The Psychology of Pandemics

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  Member

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Land Acknowledgement

This presentation takes place on the unceded traditional territories of the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and səlilwətaɁ (Tsleil-Waututh) Nations.
Importance of Psychological Factors

• Methods for managing pandemics
  • Communication from health authorities
  • Hygiene – e.g., handwashing, masks
  • Social distancing
  • Vaccination

• Psychological disorders
  • Worsening of preexisting problems
  • Triggered by pandemic
  • Exacerbated by lockdown
Overview

• Psychological phenomena: Similarities across pandemics
• Polarization of attitudes, emotions, and behaviors
• Heterogeneity of responses: Role of personality traits
• Coping and the illusion of control
• Lockdown: Effects, alternatives
• Pandemics and mental health
Psychological Phenomena:
Similarities across Disease Outbreaks
Pandemics and Other Noteworthy Outbreaks

• Influenza pandemics:
  • e.g., 1889, 1918, 1957, 1968, 2009
• Plague: Recurrent waves over 300+ years
• Cholera: 7 pandemics over 200 years
• HIV/AIDS
• COVID-19
• Others:
  • e.g., Zika, SARS-1, yellow fever, smallpox
Characteristics of Disease Outbreaks that Trigger Widespread Public Alarm

• **Lethal**: Higher fatality than endemic diseases
• **Unfamiliar**: Emergent or re-emergent rather than endemic
• **Volatile**: Sudden or swift acting
• **Egalitarian**: Not limited to particular demographic groups
• **Uncertainties** about prevention, protection, and treatment
• **Newsworthy**: Widely reported in the media
• **Disgusting**: Revolting signs or symptoms
• **Stressful mitigation measures**: Socioeconomic impacts of lockdown, quarantine, etc.
Similarities across Pandemics: Common Reactions

- Polarization of emotions, attitudes, behaviors
- New onset and newly worsened psychol. disorders
- Rise of altruism
- Rise of racism, xenophobia
- Non-adherence; masks, vaccinations, closures
- Sporadic protests, including violent protests
- Rumors
- Conspiracy theories
- Panic buying, superstitious coping
- Folk remedies, quack cures, and profiteering
- Fleeing
Fleeing

Lord, haue mercy
on London
Wee dye.
I follow. We fly.
Keep our.
Pandemics and Protests

• Violent protests are commonly underestimated

• Cholera riots
  • Europe (1830s), Venezuela (1992), Haiti (2010)

• Smallpox vaccination riots
  • Montreal (1885), Rio de Janeiro (1904)

• Plague riots
  • India (1890s)

• COVID-19:
  • 3% increase in protests from 2019 to 2020; 94% peaceful
  • About two dozen violent protests (2020-2022)
  • e.g., Netherlands, Nov/2021: “worst riots in four decades”

• Commonly triggered by tightening or re-imposing restrictions

• Protests, including violent protests, tend to be bundled phenomena
COVID-19 vs. Past Pandemics: Notable Differences

• Beliefs about the cause of disease
  • miasma vs germ theory
• Social media, 24/7 news cycle
• Quantitatively bigger “infodemic”
• Global, digital inter-connectedness
• Rapidly evolving views on COVID-19
  • e.g., whether masks are useful
Polarization of Attitudes, Emotions, and Behaviors
Pandemics Evoke Extremes

• Exacerbation of pre-existing societal tensions
  • The “fault lines” of society
• Over- vs under-responders re threat perception
• Pro vs anti ... vax, masks, lockdown
• Increasing piety vs “lawlessness, pleasure, & sin”
• Altruism vs self-interest
• Authoritarianism vs libertarianism
Attitude Polarization

• Uncertainty invites speculation and rumors
• Like-minded people share common views
• Repeated expression of beliefs within a group of like-minded people:
  • Increase perceived truth of beliefs (repetition effect)
  • Exposes people to arguments supporting beliefs and to refutations to counter-arguments
  • Encourages extreme forms of beliefs
• Extreme attitudes are typically resistant to change
COVID Stress Study

- Evidence for:
  - COVID Stress Syndrome
  - COVID Disregard “Syndrome”
  - Extreme ends of a continuum; ~ 10-15% at each end
WHAT IS COVID STRESS SYNDROME?

COMPONENTS

COVID Stress Syndrome is characterized by five related facets: danger and contamination fears, socioeconomic concerns, xenophobia, traumatic stress, and compulsive checking and reassurance seeking.

ASSOCIATIONS

People with more severe COVID Stress Syndrome are more likely to be anxious or depressed, stockpile supplies, experience distress during voluntary self-isolation, and avoid public places or transportation.
WHAT IS COVID DISREGARD SYNDROME?

COMPONENTS
COVID Disregard Syndrome involves believing that the COVID-19 threat is exaggerated, believing one will be largely unaffected from COVID-19 infection, and a disregard for social distancing.

ASSOCIATIONS
People with more severe COVID Disregard Syndrome are more likely to have poorer COVID-19 hygiene practices (e.g., hand washing) and stronger COVID-19 anti-vaccination attitudes.
Personality Traits
Personality Traits

Distress *protective factors*
- Hardiness:
  - Commitment, control, challenge
  - Trait optimism

Distress *Vulnerability factors*
- Negative emotionality
- Overestimation of threat
- Worry proneness
- Intolerance of uncertainty
- Disgust sensitivity
- Perceived vulnerability to disease

Non-adherence factors
- Psychological reactance
- Boredom proneness
- Dark traits; e.g.,
  - Psychological entitlement
  - Negative social potency
Disgust Sensitivity

- Trait: Propensity to readily experience strong disgust
- High levels of disgust sensitivity are associated with...
  - Germ phobia
  - OCD
  - Xenophobia
- Linked to stigmatization
  - Sickly people
  - Elderly, infirm, handicapped
Psychological Reactance

• An allergic reaction to being told what to do; “You’re not the boss of me!”
• Leads people to strengthen their reasons for refusing to do something
• Nudges?
The Anti-Mask League, 1919

ANTI-MASK MEETING
TONIGHT (Saturday) JAN. 25
DREAMLAND RINK

To Protest Against the Unhealthy Mask Ordinance
Extracts will be read from State Board of Health Bulletin showing compulsory mask wearing to be a failure. Eugene E. Schmitz and other interesting speakers.
Admission Free.

Resistance to Wearing Face Masks

- Ineffective
- Don't like being forced
- Uncomfortable
Coping

• Coping can be adaptive, maladaptive, or somewhere in between

• Emotion-focused coping
  • e.g., nostalgia, dark humor, religious coping, giving and receiving social support

• Problem-focused coping
  • Search for cues to danger and safety; e.g., 1527, Machiavelli’s morning walks
  • Fleeing
  • Panic buying, seeking cures and preventives
  • Superstitious coping
  • Coping based on the illusion of control
“Lord Have Mercy” broadsheet
1665

- Targeted ordinary citizens
- Official mortality statistics
- Illustrations
- Prayers
- “Plague remedies”
- Interactive
Superstitious Coping

• Disease modeling and *homo economicus*
• People are superstitious, especially when it comes to fighting off invisible forces
  • 80% of high-rise buildings lack a 13\textsuperscript{th} floor
  • 70% of US students use good luck charms to improve academic performance
• Omens, stigmata (danger signals)
• Amulets, talismans (safety signals)
• Rituals (lucky behaviors); e.g., “sulphur in shoes”
• Rituals bolster an illusion of personal control
• Superstitious rituals are more likely when the stakes are high
  • e.g., baseball players
  • COVID-19: higher fear of infection associated with greater use of superstitious behaviors
“... In combating the pestilence the authorities find their difficulties immensely increased by the crass ignorance and superstition of the lower classes, who trust rather to the virtue of charms and amulets than in preventive measures ...”
President Andrés Manuel López Obrador showing amulets that he says protect him from the coronavirus.
Mexican Presidency/Agence France-Presse — Getty Images
Illusion of Control: Not always a bad thing
Hygiene Theater Is a Huge Waste of Time
People are power scrubbing their way to a false sense of security.

JULY 27, 2020

Derek Thompson
Start writer at The Atlantic
Coping Fads Spread by Rumours

• Coping fads are common during pandemics

• Plague of Justinian, Constantinople, 543AD:

  A rumour spread that if you threw pitchers from upper storey windows and they burst below on the street, then death would flee from the city; “Everybody succumbed to this foolishness”

• Sometimes based on a grain of truth
  E.g., avoiding vegetables (Cholera, 1849)

• COVID-19: Alcohol as “preventive”
ALCOHOL POISONING KILLS 480 IN IRAN
Lockdown: Effects and Alternatives
• Increases in disorders:
  • Major depression 28%
  • Anxiety disorders 26%
• Increases greater with:
  • Higher infection rates
  • Greater restrictions on mobility
• Greater in women and younger adults
• Transient vs. persistent?

Figure 1: Global prevalence of major depressive disorder (A) and anxiety disorders (B) before and after adjustment for (i.e., during) the COVID-19 pandemic, 2020, by age and sex
Lockdown

- Shelter-in-place orders and closures
- Centuries of controversy
- The “catch-and-release” problem of recurrent lockdowns
- Pandemic fatigue
- Use sparingly

Alternatives to lockdown

- Targeted self-isolation protocols; test-trace-isolate
- App-based: *Advanced Automated Contact Tracing and Targeted Isolation*
- Issues: Privacy, discrimination, adherence
Pandemics and Mental Health
Resilience

• Most people are resilient to stress
  • Bounce-back is the norm

• A substantial minority of people (15%?) may develop persistent psychological problems
  • e.g., mood and anxiety disorders, OCD, PTSD, germ phobias
  • higher prevalence in particular sub-populations

• Resilience can be increased, within limits, by training in coping skills

• Posttraumatic growth is common: Thriving through adversity
PTSD and COVID-19

Figure. Posttraumatic Stress Disorder (PTSD) After COVID-19 Infection and Other Collective Traumatic Events

- 2002 MERS and 2012 SARS survivors
- 2020 COVID-19 survivors treated at Gemelli Hospital, Rome, Italy
- 2006 Hurricane Katrina survivors
- 2011 Great East Japan Earthquake and Tsunami survivors
- Residents near the World Trade Center after the September 11, 2001, terrorist attacks

Janiri et al. 2021, JAMA Psychiatry
Other Clinical Conditions

- Suicide
  - SARS, Spanish flu, Russian flu
  - Linked to economic recessions
  - COVID-19: Mixed findings
- Prolonged grief disorder
- Hikikomori
- Addictive behaviors
  - Problem gambling → switching addictions
  - Role of boredom proneness
  - Treatment of boredom proneness? Mindfulness?
Long COVID

• Term coined by patients
• Chronic fatigue, dyspnea
• Shifting symptoms
• Relapsing/remitting
• Stigma
• Treatment?
Mental Health Resources

- Telehealth
- CBT phone apps
- Comprehensive, integrated programs
- Method for enhancing HCW resilience
- Inevitable rise of AI-assisted therapy
MindShift CBT - Anxiety Relief
Manage anxiety & be mindful
Anxiety Canada Association
Designed for iPad

#81 in Health & Fitness
4.4 • 345 Ratings
Free
[View in Mac App Store]

COVID Coach
Cope with stress & stay well
US Department of Veterans Affairs (VA)
Designed for iPad

4+ • 599 Ratings
Free
[View in Mac App Store]
COPING WITH COVID-19

While some offices may be closed, BounceBack program coaches are still here for you by phone and online. Visit the [adult](#) or [youth](#) page to learn more and get started.

Online Referrals for BounceBack Coaching

You can now submit online referrals for our free coaching program. If you have a family doctor, nurse practitioner or psychiatrist, you can sign up online yourself. If not, you can book an online appointment with a primary care provider to get your referral.
Enhancing the Resilience of Frontline Healthcare Workers

• Needs assessment
  • Stress management is not enough...

• Infrastructure, work environment
  • Adequate staff, sufficient resources, solid leadership, workplace culture...

• Resilience training

• Mental health practitioners embedded in clinics & wards

• Peer support

• Buddy system
  • Matched on demographics, professional roles, seniority
  • Check-in, debrief, mutual support

Wei EK et al. 2020. Health Security
Implications for Future Pandemics

- Psychological phenomena are remarkably consistent across pandemics
- Most people are resilient, within limits
- Expect a rise in mental health problems in future outbreaks
- Expect to see unusual coping strategies (coping fads)
- Protests, including violent protests, are more common than people expect
- Use lockdown sparingly
- Innovations in mental health services show promise