

Supplementary Table 2: Suggested list of questionnaires for investigation of persistent fatigue & symptoms after COVID-19

Questionnaire	Symptom Domain	Comment (Caseness for clinically-significant disorder in the relevant domain - if applicable)	Relevant references
Somatic and Psychological Health Report (SPHERE)	Fatigue	SPHERE: 34-item instrument assessing a range of physical and psychological symptoms that commonly accompany fatigue. Screens for caseness for both fatigue and mood disorder in medical and psychiatric settings. <i>Fatigue caseness (SOMA): ≥ 3 indicates 'clinically-significant'</i> <i>Mood disturbance caseness (PSYCH) ≥ 2 indicates 'clinically-significant'</i>	Hickie IB, Davenport TA, Hadzi-Pavlovic D, Koschera A, Naismith SL, Scott EM, et al. Development of a simple screening tool for common mental disorders in general practice. <i>Med J Austr</i> 2001;175(Suppl.):S10-7.
Chalder Fatigue Scale		Chalder fatigue scale: 11-item instrument with 4-choice format measure fatigue severity. Provides scores for mental and physical fatigue. ≥ 4 (bimodal scoring) indicates 'severe fatigue'.	Chalder T, Berelowitz G, Pawlikowska T, Watts L, Wessely S, Wright D, et al. Development of a fatigue scale. <i>J Psychosom Res</i> 1993;37:147-53.
Checklist Individual Strength (CIS)		CIS: 20-item inventory with four subscales: fatigue severity, concentration, reduced motivation, and activity. Fatigue severity measures general and physical fatigue. <i>The fatigue severity subscale ≥ 35 indicates severe fatigue.</i>	Bultmann U, de Vries M, Beurskens AJ, Bleijenberg G, Vercoulen JH, Kant IJ. Measurement of prolonged fatigue in the working population: determination of a cut-off point for the Checklist Individual Strength. <i>J Occup Health Psychol</i> 2000;5:411-6.
PedsQL-Multidimensional Fatigue Scale		PedsQL-MFS: 18-item, includes three subscales: general fatigue (six items), sleep/rest fatigue (six items), and cognitive fatigue (six items). Each item has a Likert-type response scale, with higher scores indicating fewer fatigue symptoms.	Worm-Smeitink M, Gielissen M, Bloot L, van Laarhoven HWM, van Engelen BGM, van Riel P, Bleijenberg G, Nikolaus S, Knoop H. The assessment of fatigue: Psychometric qualities and norms for the Checklist individual strength. <i>J Psychosom Res.</i> 2017; 98:40-46.
Fatigue Severity Scale (FSS)		FSS: 9-item on 7-point scale measuring severity of fatigue and affects the person's activities. <i>A score of > 4 indicates problematic fatigue.</i>	Varni JW, Burwinkle TM, Katz ER, Meeske K, Dickinson, P. The PedsQL in pediatric cancer: reliability and validity of the Pediatric Quality of Life Inventory Generic Core Scales, Multidimensional Fatigue Scale, and Cancer Module. <i>Cancer</i> 2002, 94(7), 2090-106. Krupp LB, LaRocca NG, et al. The fatigue severity scale. Application to patients with multiple sclerosis and systemic lupus erythematosus. <i>Arch Neurol</i> 1989; 46(10): 1121-3.
PEM items from DePaul Symptom Questionnaire (DSQ)	Post-exertional malaise (PEM)	DSQ: Five items from the DSQ to assess frequency and severity of the common post-exertional exacerbation of symptoms (PEM) over 6 months.	Jason, L.; Jessen, T.; Porter, N.; Boulton, A.; Gloria-Njoku, M.; Friedberg, F. Examining Types of Fatigue among Individuals with ME/CFS. <i>Disabil. Stud Q.</i> 2009.
Fatigue and Energy Scale (FES)		FES: A 6 item questionnaire which records the current fatigue state (i.e., "right now") and its severity in two dimensions (physical and mental fatigue).	Cotler J, Holtzman C, et al. A Brief Questionnaire to Assess Post-Exertional Malaise. <i>Diagnostics (Basel, Switzerland)</i> 2018; 8(3): 66. Keech A, Sandler CX, Vollmer-Conna U, Cvejic E, Lloyd AR, & Barry, BK. (2015). Capturing the post-exertional exacerbation of fatigue following physical and cognitive challenge in patients with chronic fatigue syndrome. <i>J Psychosomatic Research</i>, 79(6), 537-549.
Pittsburgh Sleep Quality Index (PSQI)	Sleep disturbance	PSQI: A 19-item questionnaire evaluating sleep quality and disturbances over the past month. A total score (0-21) is calculated from 7 component scores (subjective sleep quality, sleep latency, sleep duration, habitual sleep	Buysse DJ, Reynolds 3rd CF, Monk TH, Berman SR, Kupfer DJ. The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. <i>Psychiatry Res</i> 1989;28:193-213.

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Sleep Assessment Questionnaire (SAQ)		<p>efficiency, sleep disturbances, use of sleeping medication, and daytime dysfunction). <i>Total score > 5 suggests poor sleep quality.</i></p> <p>SAQ (proprietary): A 17-item instrument measuring 7 factors intended to screen for sleep disorders: insomnia/hypersomnia, restlessness, sleep schedule, excessive daytime sleeping, sleep apnoea, restless leg/motility, and non-restorative sleep.</p>	<p>Unger ER, Nisenbaum R, Moldofsky H, et al. Sleep assessment in a population-based study of chronic fatigue syndrome. <i>BMC Neurol.</i> 2004;4:6.</p>
McGill Pain Questionnaire (MPQ)	Pain	<p>MPQ: For characterisation of pain states and their severity. Available in short and long form. The four components include: (1) a human figure drawing to indicate the location of pain; (2) a series of 78 adjectives to describe patient experience; (3) questions about prior pain experience, pain location, and the use of pain medication; and (4) a pain intensity index. The short form does not assess areas of bodily involvement.</p>	<p>Melzack R. The McGill Pain Questionnaire: major properties and scoring methods. <i>Pain</i> 1975;1:277-99.</p>
Brief Pain Inventory (BPI)		<p>BPI: Assesses the severity and impact of pain on daily function, location of pain, pain medications and amount of pain relief in the past 24 hours or the past week.</p>	<p>Cleeland CS. Measurement of pain by subjective report. In: Chapman CR, Loeser JD, editors. <i>Advances in Pain Research and Therapy</i>, Volume 12: Issues in Pain Measurement. New York: Raven Press; 1989. pp. 391-403.</p>
Hospital Anxiety and Depression Symptoms (HADS)	Mental health (anxiety/depression)	<p>HADS (proprietary): 14-item questionnaire measuring anxiety and depression in hospital and community settings. Detects presence and severity of mood disorders. <i>For both scales ≥ 8 indicates caseness for anxiety or depression. 8-10 Mild, 11-14 Moderate, 15-21 Severe.</i></p>	<p>Zigmond AS, Snaith RP. The hospital anxiety and depression scale. <i>Acta Psychiatr Scand</i> 1983; 67(6): 361-70.</p>
Patient Health Questionnaire-9 (PHQ9)		<p>PHQ-9: 9 item questionnaire to assess the severity of depression. <i>Depression severity: 0-4 none, 5-9 mild, 10-14 moderate, 15-19 moderately severe, 20-27 severe</i></p>	<p>Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. <i>J Gen Intern Med.</i> 2001 16(9):606-13.</p>
Generalised Anxiety Disorder Assessment (GAD-7)		<p>GAD-7: 7-item anxiety questionnaire to assess the severity of anxiety. <i>Anxiety severity: 5-9 mild, 10-14 moderate, >15 severe.</i></p>	<p>Spitzer RL, Kroenke K, Williams JB, Löwe B. A brief measure for assessing generalized anxiety disorder: the GAD-7. <i>Arch Intern Med.</i> 2006 22;166(10):1092-7.</p>
General Health Questionnaire (GHQ)		<p>GHQ (proprietary): 28-item questionnaire for screening minor psychiatric disorders in the general population. Assesses the individual's current state and asks if that differs from their usual state. Suitable from adolescence upwards (not children).</p>	<p>Goldberg D, Williams P. A user's guide to the General Health Questionnaire. Windsor, UK: NFER-Nelson Publishing Company, Pty., Ltd.; 1998.</p>
Depression Anxiety Stress Scale 21 (DASS21)		<p>DASS21: 21-item designed to measure the emotional states of depression, anxiety and stress (7 items per scale).</p>	<p>Lovibond SH. & Lovibond, PF (1995). Manual for the Depression Anxiety & Stress Scales. (2nd Ed.) Sydney: Psychology Foundation.</p>
Beck Depression Inventory (BDI)		<p>BDI: 21-item questionnaire measuring depressive symptomatology. Higher scores indicate more depression.</p>	<p>Beck AT, Steer RA, Brown GK. Manual for the Beck Depression Inventory-II 1996; San Antonio, TX: Psychological Corporation.</p>
Beck Anxiety Inventory (BAI)			

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		BAI: 21-item self-report instrument measuring anxiety. Higher scores indicate more anxiety.	Beck AT, Epstein N, et al. An inventory for measuring clinical anxiety: psychometric properties. <i>J Consult Clin Psychol</i> 1988; 56(6): 893-7.
Medical Outcomes Survey Short Form-36 (SF-36)	Functional impairment	SF-36: 36-item measure of physical health, mental health and quality of life. Measures the effects of the illness on physical activity, social activity, usual role activities, bodily pain, general mental health, vitality, and general health perceptions over the previous 4 weeks.	Ware Jr JE, Sherbourne CD. The MOS 36-item Short-Form Health Survey (SF-36). Conceptual framework and item selection. <i>Med Care</i> 1992;30:473–83.
Sickness Impact Profile (SIP)		SIP: measures functional disability in different areas of daily functioning. Has 12 subscales: 12 categories including sleep and rest, eating, work, home management, recreation and pastimes, ambulation, mobility, body care and movement, social interaction, alertness behaviour, emotional behaviour, and communication.	Bergner M, Bobbitt RA, Carter WB, Gilson BS: the Sickness Impact Profile. Development and final revision of a health status measure. <i>Med Care</i> 1981;19:787–805.
Brief Disability Questionnaire (BDQ)		BDQ: 8-item, assessing disability in everyday activities. Measure physical disability and ‘mental-health’ disability. Score 8–13 moderate disability, 14-22 severe disability. Asks individuals to estimate how many days over the prior few weeks they were unable to carry out their usual role and how many days they spent in bed.	Von Korff M, Ustun TB, Ormel J, Kaplan I, Simon GE. Self-report disability in an international primary care study of psychological illness. <i>J Clin Epidemiol</i> 1996;49:297-303.
PedsQL - PedsQLTM Generic Core Scales		PedsQL: 23 items to measure functional impairment in children aged 2–18.	Varni JW, Seid M, Kurtin PS. The PedQLTM 4.0: reliability and validity of the Pediatric Quality of Life Inventory Version 4.0 Generic Core Scales in healthy and patient populations. <i>Med Care</i> 2001;39:800–12.
Illness Perception Questionnaire (IPQ)	Psychological domains	IPQ: Measures individuals expectations of their illness. Has five scales which assess <i>identity</i> (the symptoms the patient associates with the illness), <i>cause</i> (personal ideas about aetiology), <i>timeline</i> (perceived duration of illness), <i>consequences</i> (expected effects and outcome and <i>cure control</i> (how the individual controls or recovers from the illness).	Weinman J, Petrie KJ, et al. The illness perception questionnaire: A new method for assessing the cognitive representation of illness. <i>Psychology & Health</i> 1996; 11(3): 431-45.
Positive and Negative Affect Schedule (PANAS)		PANAS: 20-item to measure positive affect (10-items) and negative affect (10-items negative affect)	Watson D, Clark LA, Tellegen A. Development and validation of brief measures of positive and negative affect: the PANAS scales. <i>J Pers Soc Psychol.</i> 1988;54(6):1063-70.
Behavioural Responses to Illness Questionnaire (BRIQ)		BRIQ: 13-item questionnaire measuring illness-related behaviours: 1) <i>all-or-nothing</i> behaviour and 2) <i>limiting behaviour</i> (excessive rest).	Spence M, Moss-Morris R, Chalder T. The Behavioural Responses to Illness Questionnaire (BRIQ): a new predictive measure of medically unexplained symptoms following acute infection. <i>Psychol Med.</i> 2005 35(4):583-93.
Coping Orientation to Problems Experienced (COPE) Scale		COPE Scale: 28-item questionnaire assessing how people cope with stress, includes problem-focused and emotion-focused scales.	Carver CS, Scheier MF, Weintraub JK. Assessing coping strategies: a theoretically based approach. <i>J Pers Soc Psychol</i> 1986;56(2):267-283.