NIMH Intramural Research Program Response to COVID-19

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NIMH Joint Alliance-Coalition for Research Progress Town Hall

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NIMH Intramural Research Projects- COVID-19

Project Themes

Act early in response to public health emergency

1. **Methods** development and harmonization
2. Leverage NIMH **existing research data**
3. Utilize **online platforms** for data collection
4. **Collaborate** with intramural and extramural researchers
5. **Track changes over time** using repeated measures
6. Target **specific populations** (e.g., youth, parents, adults, health care workers)
Amended Studies

1. Characterization and Treatment of Adolescent Depression (Stringaris)

2. Characterization and Pathophysiology of Severe Mood and Behavioral Dysregulation in Children and Youth (Brotman)

3. Fluoxetine's Effects on Attention and Emotional Memory in Anxious and Depressed Youth and Adults (Pine w/Brotman)
1. Mental Health Impact of COVID-19 Pandemic on NIMH Research Participants and Volunteers (Chung)

2. Mental Health Impact of COVID-19 Pandemic on Health Care Workers (Zarate/Park)

3. Impact on Anxiety and Motivation of COVID-19 and Predictors of Individual Responses (Grillon/Ernst)
CoRonavIruS Health Impact Survey (CRISIS) 3.0

Questionnaires developed through a collaborative effort between research teams of Kathleen Merikangas, Argyris Stringaris and Michael Milham (Child Mind Institute/NYSPI) and many other contributors.

Translated into 10 different languages internationally.

Several thousand surveys piloted and completed.

http://www.crisissurvey.org/
The Coronavirus Health and Impact Survey (CRISIS) reveals reproducible correlates of pandemic-related mood states across the Atlantic.

Aki Nikolaidis, Diana Paksarian, Lindsay Alexander, Jacob DeRosa, Julia Dunn, Dylan M Nielson, Irene Droney, Minji Kang, Ioanna Douka, Evelyn Bromet, Michael P Milham, Argyris Stringaris, Kathleen R Merikangas
doi: https://doi.org/10.1101/2020.08.24.20181123

This article is a preprint and has not been peer-reviewed [what does this mean?].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.

COVID-19 SARS-CoV-2 preprint from medRxiv and bioRxiv
Characterization & Treatment of Adolescent Depression (CAT-D)

Amended Study NCT03388606  PI: Stringaris

- Protocol was the first to be approved to collect data on COVID-19 at NIMH
- Amongst the first to be approved to conduct telemedicine
- Assessments of COVID-19 related symptoms and mental health items on parents and young people in a longitudinal (i.e., repeated measures) study.
- Going through the 8th wave of data collection (979 assessments to date)
- On these participants, have collected:
  - clinical questionnaires
  - neurocomputational experimental tasks
  - clinical interviews
- Significant clinical care has been provided since the onset of the pandemic through this protocol
Results/Summary about depressive symptoms in adolescents

- Major Depressive Disorder n=106, Healthy Volunteers n=70
- First wave of repeat measures showed stable differences between groups
- A lot of interindividual variation
- No overall increase in depressive symptoms
- No apparent differences in worries about infection
- Possible differences in worries about physical and mental health overall
- Explanations? Pandemic and general lockdown (“we are all in this together”); measures done too early; families were home together
- More follow up in progress
Mental Health Impact of COVID-19 Pandemic on NIMH Research Participants and Volunteers

New Study NCT04339790  
PI: Chung

- Collaboration across NIMH IRP labs (Chung, Grillon, Zarate, Atlas, Ungerleider, McMahon) to invite previous study participants to enroll in this study
- Study participants must be 18 years or older and English-speaking; no exclusion criteria
- Study began in early April 2020 and collects repeated measures every two weeks of mental health symptoms, distress and COVID-19 psychosocial stressors
- Study has reached the 6-month end-of-study timepoint for first set of enrollees
- Will leverage NIMH patient and healthy volunteer clinical status – verified by Structured Clinical Interview for DSM-5 – to evaluate the COVID-19 stressor survey
- Using machine learning to predict the clinical status of the study population, many of whom report a history of mental illness (Pereira)
- Outreach effort to recruit more minority participants is underway
Mental Health Impact of COVID-19 Pandemic on NIMH Research Participants and Volunteers

New Study NCT04339790  PI: Chung

Results/Summary:
- Enrolled more than 3,100 people from all 50 U.S. states
- 10% of the current sample have previously been evaluated for NIMH research studies
- 90% convenience sample of participants learned about the study based on a wide range of outreach efforts, e.g., listservs, social media, mental health advocacy organizations, clinicaltrials.gov and word of mouth
- Demographics of the study population through the first 5 months of the study: Mean age 46.3; 84% female; 90% white, 3% Black; 90% non-Hispanic; 82% bachelor’s degree or higher
- Limitations:
  - enrollment may relate to comfort or time to complete online research surveys
  - data are self-report (not verifiable) but nested sample of known NIMH volunteers and patients can help validate some study findings including a COVID-19 specific questionnaire developed for the study
Mental Health Impact of COVID-19 Pandemic on Health Care Workers

New Study

- All online survey study only that utilized a sample of convenience;
- Priority aims for this study were to initiate an all online survey study using new online techniques for consent and data gathering, and to quickly start collecting data during an intense period of the COVID-19 pandemic
- Study was not intended to be an epidemiological study and given the sampling method will have limitations with regard to generalization of results

Results/Summary:
- The enrollment period was approximately 1 month in May-June 2020. Enrollment has closed with 1300 individuals consenting for the study and over 900 filled out more than 3 of the survey instruments. Of the 900+ participants, 85% were women, mean age 44 years, with race/ethnicity skewed toward white/Caucasian populations
Impact on Anxiety and Motivation of COVID-19 and Predictors of Individual Responses

New Study NCT04377100  PI: Grillon and Ernst

- **Recruits** from general population and individuals who have **previously participated** in NIH studies, have been comprehensively clinically characterized, and taken part in fMRI studies; participants will be assessed again when the threat of the pandemic is significantly reduced.

- **Online questionnaires** (on CTDB platform) and two online behavioral tasks, a motivation task (incentive-related finger tapping) and the standard attention-bias dot-probe task.

**Results/Summary:**

- About **800** participants completed the study: **260 NIH participants (69 with an anxiety disorder, and 191 healthy)**, and **540 participants from the general population**

- Compared to non-anxious, anxious individuals show: Weaker motivation to work for a reward (motivation task); Larger attention bias for threat stimuli (dot-probe task); More severe worrying and more physical complaints (COVID-19 survey).

- Trainees will present 6 posters at the NIMH Scientific Training Day.

- Planned statistics to examine moderators of the effects of the COVID-pandemic on mental health. Such moderators include demographic (age, sex, SES, ethnicity) and clinical factors, as well as resilience, executive function capacity.
Collaborating with NIAID on COVID-19 Research

In Progress  NCT 044111147

- **NIAID COVID-19 Survivor Study:** A Longitudinal Study of COVID-19 Sequelae and Immunity (PI: M. Sneller)

- **Adult men and women recovering from COVID-19** (n= up to 300) and their household contacts (n= up to 400) over next 3 years, followed at regular intervals every 6 months

- **Mental health measures and evaluations** provided by Dr. Joyce Chung, Dr. Haniya Raza, Dr. Onyi Okeke for a subset of sample (n=100) to understand the mental health symptoms in survivors including “long haulers”
Ask Suicide Screening Questions (ASQ) MODIFIED DURING COVID-19 (Horowitz et al.)

Mental Health Resources for NIH Staff During COVID-19 Pandemic with NIMH

Coping with COVID-19: How to Manage your Mental Health
NIH Director Dr. Francis Collins and National Institute on Mental Health Director Dr. Joshua Gordon discuss how to manage mental health during COVID-19.

https://www.youtube.com/watch?v=hD-5rN-7vOl&feature=youtu.be
Questions?

V I S I O N

NIMH envisions a world in which mental illnesses are prevented and cured.

M I S S I O N

To transform the understanding and treatment of mental illnesses through basic and clinical research, paving the way for prevention, recovery, and cure.