The **C**o**R**onav**I**ru**S** Health **I**mpact **S**urvey (CRISIS)

Intramural Research Program, National Institute of Mental Health and the Child Mind Institute

**Study Leaders:**

Investigators**:** K. Merikangas (NIMH, Johns Hopkins), M. Milham (Child Mind Institute; Nathan Kline), A. Stringaris (NIMH)

Collaborators: E. Bromet (Stony Brook), S. Colcombe (Nathan Kline), V. Zipunnikov (Johns Hopkins)

**Background and Aims:**

The COVID19 epidemic is rapidly emerging into one of the most significant worldwide disasters in human history. The tragic effects of the growing morbidity and mortality on individuals and families affected by the virus and those involved in their medical care are deeply disturbing. The broader impact across all levels of society due to policies that have been instituted to reduce the spread of COVID19 has led to a dramatic shift in human daily life including work, school, recreation/leisure, and social interactions. These individual and societal effects are particularly threatening to people with increased vulnerability due to mental disorders. There is an urgent need to identify resources at both the public health and individual levels that can be directed to prevent even further challenges to health and well- being beyond that of the virus itself.

The aims of this initiative are to: (1) to examine the extent and impact of life changes induced by the epidemic on the mental health and behavior of individuals and families across diverse international settings; and (2) to identify pre-, peri, and post-COVID19 demographic, social, and clinical predictors of both short- and long-term impairment and distress induced by COVID19 and its sequelae. The first descriptive aim will be accomplished by assessment of proximal emotional and behavioral responses to the epidemic, and persistence of symptoms/disorders, distress and impairment, as well as resilience over time. The second aim will be accomplished with pre-COVID socioeconomic, clinical and biological vulnerability factors from several diverse well characterized samples of youth and adults who are followed over time. Cross-study pre-COVID measures that will be key predictors of peri- and post-COVID well-being and functioning include mental health, physical health, biologic and genetic factors, famililal factors including income, education, occupational status, and family life experiences. Cross-state and cross-national collaborations will allow us to examine the associations between patterns of disease spread in time and space with impairment and distress resulting from the COVID-19 epidemic.

**Samples:**

The CRISIS will be used in the following well characterized samples underway by our research team:

**ADULTS**

* Family Study of Affective Spectrum Disorder, NIMH, IRP (K Merikangas, PI)
* Nathan Kline-Rockland Sample, a large-scale, community ascertained sample (M. Milham, S. Colcombe, Co-PI)
* Treatment Resistant Depression and Suicide Risk studies, NIMH IRP (C Zarate, PI, E Ballard)

**YOUTH**

* Characterization and Treatment Study of Depression in Adolescents, NIMH IRP (A. Stringaris, PI)
* Healthy Brain Network Child Mind Institute, NK Rockland (M. MIlham, PI)

There is a growing number of investigators of studies with previously collected multimodal data of adults and youth who have joined this collaborative effort including Australia, Canada, China, France, Germany, Greece, Switzerland, Israel, Italy, Singapore, Turkey, UK, and others. Translation and cross-translation are underway.

**Measures:**

The CRISISquestionnaires were developed through a collaborative effort between the research teams of Kathleen Merikangas and Argyris Stringaris at the National Institute of Mental Health Intramural Research Program Mood Spectrum Collaboration, and those of Michael P. Milham at the Child Mind Institute and the NYS Nathan S. Kline Institute for Psychiatric Research (S. Colcombe) and consultation with Evelyn Bromet, an expert on mental health impact of disasters, and Vadim Zipunnikov from Johns Hopkins, who has expertise in analytic models of multilevel prospective data and data from wearable devices.

Separate forms have been developed for adults, youth (ages 9-18) and parent/caretaker report on offspring. Shorter forms have also been created for use in descriptive studies. The Background form that is administered at the first assessment includes a section in that includes demographic and contextual information for the three months prior to the study. Other domains assessed in the CRISIS questionnaires include: Coronavirus/covid-19 health/exposure status; Life changes due to coronavirus/covid-19 crisis; Daily behaviors (sleep, activity); Emotions/worries; Media use; Substance use. At the initial interview, these measures are assessed for the three months prior to the interview, and a across intervals in the follow-up (e.g. one week, two weeks, monthly). The forms also contain open-ended queries that ask people to provide more information on any concerns they have to supplement the questions in the CRISIS. The Baseline form takes 10-12 minutes for completion and the Follow up Form takes about 7-8 minutes for completion. We have released the forms in MS Word format in order to allow other investigators to modify and translate the questionnaires. We are now adapting apps for Ecological Momentary Assessment for mobile administration that will also be available for IOS or android platforms in the near future.

Forms have been developed using REDCAP for computer administration and can facilitate establishment of REDCAP or equivalent platforms at other sites. We also developing a paper and pencil version with pre-scanning for administration in sites in which computer access is limited. We do not require data sharing for users of these questionnaires but encourage attribution and registry of use.  We also welcome collaborations with other COVID19 work groups that are now underway.

Psychometrics (i.e., test-retest and construct validity) of the CRISIS forms in pilot samples of more than 1000 people in the US and other countries are forthcoming. Work groups are also now working to adapt the study aims and forms for children with autism spectrum disorders, bipolar disorder, and adults in population studies of aging. This information will be used to inform development of educational information and online interventions for children and their families, and adults in the general population, as well as more focused efforts for subgroups at increased risk of impact of this crisis including children with developmental and learning problems, disadvantaged youth and their families, and people with chronic mental conditions. We are forming an international team of experts in online and web -based education and intervention programs to address the immediate needs identified in these surveys,

V0.2 (<https://github.com/nimh-mbdu/CRISIS/tree/d94bae3eba7b225f89fb310eae881d1d73ee9126>)**Attribution License:** CC-BY-4.0 (<https://creativecommons.org/licenses/by/4.0/>)