COVID-19 and mental health measurement working group
Department of Mental Health
Johns Hopkins Bloomberg School of Public Health (JHSPH)
March 18, 2020

The world is entering into a new phase with COVID-19 spreading rapidly. People will be studying various consequences of the COVID-19 pandemic and mental and behavioral health should be a core part of that effort. There is a robust literature on how environmental crises, such as SARS or natural disasters, can lead to mental health challenges, including loneliness, acute stress, anxiety, and depression. Understanding how mental health evolves as a result of this serious global outbreak will inform prevention and treatment strategies moving forward, including allocation of resources to those most in need. Critically, these data can also serve as evidence-based information for public health organizations and the public as a whole.

We are writing to request that you include a core set of items on mental health measures in your ongoing surveys of individuals across the United States and world. Below we highlight 6 key measures that will allow researchers to study the broad public mental health impacts of COVID-19. Below we also include other measures that may be of interest (Appendix A), but the 6 key items will provide a basis for comparisons across studies. We have included the Source next to each item and a list of References in Appendix B.

We are particularly interested in situations where we will be able to have longitudinal measures of mental health on a consistent cohort of individuals, or even repeated cross-sections of the same (or similar) populations. Those will allow us to even better understand how mental health changes over time within the current context.

These data will be leveraged to address many questions, such as:
- Which individuals are at greatest risk for high levels of mental health distress during a pandemic? [This will depend, in part, on what additional information are available in the core survey instrument]
- As individuals spend more time inside and isolated, how does their mental health distress evolve? [This assumes that the survey is asking about strategies people are doing, and that there are longitudinal measures]
- How do different behaviors (such as media consumption) relate to mental health?

We are providing this as a resource and do not require nor expect partnership.

Core mental health questions:
In the past 7 days, how often...

1. ...Have you felt nervous, anxious, or on edge? [Source: Adapted from the GAD-7]
2. ...Have you felt depressed? [Source: Adapted from the CES-D]
3. ...Have you felt lonely? [Source: Adapted from the CES-D]

4. ...Have you felt hopeful about the future? [Source: Adapted from the CES-D]
5. ...Have you had physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart, when <u>thinking</u> about your experience (e.g., social distancing, loss of income/work, concerns about infection) with the coronavirus/COVID-19 pandemic? [Source: Adapted from the Impact to Event Scale - Revised]

   Response options for items 1- 5 are:
   A. Not at all or less than 1 day;
   B. 1-2 days;
   C. 3-4 days;
   D. 5-7 days

6. Existing diagnosis of a mental disorder: "Has a doctor or other healthcare provider EVER told you that you have a mental health condition?" [Source: Adapted from The Behavioral Risk Factor Surveillance System (BRFSS)]

   Response option: Yes/No

Secondary set of questions:
1. **Social distancing behaviors:** "Which of these recommendations did you follow during the past week? (Check all that apply)" [Source: Newly developed based on existing literature and CDC guidelines]

   Response options:
   A. Avoid crowded places;
   B. Avoid public places;
   C. Keep your distance from others (6 feet);
   D. Change school or work arrangements;
   E. Isolate yourself if you have symptoms;
   F. Quarantine yourself even if you do not have symptoms.

2. "Which of these additional measures did you take during past week? (yes/no)" [Source: UAS]

   Response options:
   A. Worn a face mask;
   B. Washed your hands with soap or used hand sanitizer several times per day;
   C. Canceled or postponed air travel for work;
   D. Canceled or postponed air travel for pleasure;
   E. Canceled or postponed personal or social activities;
   F. Visited a doctor;
   G. Canceled a doctor's appointment;
   H. Stockpiled food or water;
   I. Avoided contact with people who could be high-risk;
   J. Prayed

3. **Connectedness:**

Loneliness usually is seen as having two components: the actual social disconnectedness and the feeling. Often people feel lonely without necessarily being disconnected. And while people are getting physically disconnected, it is possible to stay in touch via phone, skype, or zoom.

3a. How many people have you been in touch with over the last week?

3b. What approaches did you use to stay connected?

3c. When was the last time you had face to face contact?

3d. When was the last time you had physical contact with a person (including friendly hug or kiss)?

4. **Substance use:**
   4a. "During the past 7 days, on how many days did you drink one or more drinks of an alcoholic beverage?" [Source: Adapted from NSDUH, 2019 - time frame changed from past 30 to 7 days]

   Response option: Number of days

   4b. "On the days that you drank during the past 7 days, how many drinks did you usually have each day? Count as a drink a can or bottle of beer; a wine cooler or a glass of wine, champagne, or sherry; a shot of liquor or a mixed drink or cocktail." [Source: Adapted from NSDUH, 2019]

   Response option: Number of drinks

   4c. "During the past 7 days, on how many days did you use marijuana or hashish?" [Source: Adapted from NSDUH, 2019]

   Response option: Number of days

   4d. "During the past 7 days, on how many days did you use any other drugs or prescription medication for non-medical reasons?" [Source: Adapted from NSDUH, 2019]

   Response option: Number of days

   4e. "Which of the drugs or prescription medications have you used for non-medical reasons in the past 7 days (Check all that apply)?" [Source: Adapted from NSDUH, 2019]

   Response Options:
   A. Cocaine (coke, crack, etc.)
   B. Prescribed Amphetamine type stimulants (Ritalin, Concerta, Dexedrine, Adderall, diet pills, etc.)
   C. Methamphetamine (speed, crystal meth, ice, etc.)
   D. Inhalants (nitrous oxide, glue, gas, paint thinner, etc.)
   E. Sedatives or sleeping pills (Valium, Serepax, Ativan, Librium, Xanax, Rohypnol, GHB, etc.)
   F. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, ecstasy, etc.)

G. Street Opioids (heroin, opium, etc.)
H. Prescribed opioids (fentanyl, oxycodone [OxyContin, Percocet], hydrocodone [Vicodin], methadone, buprenorphine, etc.)

5. **Intimate partner violence (IPV):**

5a. Over the past week, has there been an higher than usual amount of fights with adults or children you live with?

Response options: Yes, No, Not sure/I don't know, Refused

5b. Over the past week, has your partner said things to you like that you were a loser, a failure, or not good enough? [Source: NIPSVS; CDC]

Response options: Yes, No, Not sure/I don't know, Refused

5c. Over the past week, has your partner threatened you with physical violence? This includes threatening to hit, slap, push, kick, or physically hurt you in any way. [Source: BRFSS; CDC]

Response options: Yes, No, Not sure/I don't know, Refused

Written by:
COVID-19 and Mental Health Measurement Working Group
Johns Hopkins Bloomberg School of Public Health (JHSPH)

Members:
M. Daniele Fallin, JHSPH
Calliope Holingue, Kennedy Krieger Institute, JHSPH
Renee Johnson, JHSPH
Luke Kalb, Kennedy Krieger Institute, JHSPH
Frauke Kreuter, University of Maryland, University of Mannheim
Elizabeth Stuart, JHSPH
Johannes Thrul, JHSPH
Cindy Veldhuis, Columbia University

Appendix A: Additional variables ideally available, to help interpret the results or for additional insights

- Age
- Race and Ethnicity
- Sex and Gender
- Sexual and gender identity
- Relationship status and household composition (e.g., number and ages of children in the home, schooling of children before and during COVID-19)Dependents on one's care in household?
- Has respondent needed to provide care for household-based dependent with lab-confirmed or suspected diagnosis of COVID-19?
- Indicators of socioeconomic position (e.g., educational attainment, income, food insecurity, housing instability)
- Location (rural, urban; population density; ideally zip code or geographic area)
- Pre-existing mental and physical health conditions
- Behaviors respondents are changing or doing in response to COVID-19
- Extent of spread of COVID-19 in their local area [may be able to merge in if know geographic area]
- Measures of self-efficacy, coping, family disputes and neighborhood cohesion
- Whether have symptoms or have been diagnosed with COVID-19
- Whether know someone with the symptoms of, or has been diagnosed with, COVID-19
- Access to guns
- Suicidal behavior
- Violence

Core employment questions to those employed:

- Are you employed?
- Have you been furloughed?
- If unemployed/furloughed: do you receive unemployment benefits or other kinds of financial support?
- What industry do you work in? (if unemployed/furloughed: worked in most recently)
- Does your firm have a telework policy?
- Can you work from home?
- How long have you worked from home?

Appendix B: Sources

1. Spitzer, Robert L., et al. "A brief measure for assessing generalized anxiety disorder: the GAD-7." *Archives of internal medicine* 166.10 (2006): 1092-1097.
2. Radloff, Lenore Sawyer. "The CES-D scale: A self-report depression scale for research in the general population." *Applied psychological measurement* 1.3 (1977): 385-401.
3. Weiss, Daniel S. "The impact of event scale: revised." *Cross-cultural assessment of psychological trauma and PTSD*. Springer, Boston, MA, 2007. 219-238.
4. Nelson, David E., et al. "Reliability and validity of measures from the Behavioral Risk Factor Surveillance System (BRFSS)." *Sozial-und Praventivmedizin* 46 (2001): S3-42.
5. Bults, Marloes, et al. "Perceived risk, anxiety, and behavioural responses of the general public during the early phase of the Influenza A (H1N1) pandemic in the Netherlands: results of three consecutive online surveys." *BMC public health* 11.1 (2011): 2.
6. Centers for Disease Control and Prevention (CDC). Interim US Guidance for Risk Assessment and Public Health Management of Persons with Potential Coronavirus Disease 2019 (COVID-19) Exposures: Geographic Risk and Contacts of Laboratory-confirmed Cases. https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html. Published 2020.
7. Radimer, K.L. 2002. Measurement of household food security in the USA and other industrialized countries. Public Health Nutrition, 5(6A) :859-64. (available at http://www.ingentaconnect.com/content/cabi/phn).
8. Centers for Disease Control and Prevention (2005). Behavioral Risk Factor Surveillance System Survey Questionnaire. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.
9. Centers for Disease Control and Prevention (2017). The National Intimate Partner and Sexual Violence Survey (NIPSVS) Questionnaire. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.