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2022 Fukushima Medical University International Symposium on the Fukushima Health Management Survey
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Disasters and Mental Health: Lessons from 9/11 and the COVID-19 Pandemic

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New York, New York, USA

5 March 2022



**Mount
Sinai**



Outline

- **Overview of disasters and mental health**
- **Immediate mental health issues**
- **Long term mental health issues**
- **Intervening to help**



Overview of Disasters and Mental Health



Immediate vs Long-term Phases

Immediate

- ▶ Hours, days, to week(s)
- ▶ Immediate impact
- ▶ Informal and makeshift settings
- ▶ Assessment of psychological reactions and possible symptoms
- ▶ Practical, flexible, basic care

Long-term

- ▶ Weeks, months, to years
- ▶ Longer-term sequelae
- ▶ Structured settings
- ▶ Recognition of psychiatric syndromes
- ▶ Interventions and referrals



Disaster Community



Risk Factors for Post-disaster Mental Health Problems

- ▶ Dose of trauma, level of exposure to the event
- ▶ Prior exposure to trauma, such as disaster
- ▶ Prior psychiatric history
- ▶ Problems of living prior to the disaster/low socioeconomic status
- ▶ Lack of perceived or actual social supports after the event
- ▶ Presence of “secondary stresses”
- ▶ Female
- ▶ Middle aged
- ▶ Ethnic minority



Resilience Factors

Realistic
Optimism

Facing Fear

Moral
Compass

Religion and
Spirituality

Social Support

Resilient Role
Models

Physical
Fitness

Brain Fitness

Cognitive and
Emotional
Flexibility

Meaning and
Purpose



Immediate Phase: Common Distress Reactions

- ▶ **Physical:** palpitations, shortness of breath, dizziness, sweating, loss of appetite, chest pain
- ▶ **Cognitive:** distractibility, confusion, watchfulness, questions of meaning, expectation of harm, nightmares
- ▶ **Emotional:** fear, anxiety, depression, irritability, fatigue/exhaustion
- ▶ **Behavioral:** insomnia, interpersonal conflict, agitation, social withdrawal, social dependency, loss of routine, substance use



Long term:

“The Big 3” Mental Health Disorders

- ▶ **Major Depression** involves not just low mood or motivation but a range of symptoms that affect us physically (eg, sleep or appetite) and in how we think (eg, problems focusing or, worse, suicidal thinking)
- ▶ **Posttraumatic Stress Disorder** consists of an initial fear reaction that will not stop. It outlasts the threat and causes the sufferer to act and feel as though it is still happening when it is not
- ▶ **Alcohol Use Disorder:** disasters usually do not create new drinking problems but cause old problems to relapse



Immediate Mental Health Issues



9/11 Family Assistance Center in New York City



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Post-9/11- Immediate Symptoms at the Family Assistance Center

- ▶ 9/15/01-11/20/01
- ▶ 848 patients

- ▶ 61% insomnia
- ▶ 52% anhedonia
- ▶ 34% low mood
- ▶ 20% persistent general anxiety

(Pandya et al., 2010)



New Yorkers

3-6 Months after 9/11

- **We interviewed 1009 adults (516 men and 493 women) in indoor public sites throughout Manhattan about post-trauma symptoms, including alcohol use**
- **Most common distressful experiences:**
 - **painful memories**
 - **stress when exposed to reminders of 9/11**
 - **avoidance of feelings and reminders**
 - **feeling distracted**
 - **sleep problems**
- **More likely if highly exposed, prior psychiatric history;**
 - **Less likely with longer time since 9/11**
- **18.5% had symptoms consistent with Post-Traumatic Stress Disorder**
 - **But, only 26.7% were receiving care**



COVID-19 Survivors in Milan, Italy

- ▶ Follow-up of patients from April-June, 2020
- ▶ 402 patients (300 hospitalized, 102 outpatient) **1 month** after initial presentation to the IRCCS San Raffaele Hospital Emergency Department
- ▶ Survey Results:
 - Post-Traumatic Stress Disorder= 28%
 - Depression= 31%
 - Anxiety= 42%
 - Insomnia= 40%



Immediate Experience with SARS COVID-1 (2002) and Middle Eastern Equine Virus (2012)

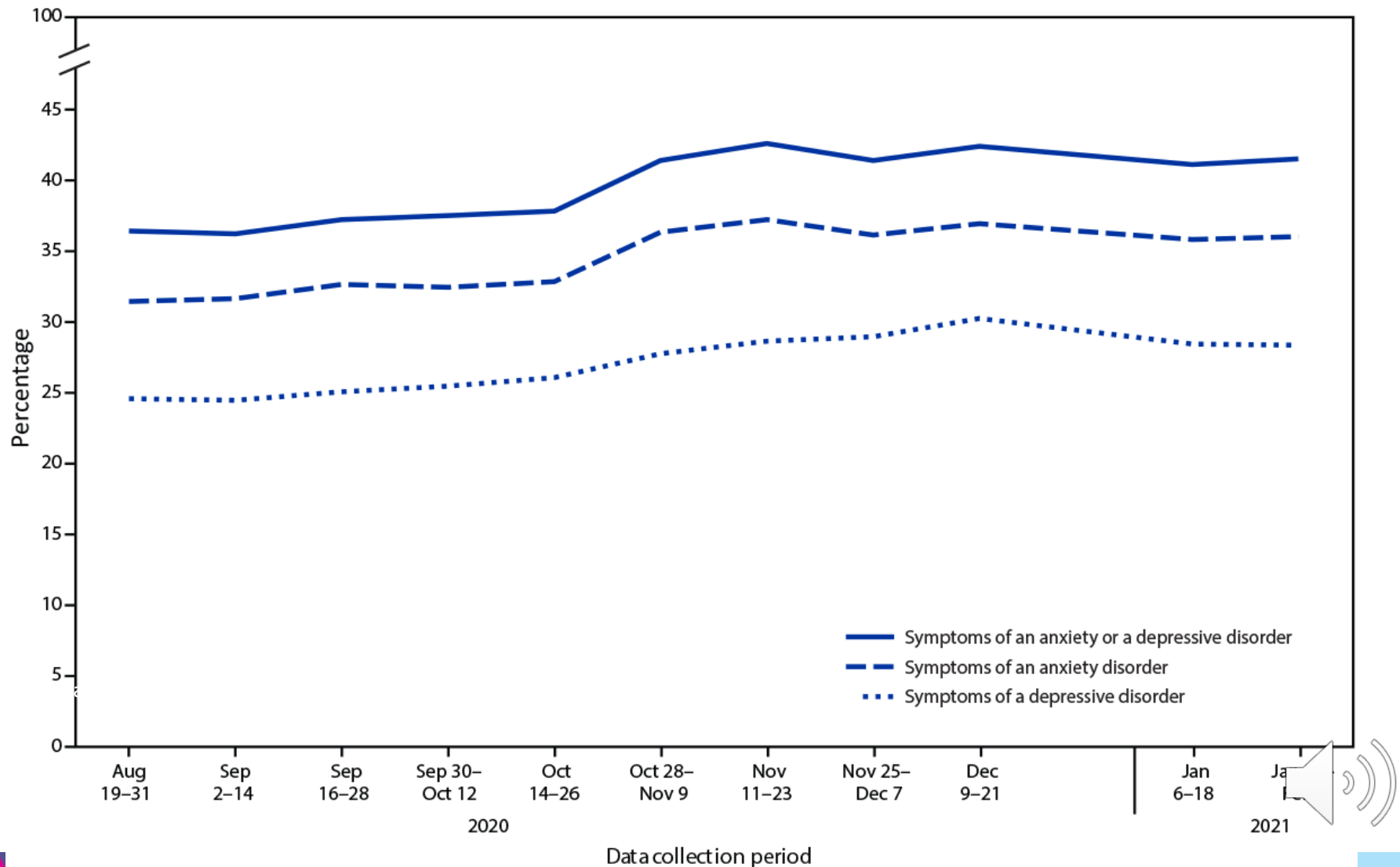
- **SARS**= affected ~ 8096 people
- **MERS**= affected ~2260 people

Acute Symptoms:

- 41.9% insomnia
- 38.2% impaired concentration
- 35.7% anxiety
- 34.1% impaired memory
- 32.6% depressed mood
- 27.9% confusion
- 29.4% emotional lability



Symptoms of depressive or anxiety disorder in the last seven days in U.S. , August 2020- January 2021



Long Term Mental Health Issues





World Trade Center Health Program

In operation since July, 2002 to serve World Trade Center rescue and recovery workers and volunteers



World Trade Center Health Program in 2021- Annual Monitoring

- 24, 698 patients have undergone monitoring at least once with an average of five annual screenings/patient
- 971 monitoring visits in January, 2021 (average of 55/day)
 - Down from average of 1100/month pre-pandemic



World Trade Center Health Program in 2021- Mental Health Treatment

January 2021:

- *New Patients= 54*
- *Individual Psychotherapy visits =743*
- *Group psychotherapy visits= 238*
- *Medication Management visits= 246*



Healthcare Workers Seeking Care for Mental Health Problems at Mount Sinai During COVID-19

- We established a special center to address the mental health issues of Mount Sinai healthcare workers since the onset of the COVID-19 pandemic
- Between June 2020-May, 2021, 229 healthcare workers contacted our center for help
- Phone screenings:
 - 65% - clinical anxiety
 - 57%- clinical depression
 - 53%- post-traumatic stress disorder
 - 13%- alcohol use disorder
 - 15%- suicidal thinking



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Post-Traumatic Growth

Post-traumatic growth (PTG) = positive psychological changes a person may experience as a result of the **struggle** they engage in following traumatic or highly challenging life circumstances. It is both a process and an outcome.



The Five Domains of Post-Traumatic Growth

1. Personal strength
2. Relating to others
3. Spiritual and existential changes
4. Appreciation of life
5. New possibilities



Mental Health Impact of other Life Events versus COVID-19

- We studied 78 Mount Sinai medical students in October-December 2020
- 47.9% reported that another life event was most impactful in their life, and 52.1% said COVID-19 was
- Students who reported another life event as most impact reported more post-traumatic growth, more resilience promoting behaviors and less COVID-19 stress
- In brief, prior life stresses can strengthen your response to future ones, even a pandemic



Intervening to Help

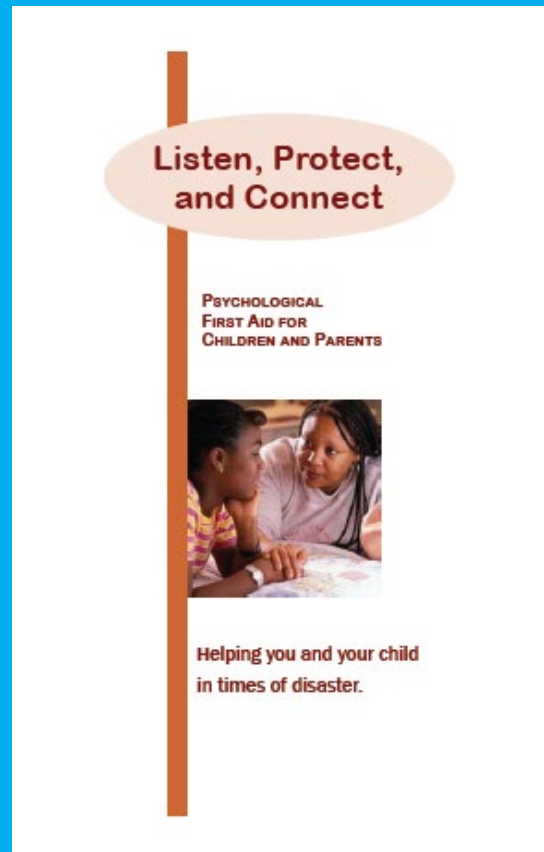


Psychological First Aid

- ▶ Provide for basic needs
- ▶ Protect from further harm
- ▶ Reduce agitation & arousal
- ▶ Support those in most distress
- ▶ Keep families together and provide social support
- ▶ Provide information, foster communication & education
- ▶ Orient to available services
- ▶ Use effective risk communication techniques



Psychological First Aid for Children – Listen, Protect, and Connect



Traditional Mental Health Treatments

- Medications
 - Anti-depressants
 - Anti-anxiety medication
 - Sleep medication
- Psychotherapy
 - Cognitive-behavioral psychotherapies
 - Exposure psychotherapy



Resilience Promoting Workshops

Realistic
Optimism

Facing Fear

Moral
Compass

Religion and
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Social Support

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Physical
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Engage in realistic optimism

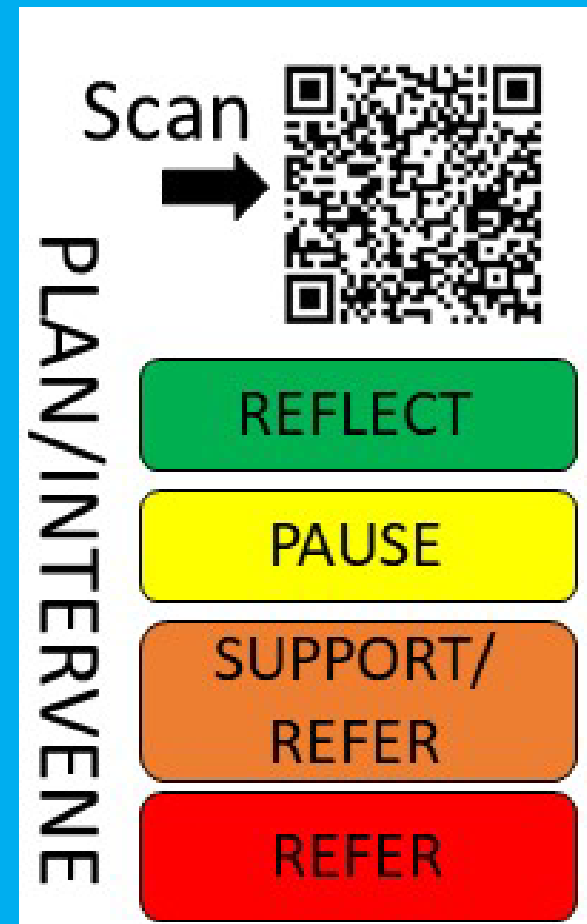
1. Focus on the positive by interpreting events positively.
2. Insert positive thoughts into one's thinking
3. Avoid dwelling on negative ones.
4. Behave in positive ways.



Social Support- 9/11Survivors Outreach to 3/11 Survivors



Support Through “Battle Buddies”



Conclusions



Conclusions

1. There are a range of psychological reactions to disasters, ranging from clinical depression to personal growth
2. These are shaped by many factors such as time and one's role in the event
3. Mental health professionals can help, but people often suffer without getting help
4. “Natural” approaches can also help, such as one's personal resilience and social support



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