

Supplemental Table 1. Measures of potential correlates of psychiatric conditions among U.S. veterans who were infected with COVID-19

Sociodemographic characteristics	Age, gender, race, education, marital status, income (\$60,000 or more vs less than \$60,000), employment, and combat status
Peri-pandemic psychiatric diagnosis	
Major depressive disorder (MDD)	A score ≥ 3 on the two depressive symptoms of the PHQ-4 occurring in the past two weeks[1].
Generalized anxiety disorder (GAD)	A score ≥ 3 on the two generalized anxiety items of the PHQ-4 occurring in the past two weeks[1].
Pandemic-related stress symptoms	A score ≥ 5 on the brief, 4-item PTSD Checklist for DSM-5[2]: “Thinking about the Coronavirus/COVID-19 pandemic, please indicate how much you have been bothered by repeated, disturbing, and unwanted memories of the pandemic”
Alcohol use disorder	A score ≥ 8 on the Alcohol Use Disorders Identification Test (AUDIT)[3].
Drug use disorder	Screen for Drug Use question: How many days in the past year have you used <u>non-prescription</u> drugs?; a response of ≥ 7 days on this question is indicative of a positive screen for DUD; if the response to this question is 6 or fewer days, a response of ≥ 2 days to the question “How many days in the past 12 months have you used drugs more than you meant to?” is indicative of a positive screen for drug use disorder.
Suicidal ideation	Suicidal ideation was assessed using two items adapted from the PHQ-9[4] Item 9, which asked participants to report suicidal thoughts during the prior two weeks. A positive screen was indicated by a response of “several days,” “more than half the days,” or “nearly every day” to at least one of the following questions: “How often have you been bothered by thoughts that you might be better off dead?” and “How often have you been bothered by thoughts of hurting yourself in some way?”
Pre-pandemic risk factors	
Psychiatric symptom severity	MDD symptoms – participant responses on the two depressive symptoms of the PHQ-4 occurring in the past two weeks[1]; Posttraumatic stress disorder (PTSD) symptoms- assessed with the PTSD Checklist for DSM-5[5]; GAD symptoms – participant responses on the two generalized anxiety items of the PHQ-4 occurring in the past two weeks[1].
Alcohol use problem severity	AUDIT total score[3]
Non-prescription drug use days in past year	Screen for Drug Use question: How many days in the past year have you used <u>non-prescription</u> drugs?
Cumulative trauma burden	Count of potentially traumatic events on the Life Events Checklist for DSM-5[6].
Adverse childhood experiences	Score on Adverse Childhood Experiences Questionnaire[7].
Suicide variables	
<i>Lifetime suicide attempt</i>	“Have you ever tried to kill yourself?”
<i>Past-year suicidal ideation</i>	Positive endorsement of question 2 of the Suicide Behaviors Questionnaire-Revised (SBQ-R): “How often have you thought about killing yourself in the past year?”[8]
Psychosocial difficulties	Score on the Brief Inventory of Psychosocial Functioning[9].
Loneliness	Score on 3-item measure adapted from the UCLA Loneliness Scale[10].
Impulsivity	Barratt Impulsiveness Scale-Brief (BIS)[11], which assesses for the personality construct of impulsiveness through measurement of three subtraits, including attentional, motor, and non-planning impulsiveness. Higher scores indicate greater impulsivity.
Physical health characteristics	
<i>Number of medical conditions</i>	Sum of number of medical conditions endorsed in response to question: “Has a doctor or healthcare professional ever told you that you have any of the following medical conditions?” (e.g., arthritis, cancer, diabetes, heart disease, asthma, kidney disease). Range: 0-24 conditions.
<i>Any disability</i>	Any disability in activities of daily living or instrumental activities of daily living. The following questions were asked: “At the present time, do you need help from another person to do the following?” (e.g., bathe; walk around your home or apartment; get in and out of chair; pay bills or manage money; prepare bills; get dressed)[12]
Pre-pandemic protective factors	

Engement in mental health treatment	Positive endorsement of current treatment with psychotropic medication and/or psychotherapy or counseling: “Are you currently taking prescription medication for a psychiatric or emotional problem?” Are you currently receiving psychotherapy or counseling for a psychiatric or emotional problem?
Perceived social support	Score on 5-item version of the Medical Outcomes Study Social Support Scale[13,14].
Protective psychosocial characteristics	
Resilience	Score on Connor-Davidson Resilience Scale-10[15].
Purpose in life	Score on Purpose in Life Test-Short Form[16].
Dispositional optimism	Score on single-item measure of optimism from Life Orientation Test-Revised[17]; “In uncertain times, I usually expect the best”; (rating 1=strongly disagree to 7=strongly agree).
Dispositional gratitude	Score on single-item measure of gratitude from Gratitude Questionnaire[18]; “I have so much in life to be thankful for”; (rating 1=strongly disagree to 7=strongly agree).
Curiosity/exploration	Score on single-item measure of curiosity/exploration from Curiosity and Exploration Inventory-II[19]; “I frequently find myself looking for new opportunities to grow as a person (e.g., information, people, resources)”; (rating 1=strongly disagree to 7=strongly agree).
Community integration	Perceived level of community integration: “I feel well integrated in my community (e.g., regularly participate in community activities)”; (rating 1=strongly disagree to 7=strongly agree).
COVID-19 variables (peri-pandemic)	Hours consuming COVID-related media, self, household, and non-household member infected with COVID and COVID-related worries, social restriction stress, and financial stress were assessed using a questionnaire developed by the National Center for PTSD based on the Coronavirus Health Impact Survey[20]. COVID-related worries(e.g., “In the past month, how worried have you been about being infected with coronavirus?”); COVID-social restriction stress (e.g., “How stressful have these changes in social contacts been for you?”); COVID-related financial hardship (e.g., “In the past month, to what degree have changes related to the pandemic created financial problems for you or your family?”)

COVID=coronavirus disease, DSM-5=Diagnostic and Statistical Manual of Mental Disorders, 5th edition, PHQ=patient health questionnaire

References

- 1 Kroenke K, Spitzer RL, Williams JB, Lowe B. An ultra-brief screening scale for anxiety and depression: the PHQ-4. *Psychosomatics* 2009; 50: 613-621.
- 2 Geier T, Hunt JC, Hanson JL. Validation of abbreviated four- and eight-item versions of the PTSD checklist for DSM-5 in a traumatically injured sample. *J Trauma Stress* 2020; 33: 218-226.
- 3 Bohn MJ, Babor TF, Kranzler HR. The Alcohol Use Disorders Identification Test (AUDIT): validation of a screening instrument for use in medical settings. *J Stud Alcohol* 1995; 56: 423-432.
- 4 Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med* 2001; 16: 606-613.
- 5 Weathers F, Litz B, Keane T et al. The PTSD checklist for DSM-5 (PCL-5) [Online]. Available: Scale available at: from the National Center for PTSD at <http://www.ptsd.va.gov> [Accessed on Feb 24, 2021].
- 6 Weathers F, Blake DD, Schnurr PP et al. The Life Events Checklist for DSM-5 (LEC-5). Instrument available from the National Center for PTSD at www.ptsd.va.gov [Online]. [Accessed on Feb 24, 2021].
- 7 Felitti V, Anda RF, Nordenberg D et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med* 1998; 14: 245-258.
- 8 Osman A, Bagge C, Gutierrez P et al. The Suicidal Behaviors Questionnaire Revised (SBQ-R): Validation with clinical and nonclinical samples. *Assessment* 2001; 8: 443-454.
- 9 Marx B, Schnurr P, Lunney C et al. The Brief Inventory of Psychosocial Functioning (B-IPF). [Measurement instrument]. Available from <https://www.ptsd.va.gov>. [Accessed on Mar 14, 2021]
- 10 Hughes M, Waite L, Hawkey L, Cacioppo J. A short scale for measuring loneliness in large surveys: Results from two population-based studies. *Res Aging* 2004; 26: 655-672.
- 11 Steinberg L, Sharp C, Stanford MS, Tharp AT. New tricks on an old measure: The development of the impulsiveness scale-brief (BIS-Brief). *Psychol Assess* 2013, 25, 216-226.
- 12 Hardy S, Gill T. Recovery from disability among community-dwelling older persons. *JAMA* 2004; 291: 1596-1602.
- 13 Sherbourne C, Stewart A. The MOS social support survey. *Soc Sci Med* 1991; 32: 705-714.
- 14 Amstadter A, Begle A, Cisler J et al. Prevalence and correlates of poor self-rated health in the United States: The national elder mistreatment study. *Am J Geriatr Psychiatry* 2011; 18: 615-623.
- 15 Campbell-Sills L, Stein M. Psychometric analysis and refinement of the Connor-Davidson Resilience Scale (CD-RISC): validation of a 10-item measure of resilience. *J Trauma Stress* 2007; 20: 1019-1028.
- 16 Schulenberg S, Schnetzer LW, Buchanan EM. The Purpose in Life Test-Short Form: development and psychometric support. *J Happiness Stud* 2010; 20: 1-16.

- 17 Scheier M, Carver CS, Bridges MW. Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): a re-evaluation of the Life Orientation Test. *J Pers Soc Psychol* 1994; 67: 1063-1078.
- 18 McCullough M, Emmons RA, Tsang J. The grateful disposition: a conceptual and empirical topography. *J Pers Soc Psychol* 2002, 82: 112-127.
- 19 Kashdan T, Gallagher MW, Silvia PJ. The Curiosity and Exploration Inventory-II: Development, factor structure, and psychometrics. *J Res Pers* 2009; 43: 987-998.
- 20 National Institute of Mental Health Intramural Research Program Mood Spectrum Collaboration, Child Mind Institute of the NYS Nathan S. Kline Institute for Psychiatric Research. The CoRonavIruS Health Impact Survey (CRISIS). https://www.nlm.nih.gov/dr2/CRISIS_Adult_Self-Report_Baseline_Current_Form_V0.3.pdf. Accessed Mar 11th, 2021.