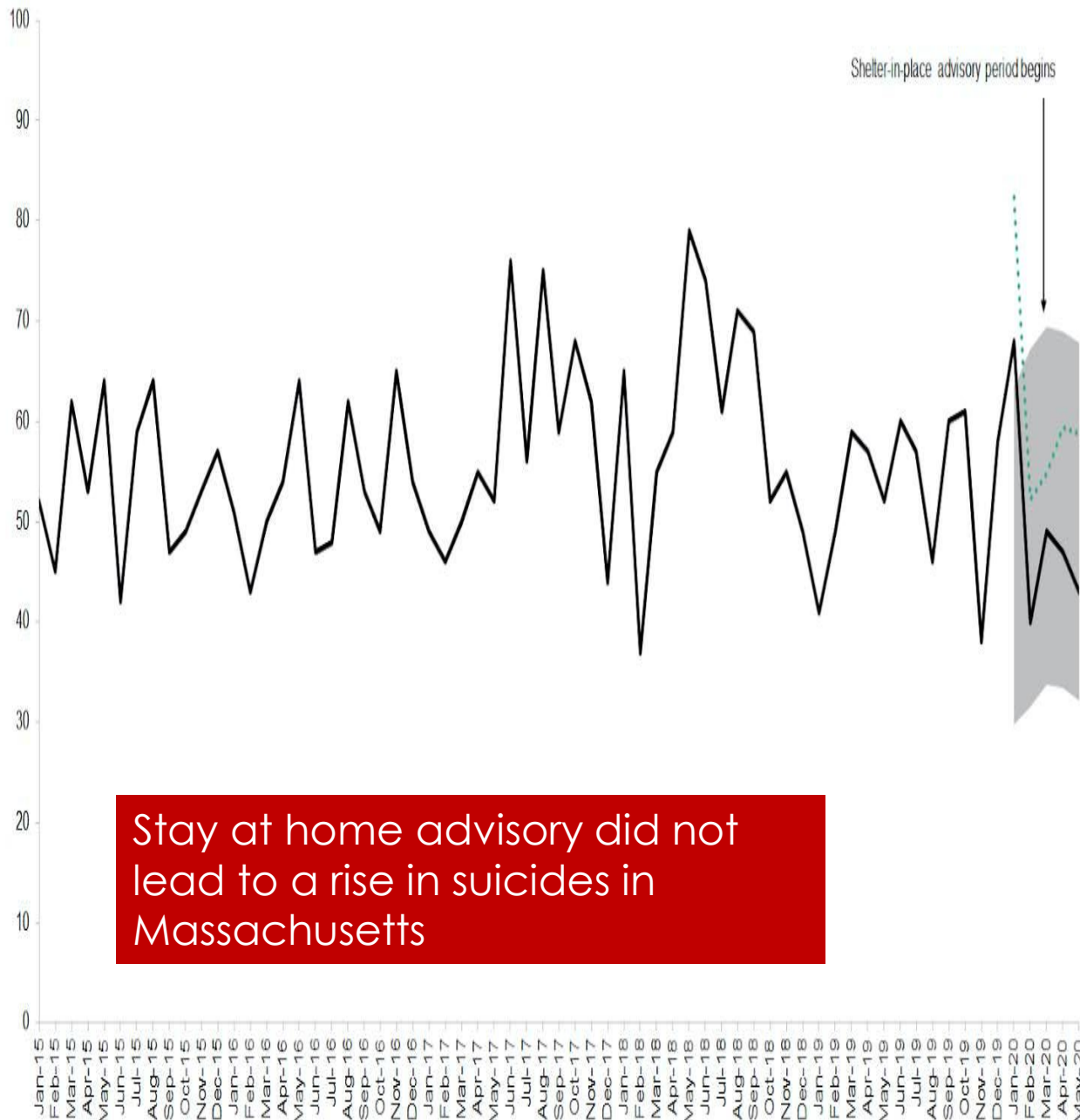
Increase in suicide following an initial decline during the COVID-19 pandemic in Japan

Takanao Tanaka [1] and Shohei Okamoto [2] ✉

There is increasing concern that the coronavirus disease 2019 (COVID-19) pandemic could harm psychological health and exacerbate suicide risk. Here, based on month-level records of suicides covering the entire Japanese population in 1,848 administrative units, we assessed whether suicide mortality changed during the pandemic. Using difference-in-difference estimation, we found that monthly suicide rates declined by 14% during the first 5 months of the pandemic (February to June 2020). This could be due to a number of complex reasons, including the government's generous subsidies, reduced working hours and school closure. By contrast, monthly suicide rates increased by 16% during the second wave (July to October 2020), with a larger increase among females (37%) and children and adolescents (49%). Although adverse impacts of the COVID-19 pandemic may remain in the long term, its modifiers (such as government subsidies) may not be sustained. Thus, effective suicide prevention—particularly among vulnerable populations—should be an important public health consideration.

https://www.nature.com/articles/s41562-020-01042-z
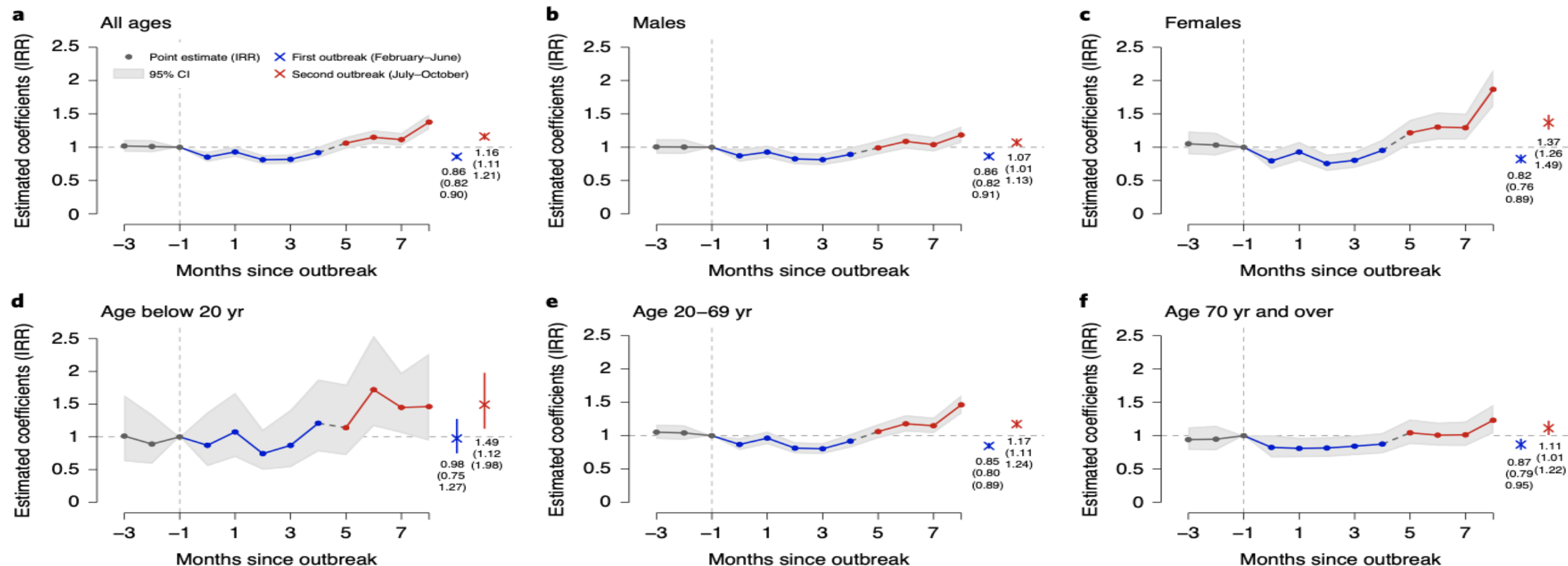
Fig. 2 | The effects of COVID-19 pandemic on suicide across gender and age groups using DID and event-study approaches. a, Results of the DID and the event study using all pooled samples. **b,c**, Results of comparing suicide rates among males (**b**) and females (**c**). **d–f**, Results for different age groups: below 20 years (**d**), 20–69 years (**e**) and ≥70 years (**f**). Lines represent point estimates before the pandemic (grey), during the first outbreak of COVID-19 (blue) and during the second outbreak (red), with shaded areas showing [...] the first and second outbreaks, respectively. Full results are presented in [...] city-by-month fixed effects and are weighted by the population. Standar[...] 1,896 (**d**), 53,164 (**e**) and 34,703 (**f**). The separated observations are ex[...] aggregated at prefectural level.

Larger rise for females
Larger rise for those under 20
The pandemic appears to have a cumulative effect
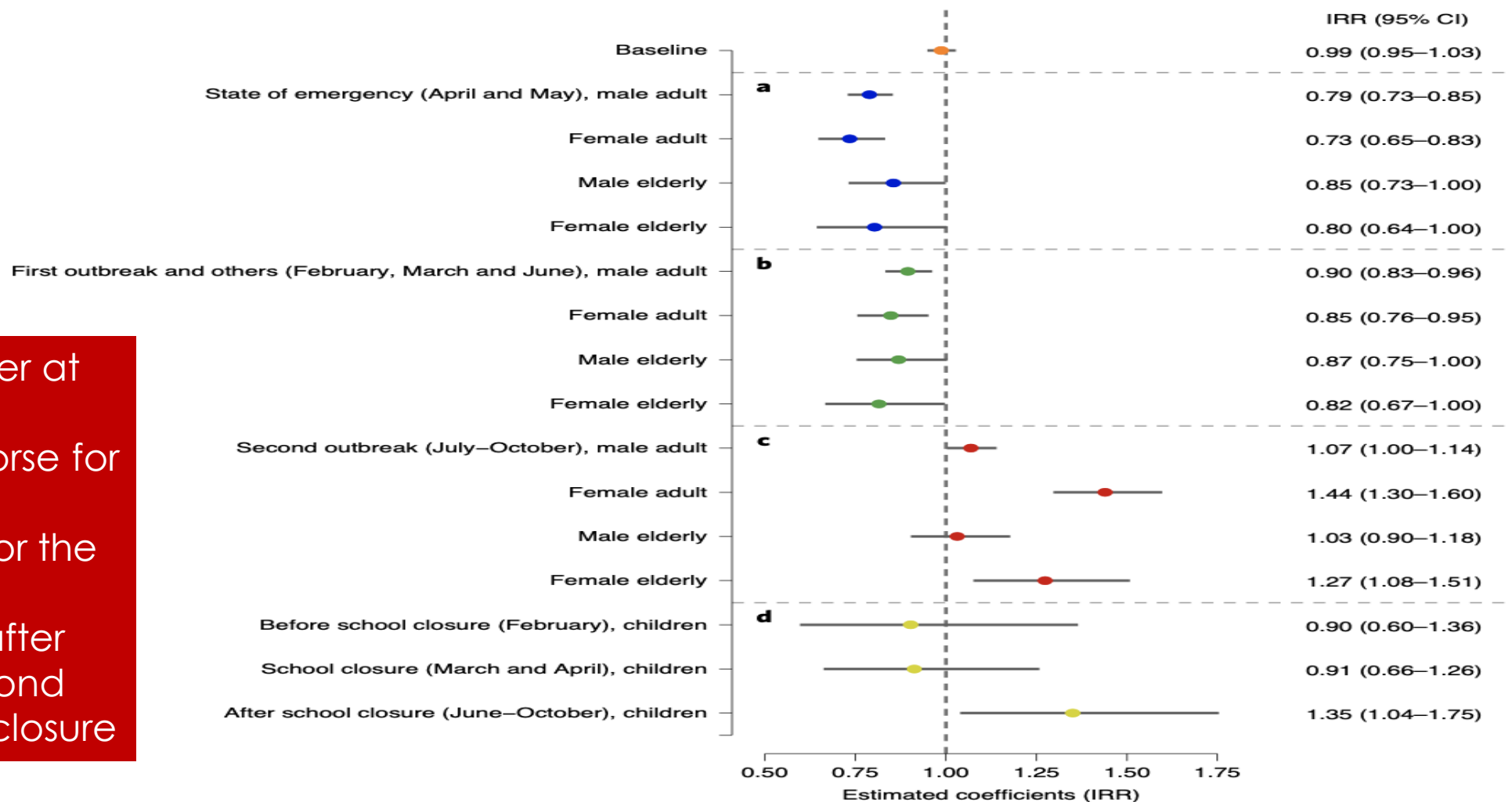
1. Risk lower at first
2. Then worse for women
3. Worse for the elderly
4. Worse after the second school closure

Fig. 3 | Heterogeneous effects of the COVID-19 pandemic with age groups and gender, before and after the state of emergency and school closure. **a–d**, Here we assign April and May as the period of the SOE, February–June as the first outbreak period and July–October as the second outbreak period. The baseline is the result for the pooled data. The circle and line denote the DID result and its 95% CI. **a**, Heterogeneous effects among age groups and gender during the SOE. **b,c**, Heterogeneity across age and gender groups during the first outbreak (excluding the SOE) (**b**) and second outbreak (**c**). **d**, Effects on students during school closure (March and April) and other periods. Full results are presented in Supplementary Table 5. All regressions include city-by-year fixed effects and city-by-month fixed effects and are weighted by the population; standard errors are clustered at the city level. $N = 61,209$ (all), 47,317 (male adults), 26,319 (female adults), 24,478 (male elderly), 16,531 (female elderly) and 1,896 (children and adolescents). The separated observations are excluded (Methods), and suicide data of children and adolescents are aggregated at prefectural level.

a Employed

- First outbreak (February–June)
- Second outbreak (July–October)

0.80 (0.70–0.91)
1.24 (1.11–1.40)

First   Second

b Retired

0.80 (0.69–0.92)
1.08 (0.94–1.24)

First   Second

c Unemployed

0.83 (0.73–0.95)
1.11 (0.95–1.29)

First   Second

d Self-employed

0.81 (0.61–1.09)
0.95 (0.68–1.33)

First   Second

e Housewives

1.17 (0.81–1.70)
2.32 (1.65–3.26)

First   Second

f Students

- Before closure (February)
- School closure (March and April)
- After closure (May–October)

0.98 (0.61–1.57)
0.51 (0.34–0.77)
1.05 (0.77–1.43)

Before   Close   After

Fig. 4 | Heterogeneous effects of the COVID-19 pandemic according to job status. a–f, Effects of the pandemic on suicide rate across individuals with different employment statuses during the first and second COVID-19 ou... denote the DID estimates during the first and second outbreaks, respec... (**b**), unemployed (**c**), self-employed (**d**), housewives (**e**), and students ... city-by-year fixed effects and city-by-month fixed effects and are weigh... 9,146 (**b**), 9,246 (**c**), 4,124 (**d**), 3,854 (**e**) and 3,220 (**f**). The separated ... Supplementary Note 1.

Heterogeneous effect of pandemic, students not affected as much with some improvement at first school closure

INVISIBLE ENEMY   3

THE STORM

THE PANDEMIC CHALLENGE: PSYCHOLOGICAL

- **L**ONELINESS,
- **I**SOLATION,
- **V**ULNERABLE LOVED ONES
- **E**DUCATION: CHILDCARE/HOMESCHOOLING
- **S**UICIDES

- **B**OREDOM-LEISURE, TRAVEL, SCHEDULES CHANGED
- **U**NCERTAINTY AND FEAR
- **M**ARGINALIZATION
  - SPECIAL POPULATIONS, THE ELDERLY, SHUT-INS, HOMELESS, PRISON
- **P**SYCHOLOGICAL DISORDERS INCLUDING SUBSTANCE ABUSE
- **E**CONOMIC IMPACT (VARIABLE) – LOST JOBS, FOOD SCARCITY FOR SOME
- **D**OMESTIC ABUSE AND INTIMATE PARTNER VIOLENCE

- THOSE ARE THE FACTS.

- STRESS DOESN'T COME FROM THE FACTS BUT THE MEANING WE GIVE TO THE FACTS

cALM

STEP 2: AWARENESS

MENTAL HEALTH VITALS

- SLEEP, TENSION, IRRITABILITY, APPETITE, HOPE, SENSE OF HUMOUR?

TAKE YOUR OWN TEMPERATURE: ARE YOU?

https://www.cma.ca/physician-wellness-hub/resource-centre

CALM, RELAXED, CONTENT

WORRIED IRRITABLE SAD

FEAR, SHAME, HUMULIATION, HOPELESSNESS

TERROR, NUMBNESS, DESPAIR, ANGER
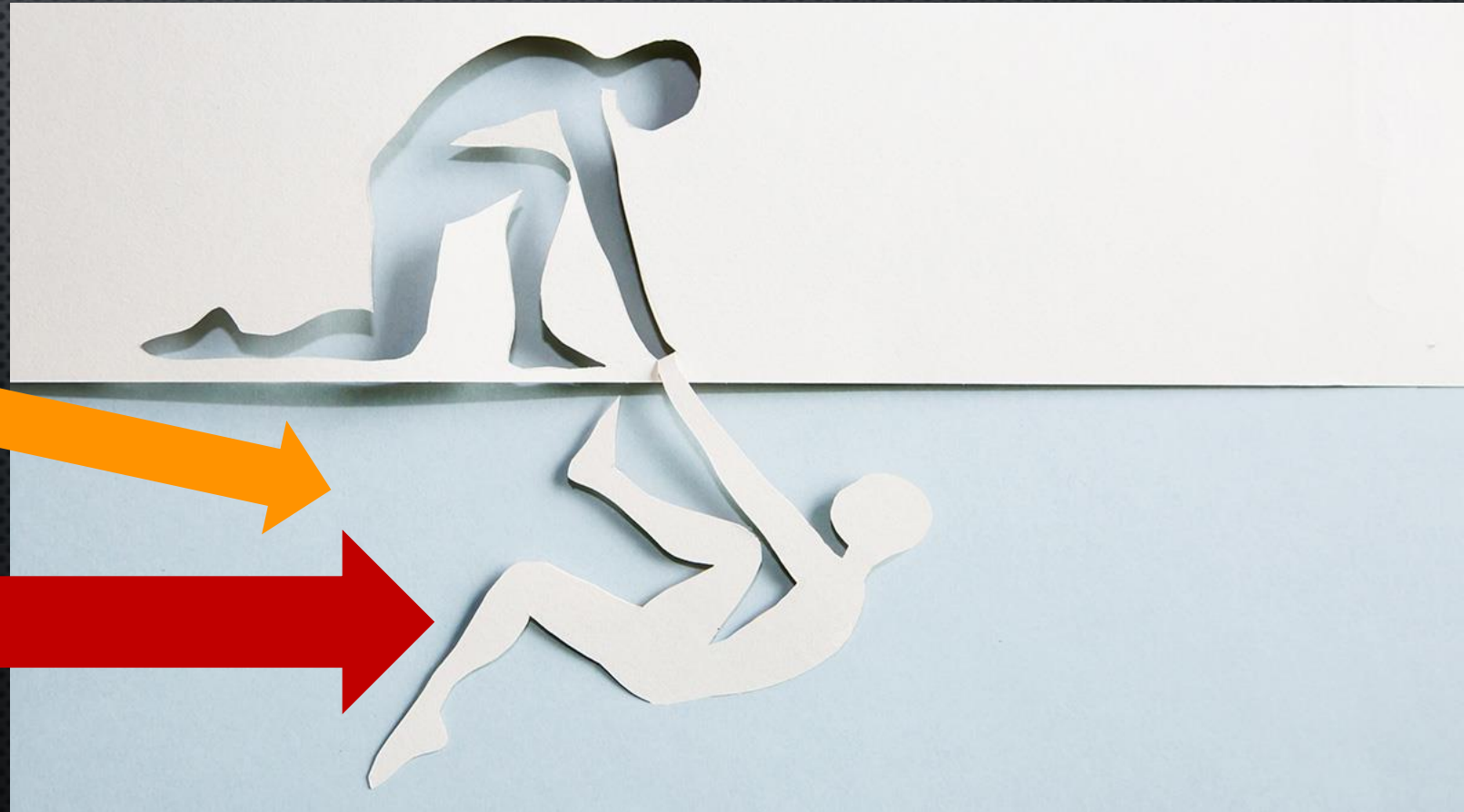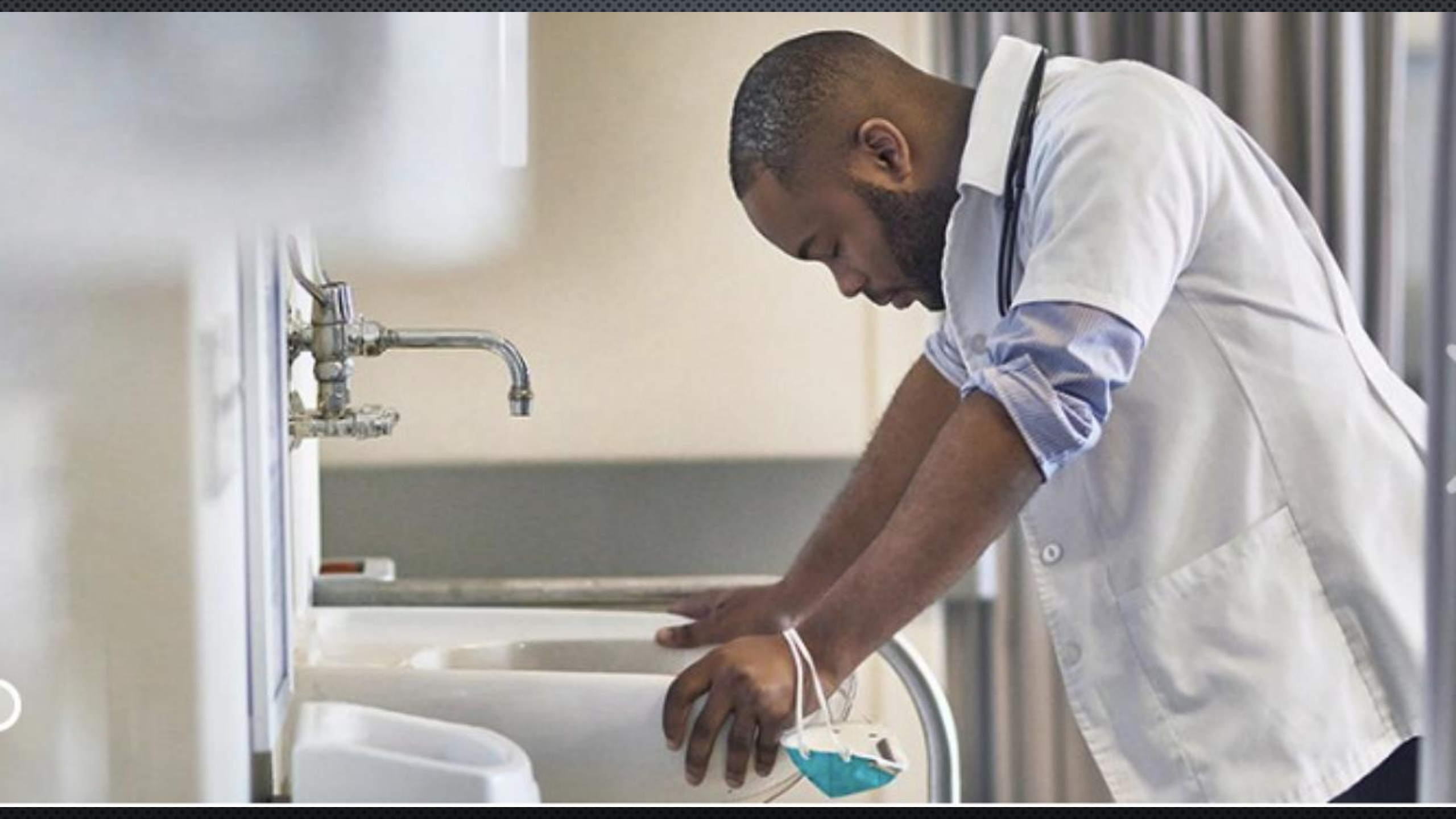
STRESS FOR HEALTH CARE PROVIDERS:
DR KARINE DION

"She felt guilty, useless, ashamed of herself," explained her sister, "she couldn't bear the guilt of being home while her overwhelmed colleagues continued to work.
"It's a lot of pressure,"

"Awareness is the greatest agent for **change**."

-Eckhart Tolle

ACCEPT WHAT IS.

LET GO OF WHAT WAS.

TAKE CONTROL OF YOUR RESPONSE AND WHAT WILL BE

AWARENESS

- BOSCO: KIDNAPPED.
  - HOW HE FOUND FREEDOM IN A 6X9 CELL
  - HE REALIZED WHAT HE COULD CHANGE AND WHAT COULDN'T.
  - HE TOOK CONTROL OF HIS LIFE

DISCOVER YOUR FREEDOM

- *"Everything can be taken from a man but one thing: the last of the human freedoms—to choose one's attitude in any given set of circumstances, to choose one's own way."*

- — Viktor E. Frankl, Man's Search for Meaning

MAN'S SEARCH FOR MEANING

- *"A WHY CAN BEAR ALMOST ANY HOW"*

  - VICTOR FRANKL QUOTING NIETCHZE
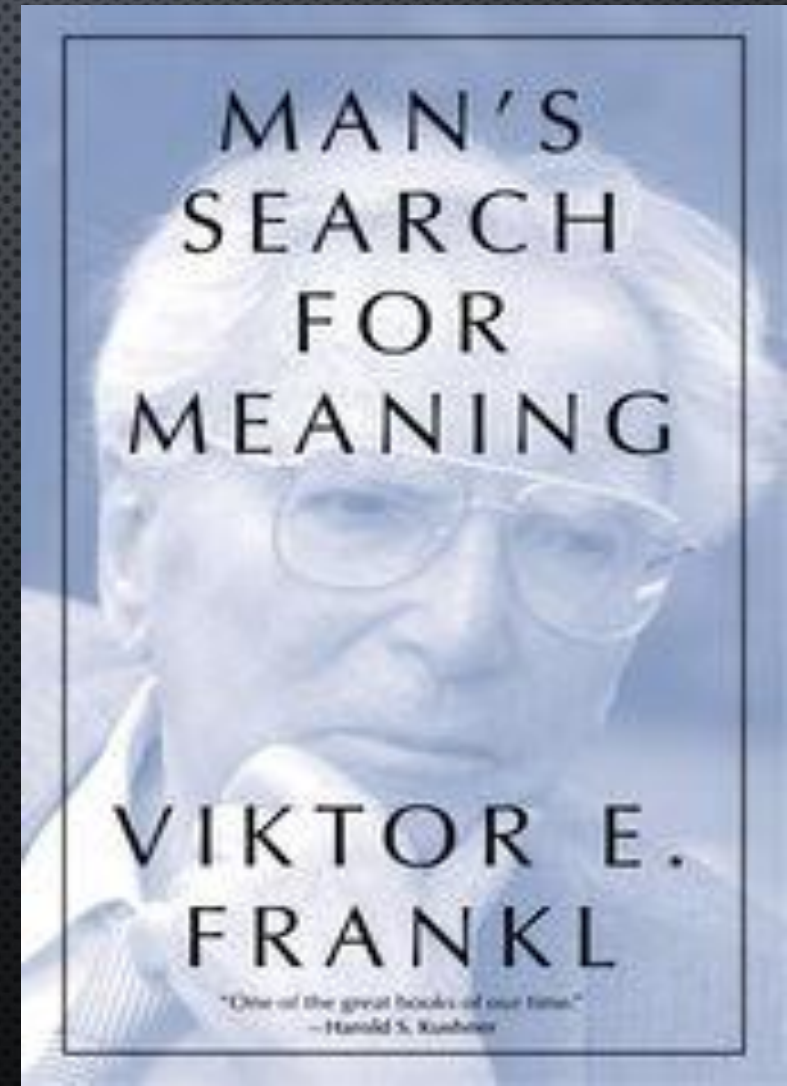
Association Between Life Purpose and Mortality Among US Adults Older Than 50 Years

Aliya Alimujiang, MPH; Ashley Wiensch, MPH; Jonathan Boss, MS; Nancy L. Fleischer, PhD, MPH; Alison M. Mondul, PhD, MPH; Karen McLean, MD, PhD; Bhramar Mukherjee, PhD; Celeste Leigh Pearce, PhD, MPH

Abstract

IMPORTANCE A growing body of literature suggests that having a strong sense of purpose in life leads to improvements in both physical and mental health and enhances overall quality of life. There are interventions available to influence life purpose; thus, understanding the association of life purpose with mortality is critical.

OBJECTIVE To evaluate whether an association exists between life purpose and all-cause or cause-specific mortality among older adults in the United States.

DESIGN, SETTING, AND PARTICIPANTS The Health and Retirement Study (HRS) is a national cohort study of US adults older than 50 years. Adults between the ages of 51 to 61 were enrolled in the HRS, and their spouses or partners were enrolled regardless of age. Initially, individuals born between 1931 and 1941 were enrolled starting in 1992, but subsequent cohort enrichment was carried out. The present prospective cohort study sample was drawn from 8419 HRS participants who were older than 50 years and who had filled out a psychological questionnaire during the HRS 2006 interview period. Of these, 1142 nonresponders with incomplete life purpose data, 163 respondents with missing sample weights, 81 participants lost to follow-up, 1 participant with an incorrect survival time, and 47 participants with missing information on covariates were excluded. The final sample for analysis was 6985 individuals. Data analyses were conducted between June 5, 2018, and April 22, 2019.

Key Points

Question Does an association exist between life purpose and all-cause or cause-specific mortality among people older than 50 years participating in the US Health and Retirement Study?

Findings This cohort study of 6985 adults showed that life purpose was significantly associated with all-cause mortality.

Meaning Life purpose is a modifiable risk factor and as such the role of interventions to improve life purpose should be evaluated for health outcomes, including mortality.

+ **Supplemental content**

Author affiliations and article information are listed at the end of this article.

MEANING CAN BE A MATTER OF LIFE AND DEATH
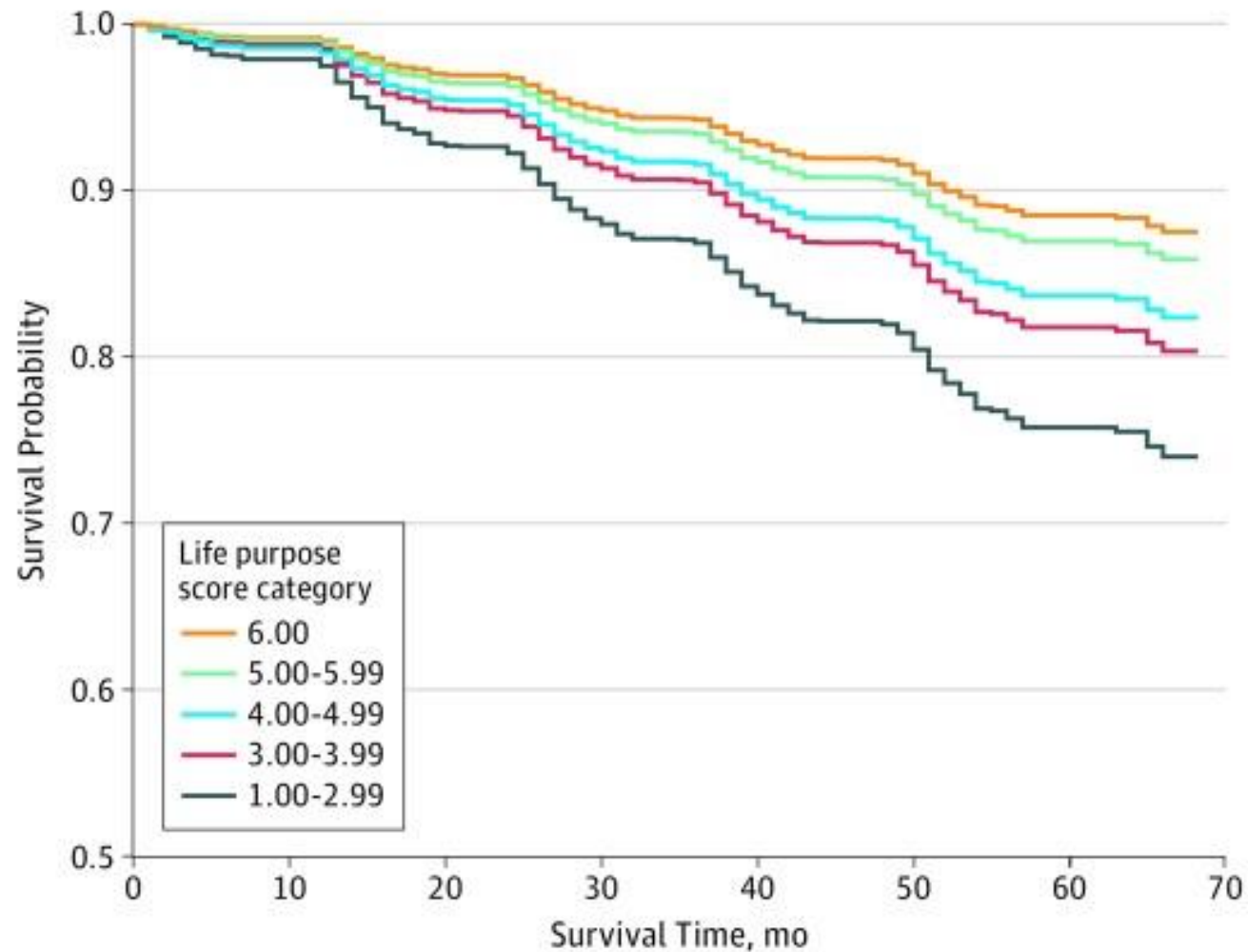
Purpose in Life and Hospitalization for Ambulatory Care-Sensitive Conditions in Old Age

Robert S. Wilson, PhD, **Ana W. Capuano, PhD**, **Bryan D. James, PhD**, **Priscilla Amofa, BA**, **Zoe Arvanitakis, MD**, **Raj Shah, MD**, **David A. Bennett, MD**, and **Patricia A. Boyle, PhD**

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Abstract

Objective—To test the hypothesis that higher level of purpose in life is associated with lower subsequent odds of hospitalization.

Design—Longitudinal cohort study.

Setting—Participants' residences in the Chicago metropolitan area.

Participants—A total of 805 older persons who completed uniform annual clinical evaluations.

Measurements—Participants annually completed a standard self-report measure of purpose in life, a component of well-being. Hospitalization data were obtained from Part A Medicare claims records. Based on previous research, ICD-9 codes were used to identify ambulatory care-sensitive conditions (ACSCs) for which hospitalization is potentially preventable. The relation of purpose (baseline and follow-up) to hospitalization was assessed in proportional odds mixed models.

Results—During a mean of 4.5 years of observation, there was a total of 2,043 hospitalizations (442 with a primary ACSC diagnosis, 1,322 with a secondary ACSC diagnosis, 279 with no ACSCs). In initial analyses, higher purpose at baseline and follow-up were each associated with lower odds of more hospitalizations involving ACSCs but not hospitalizations for non-ACSCs. Results were comparable when those with low cognitive function at baseline were excluded. Adjustment for chronic medical conditions and socioeconomic status reduced but did not eliminate the association of purpose with hospitalizations involving ACSCs.

Conclusions—In old age, higher level of purpose in life is associated with lower odds of subsequent hospitalizations for ambulatory care-sensitive conditions.
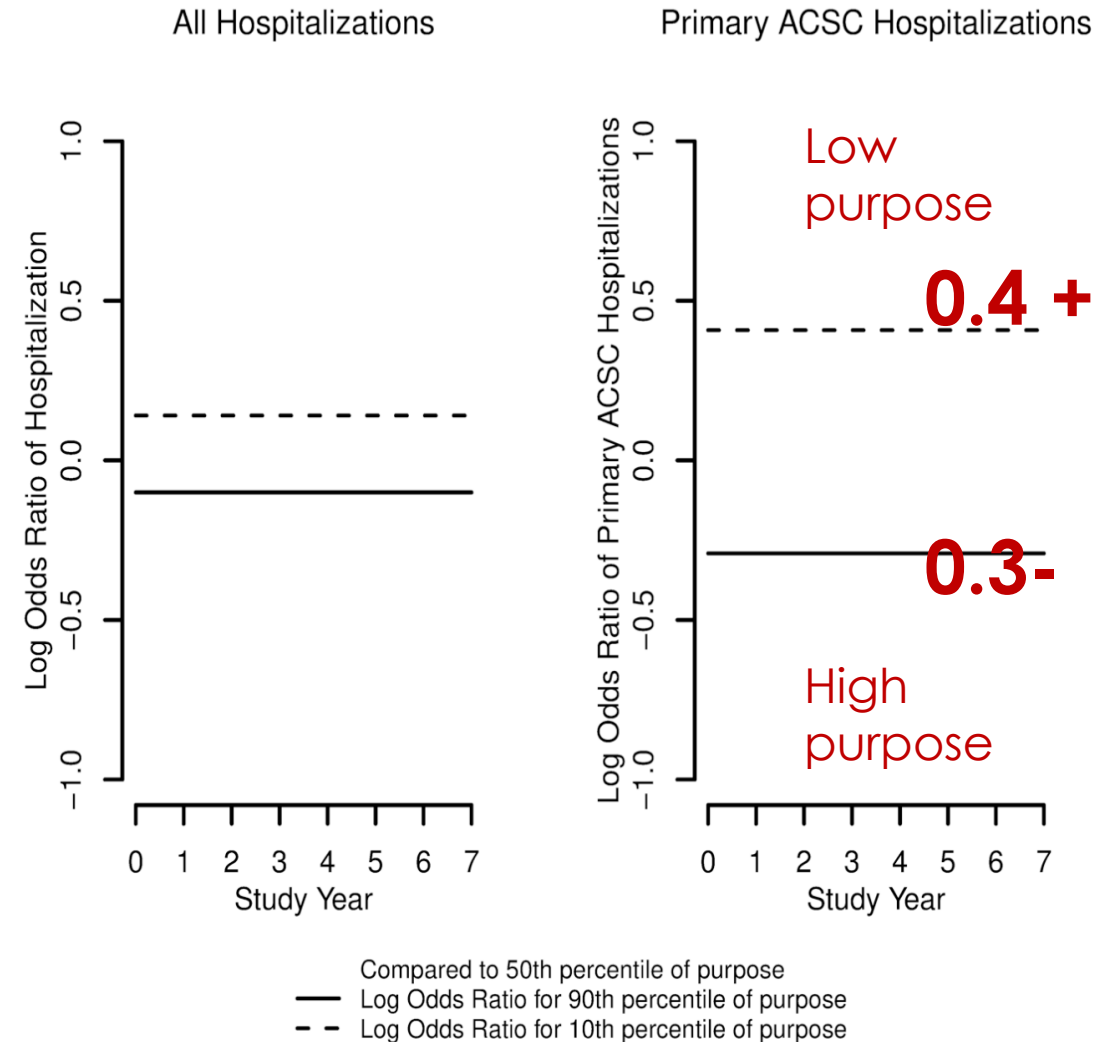
Figure 3.
Log odds ratio of hospitalizations per year for those with high (90th percentile, solid line) or low (10th percentile, dashed line) purpose in life compared to those with median purpose (50th percentile), from proportional odds models adjusted for age, sex, and education, vascular risk factors, vascular conditions, depressive symptoms, and early life socioeconomic status.

Purpose in Life Is Associated With Mortality Among Community-Dwelling Older Persons

Patricia A. Boyle, PhD, **Lisa L. Barnes, PhD**, **Aron S. Buchman, MD**, and **David A. Bennett, MD**
Rush Alzheimer's Disease Center (P.A.B., L.L.B., A.S.B., D.A.B.), and the Departments of Behavioral Sciences (P.A.B., L.L.B.) and Neurological Sciences (L.L.B., A.S.B., D.A.B.), Rush University Medical Center, Chicago, Illinois.

Abstract

Objective—To assess the association between purpose in life as an important determinant of health outcomes and mortality in community-dwelling elderly persons.

Methods—We used data from 1238 older persons without dementia from two longitudinal cohort studies (Rush Memory and Aging Project and Minority Aging Research Study) with baseline evaluations of purpose in life and up to 5 years of follow-up to test the hypothesis that greater purpose in life is associated with a reduced risk of mortality among community-dwelling older persons.

Results—The mean ± standard deviation score on the purpose in life measure at baseline was 3.7 ± 0.5 (range = 2–5), with higher scores indicating greater purpose in life. During the 5-year follow-up (mean = 2.7 years), 151 of 1238 persons (12.2%) died. In a proportional hazards model adjusted for age, sex, education, and race, a higher level of purpose in life was associated with a substantially reduced risk of mortality (hazard ratio = 0.60, 95% Confidence Interval = 0.42, 0.87). Thus, the hazard rate for a person with a high score on the purpose in life measure (score = 4.2, 90th percentile) was about 57% of the hazard rate of a person with a low score (score = 3.1, 10th percentile). The association of purpose in life with mortality did not differ among men and women or Whites and Blacks. Further, the finding persisted after the addition of terms for several potential confounders, including depressive symptoms, disability, neuroticism, the number of chronic medical conditions, and income.

Conclusion—Greater purpose in life is associated with a reduced risk of all-cause mortality among community-dwelling older persons.
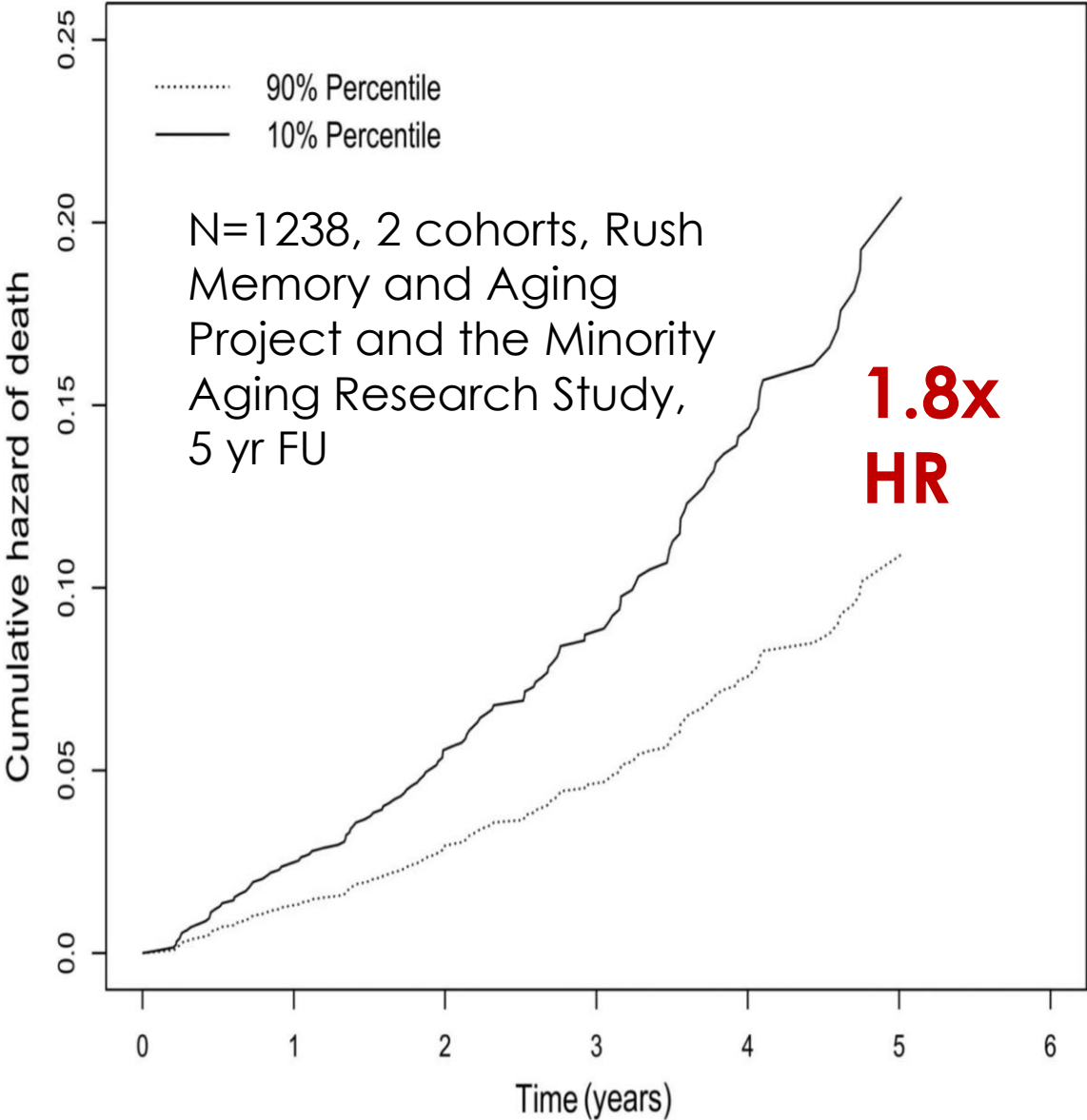
Figure 1.
Cumulative hazard of mortality for participants with high versus low purpose in life.

Check for updates

Meaning in Life and Self-Control Buffer Stress in Times of COVID-19: Moderating and Mediating Effects With Regard to Mental Distress

Tatjana Schnell [1,2*] and Henning Krampe [3]

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Background: As evidenced by several studies, mental distress increased substantially during the COVID-19 pandemic. In this period, citizens were asked to exercise a high degree of self-control with regard to personal and social health behavior. At the same time, we witnessed an increase of prosocial acts and shared creative expressions, which are known to serve as sources of meaning. Meaning in life and self-control are acknowledged psychological resources. Especially in times of crisis, meaning in life has been shown to be a crucial factor for resilience and coping. However, threatening and stressful situations can also jeopardize existential security and trigger crises of meaning. The present study aimed to document levels of acute COVID-19 stress and general mental distress in Germany and Austria during the lockdown and in the weeks thereafter. In order to identify potential risk factors related to demographics and living conditions, their associations with COVID-19 stress were analyzed exploratively. The primary objective of the study, however, was to investigate the buffering effect of two psychological resources—meaningfulness and self-control—with regard to the relation between acute COVID-19 stress and general mental distress. Finally, a potential aggravation of mental distress due to the occurrence of crises of meaning was examined.

Method: A cross-sectional survey was conducted online during lockdown (survey group 1) and the subsequent weeks characterized by eased restrictions (survey group 2). A total of N = 1,538 German-speaking participants completed a questionnaire battery including a novel measure of acute COVID-19 stress, meaningfulness and crisis of meaning (SoMe), self-control (SCS-KD), and a screening of general mental distress, measured by core symptoms of depression and anxiety (PHQ-4). In a first step, associations between living conditions, demographics, and COVID-19 stress were explored. Second, a moderation and a mediation model were tested. Meaningfulness, a measure of presence of meaning in life, as well as self-control were proposed to serve as buffers in a time of crisis, thus moderating the relation between acute COVID-19 stress and general mental distress (double moderation). Crisis of meaning, operationalizing an experienced lack of meaning in
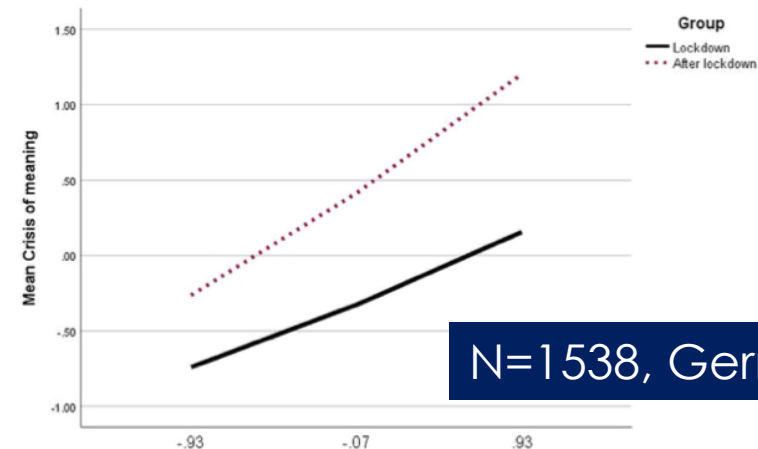
FIGURE 4 | Survey group moderating the

N=1538, German

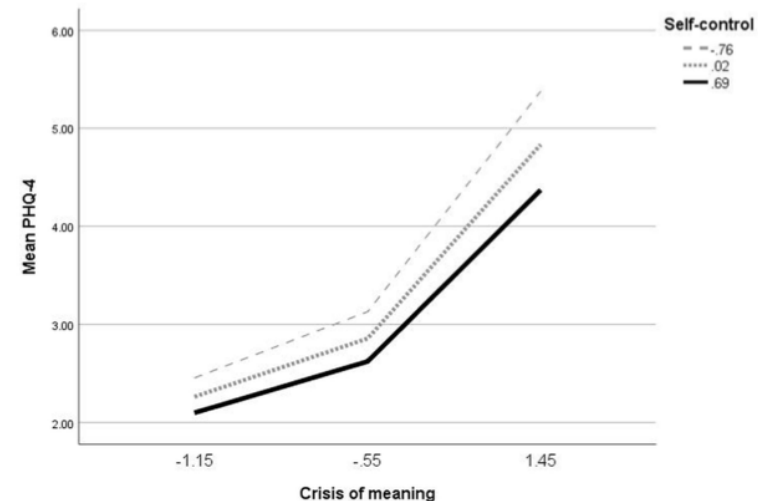The higher the crisis of meaning the higher the COVID 19 and PHQ4

FIGURE 5 | Self-control moderating the relationship between crisis of meaning and general mental distress.

AWARENESS. TRANSFORM YOUR LIFE BY BEING AWARE OF YOUR CHOICES AND WHY

WHY…A TRANSFORMATION

What is the meaning of all of the sacrifices we are making?

Survival of the **non-fittest**.

- WHO ARE WE FIGHTING FOR?

  - ESPECIALLY FOR THE VULNERABLE, THE ELDERLY, THE SICK, THE DISABLED

People don't value what they don't fight for.

TONY ROBBINS

Life's beauty is inseparable from its fragility

SUSAN DAVIS, Harvard Trained Psychologist, TED talk

PART OF THE
BEAUTY AND
PRECIOUSNESS
OF LIFE IS ITS
FRAGILITY.

Discomfort is the price
of admission
to a meaningful life.

SUSAN DAVIS, Harvard Trained
Psychologist, TED talk

CA**L**M
STEP 3: *LEARN TO LEAN INTO THE POSITIVE.*

- THINK ABOUT THE THINGS FOR WHICH YOU ARE THANKFUL AND CULTIVATE GRATITUDE ON A DAILY BASIS. LOOK FOR THE HIDDEN ADVANTAGE OF YOUR SITUATION AND LEARN TO FOCUS ON THE BENEFITS.

- "You may encounter many defeats, but you must not be defeated. In fact, it may be necessary to encounter the defeats, so you can **KNOW WHO YOU ARE**, what **YOU CAN RISE FROM**, how you can still come out of it."—Maya Angelou

REFUSE TO BE DEFINED BY TRAGEDY OR CIRCUMSTANCE.

SPECIFIC STRATEGIES FOR
RIGHT NOW

- 1-5 WAYS THINGS COULD BE WORSE NOW

- 2- LOOK FOR HIDDEN ADVANTAGE OF YOUR SITUATION

- 3- PERSPECTIVE. COMPARE PROGRESS TO YOURSELF

Lindsey Roy TED Talk
https://www.youtube.com/watch?v=IUw8z7IaPuI

Play (k)

0:31 / 17:48

What trauma taught me about happiness | Lindsey Roy | TEDxKC

The three secrets of resilient people | Lucy Hone | TEDxChristchurch

SILVER LININGS

ON THE PLUS SIDE

- Gas is cheap
- Spending less
- more flexibility in working from home
- Less travel time
- Children are spending more time with their families
- Parents are home taking care of their children and getting to know them
- Fast food often replaced by home cooked meals
- Hectic schedules stopped
- World is quieter

ON THE PLUS SIDE

- People are conscious about hygiene and health

- Money seems less important now

- Designer clothing is pointless

- Health care providers, Emergency Response teams, Supply Chain workers, and Cleaners are being praised rather than celebrities

- Technology is providing opportunities for connection and medical care more efficiently.

- We have more time to smell the roses and look up at the stars.

TIME
GUARDIAN OF THE YEAR
Frontline Health Workers
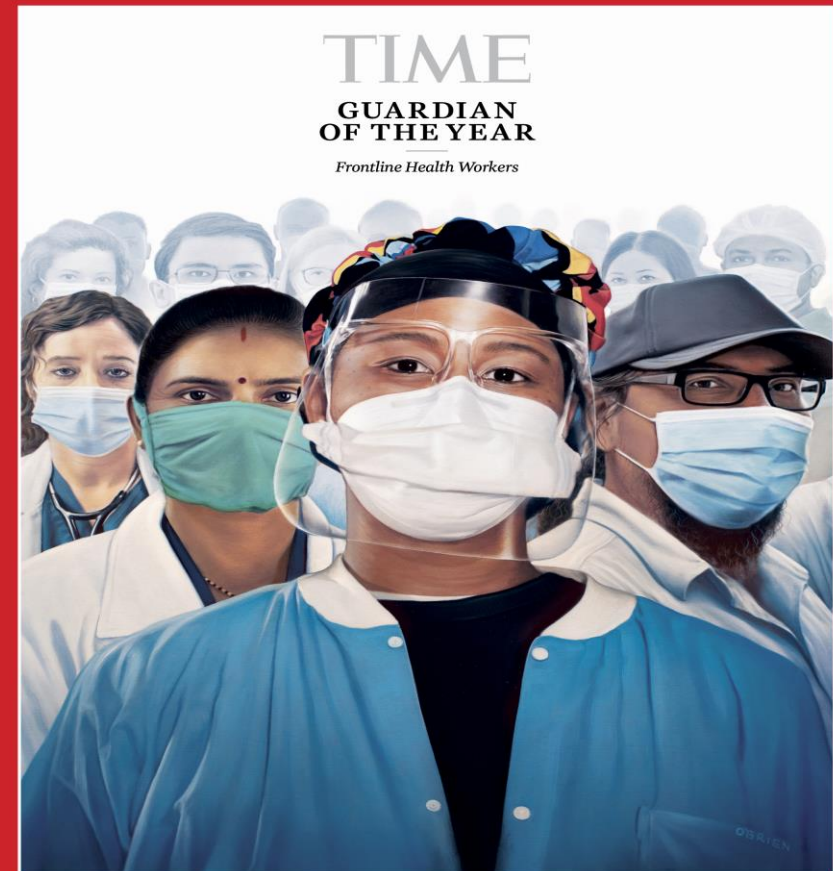
What will be the effect of us, taking this forced pause on the extras in life?

Busy-ness can be an obstacle to improvement.

Improve the things that are most important in your life.

Actually not things but people.

An opportunity to strengthen relationships.

GET STRONGER
DON'T COMPARE YOUR SELF TO OTHERS.
COMPARE YOURSELF TO YOU.
THE IMPORTANCE OF PROGRESS

COGNITIVE BEHAVIOURAL THERAPY.

- THINK BETTER
  LIVE BETTER

- THEN FEEL BETTER

THOUGHTS
What we **think** affects
how we feel and act

CBT
CHANGING PERCEPTIONS

EMOTIONS
What we **feel** affects
how we think and act

BEHAVIORS
What we **do** affects
how we think and feel
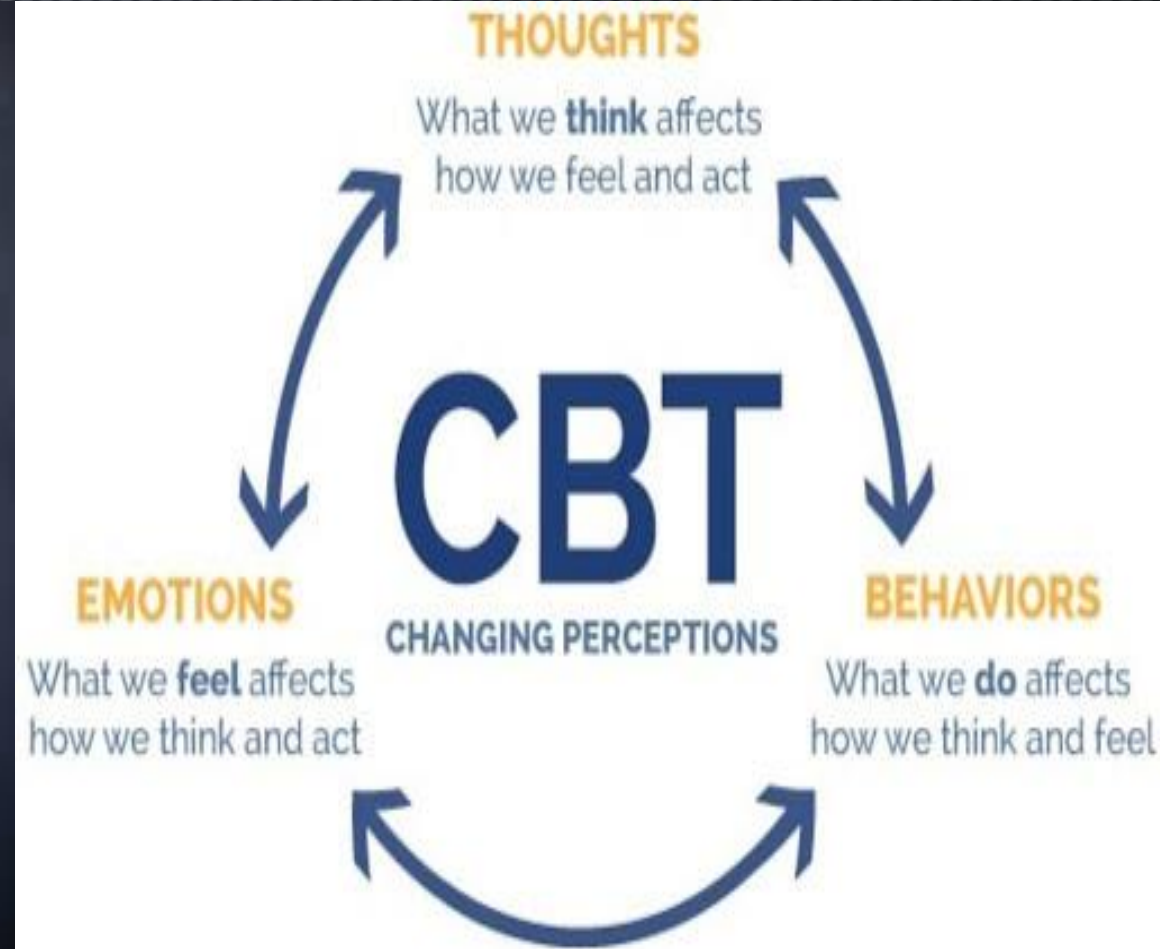
INTERPERSONAL THERAPY.
IPT

- **CONNECT**

BASIC BEHAVIORAL SCIENCE

Comprehensive Guide
to
Interpersonal
Psychotherapy

Myrna M. Weissman
John C. Markowitz
Gerald L. Klerman

DIALECTICAL BEHAVIOURAL THERAPY. DBT

- **Change**

Emotion Regulation

Mindfulness

Self - Management

Interpersonal Effectiveness

Distress Tolerance

- **Acceptance**

Help people **KNOW** and **GET** what they want

MOTIVATIONAL THERAPY

FIVE PRINCIPLES OF
MOTIVATIONAL INTERVIEWING

Express empathy for the client

Develop discrepancy between the client's goals and values and their current behavior, particularly regarding substance use

Avoid argumentation and direct confrontation

Roll with client resistance, instead of fighting it

Support the client's self-efficacy, or their belief that they can change

PROBLEM-SOLVING THERAPY.
PST

Apply problem solving orientation
DEVELOP problem solving skills

Challenges vs Obstacles

"A comfort zone is a beautiful place, but nothing ever grows there."
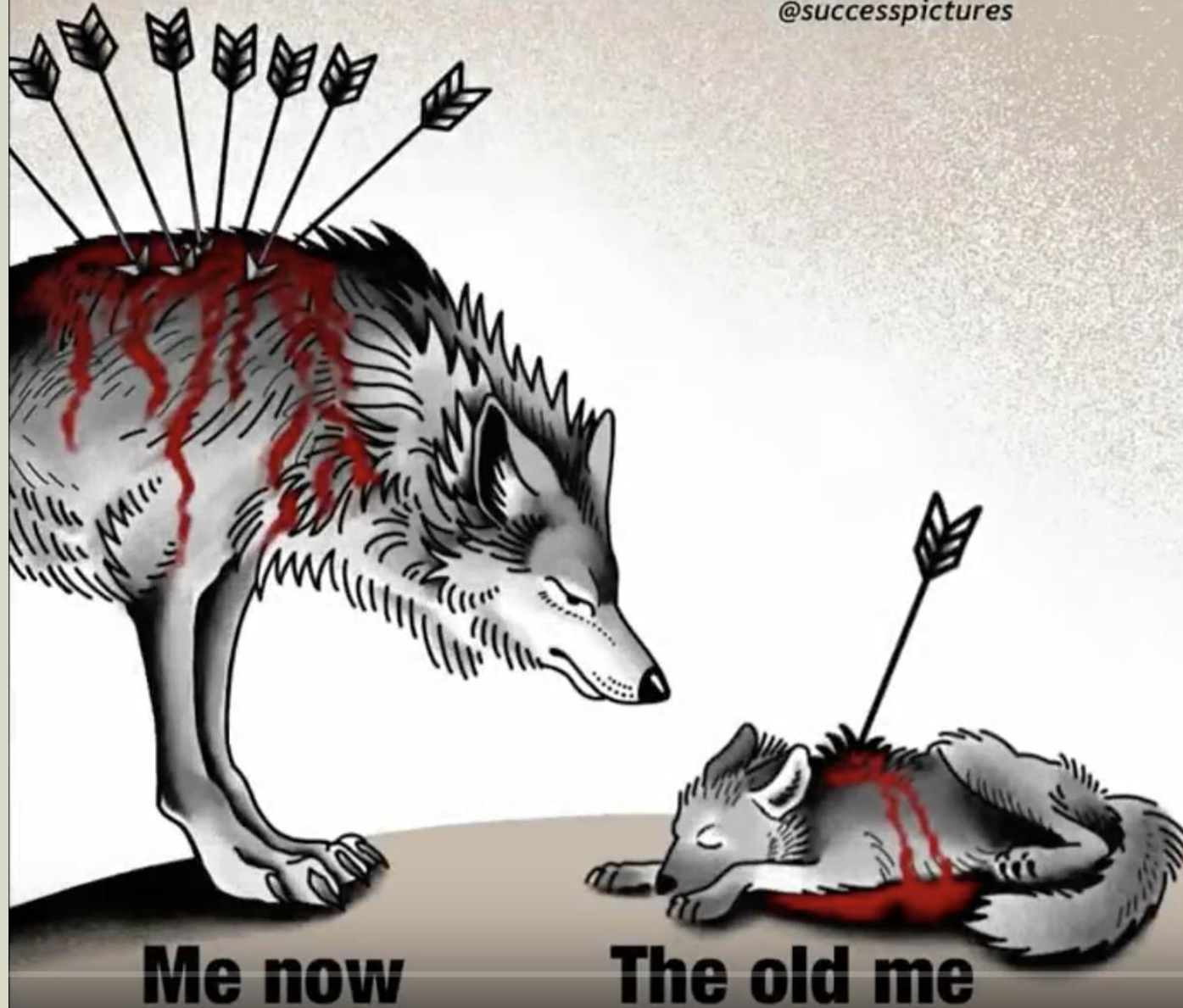
CHOOSE HOPE. BE CONSTRUCTIVE. CHOSE LIFE
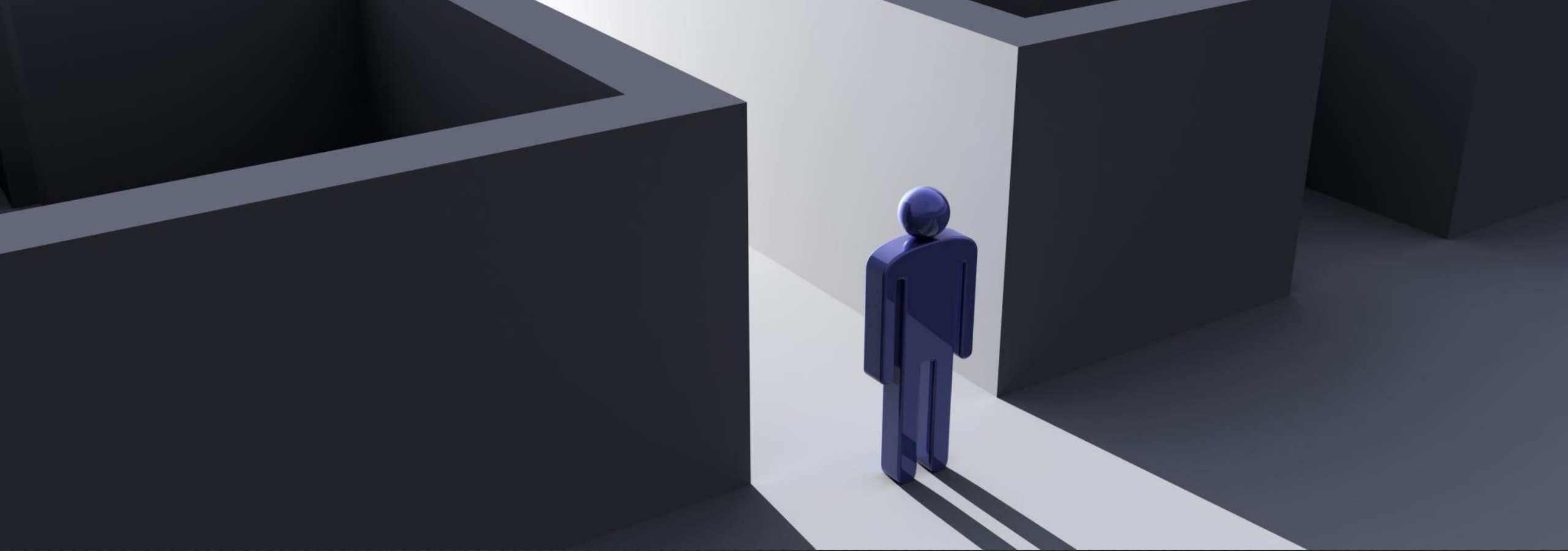
THINK ABOUT OTHER PEOPLE
FIRST DO NO HARM

FOLLOW YOUR CONSCIENCE

HOW DO WE LIFT OURSELVES AND EACH OTHER UP?

- **CONSTRUCTIVE**
  - EXERCISE
  - DOWNTIME
    - RECHARGE
  - MEDITATE/PRAY/CONTEMPLATE
  - PLAY – WHO SAYS IT IS JUST FOR KIDS
  - HUMOUR

RESEARCH ARTICLE

WILEY NursingOpen Open Access

Beneficial effect of laughter therapy on physiological and psychological function in elders

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Yuki Yoshikawa, Faculty of Nursing, Setsunan University, Hirakata City, Japan

Abstract

Aim: In the present study we investigated the effect of laughter therapy on physiological and psychological function in older people.

Design: An open-label trial.

Methods: Seventeen older people who regularly attended an elderly day care centre were recruited. Stand-up comedy as laughter therapy was performed once a week for 4 weeks. Parameters of physiological and psychological function were evaluated before and after laughter therapy.

Results: Laughter therapy intervention resulted in a significant reduction in systolic blood pressure and heart rate, accompanied by a significant increase in plasma concentration of serotonin and a significant decrease in salivary concentration of chromogranin A. Questionnaire surveys of SF-8, GDS-15, and Vitality Index demonstrated alleviation of depression and improvement of sociability and activity in older people. Laughter therapy could be expected to become a practical treatment to improve quality of life of older people in an elderly day care centre.

KEYWORDS
blood pressure, geriatric depression scale (GDS), laughter therapy, quality of life (QOL), serotonin, SF-8

LAUGHTER IS THE BEST MEDICINE

N=17, prospective, open label
Stand up comedians
Elderly day hospital
Reduction in blood pressure, increase serotonin, increased sociability, decreased stress.
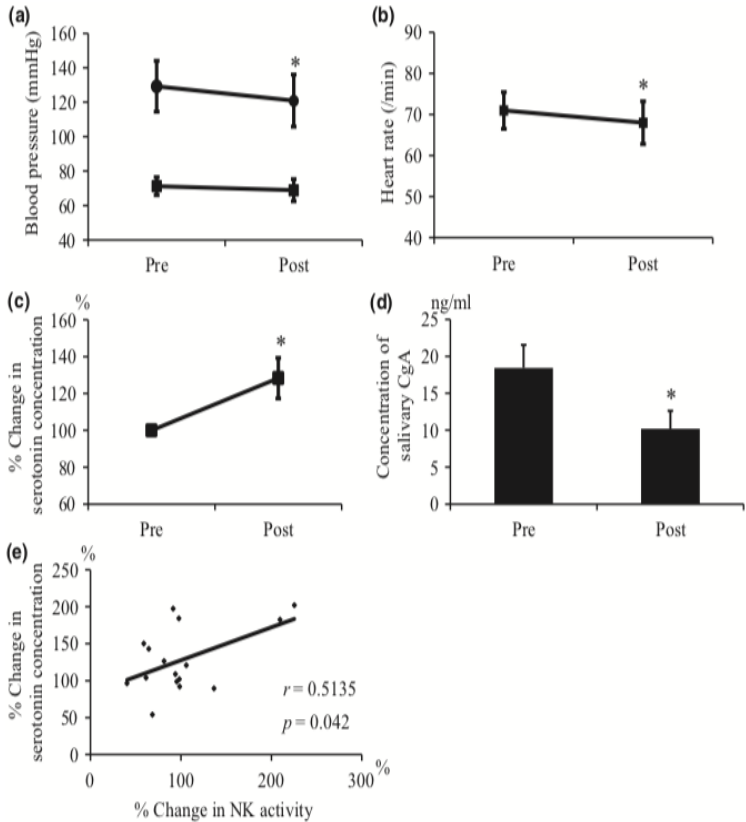
FIGURE 1 (a) BP before and after intervention. (N = 17). (b) HR before and after intervention. (N = 17). (c) Percent change in plasma serotonin concentration after four performances of laughter therapy. (N = 16). (d) Concentration of salivary CgA before and after laughter therapy. (N = 16). (e) Correlation of percent change in plasma serotonin concentration with percent change in plasma NK activity. (N = 16). Values are expressed as mean ± SEM. *p < 0.05 versus Pre. Pre, the day before the first laughter therapy. Post, the day after the last laughter therapy.

FIND A WAY TO LAUGH AND PLAY

- "JOKES CONNECT US, THEY EMBRACE US....WHEN YOU MAKE SOMEONE LAUGH YOU ARE NOT JUST BEING FUNNY, YOU ARE INDUCERS OF HOPE, EMBRACERS OF STRANGERS, ERADICATORS OF HOPELESSNESS, YOU ARE PHYSICIANS AND PEACEMAKERS"
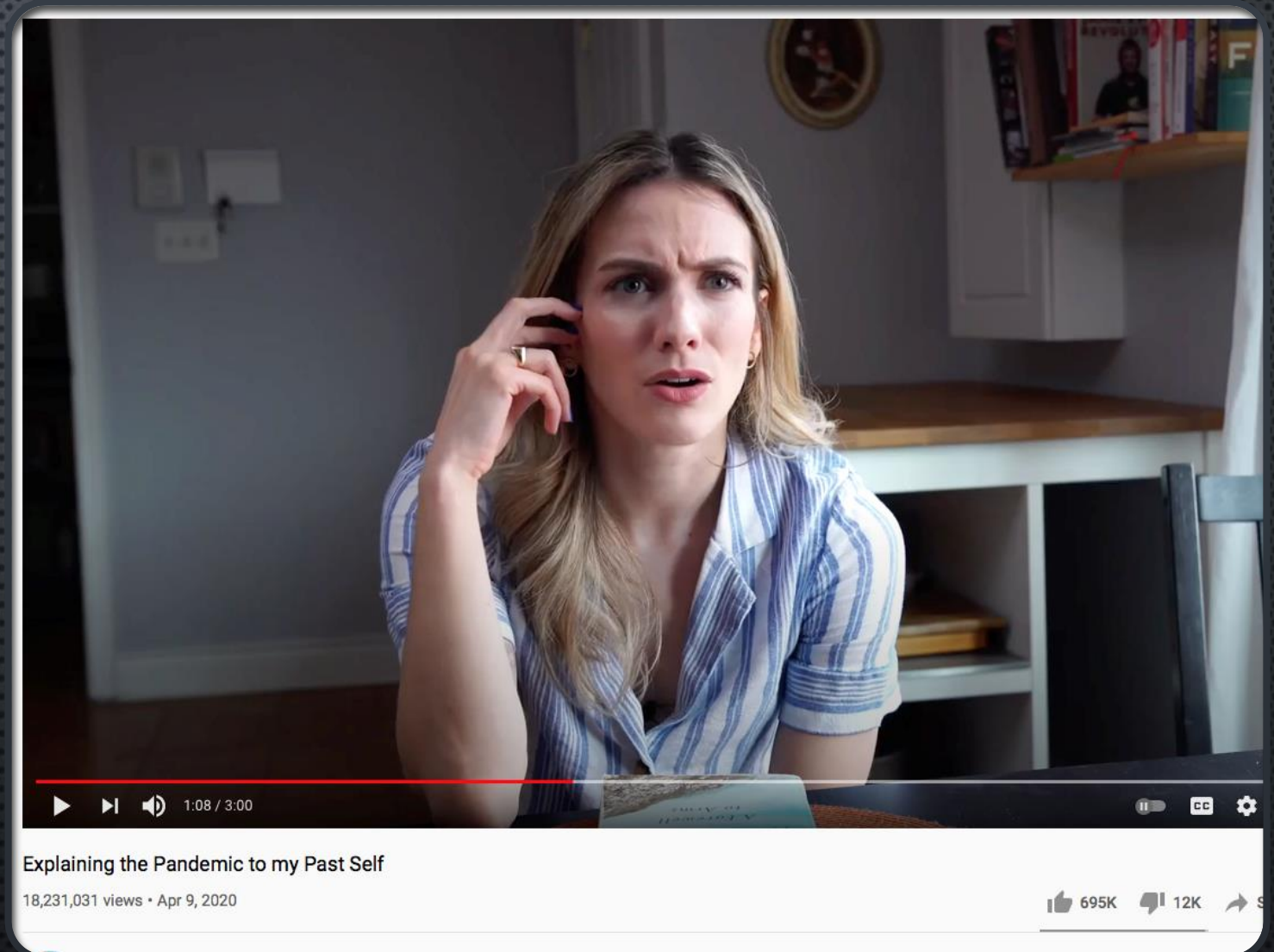
McCarten TED talk

Evidence that stress can make you stupid

JULIE NOLKE:

EXPLAINING THE PANDEMIC TO MY PAST SELF: PARTS 1-4

•HTTPS://WWW.YOUTUBE.COM/WATCH?V=MS7CAPX4CB8

HUMOUR

- Humour obliges us to have an open mind, and obliges empathy
- Humour always forgives.
- Laughter connects us

McCarten TED talk

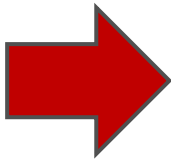BE THERE FOR ONE ANOTHER

Friendships,
Peer supports,
Counselors,

IN SHARING IN THIS HARDSHIP TOGETHER, WE CAN LEARN TO BE KINDER, BRAVER, AND MORE RESILIENT

EACH DAY WE ARE CLOSER TO THE END OF THIS PANDEMIC