

# Biobehavioral Research Recommendations

## Psychosocial Recommendations

Domain	Recommended Instruments	Additional, Optional Instruments
<b>Anxiety</b>	GAD-2	PROMIS Anxiety 4a
<b>Depression</b>	PHQ-2	PROMIS Depression 4a
<b>Sleep</b>	PROMIS Sleep Disturbance 6a + Sleep Duration	PROMIS Sleep-Related Impairment-4a (or 8a)
<b>Pain Catastrophizing</b>	6-item Pain Catastrophizing Scale PCS-SF	
<b>Sensory versus Affective Pain</b>	McGill Short Form	
<b>Pain Qualities / Neuropathic Pain / Widespread Pain</b>	PainDETECT + Body Map and Trajectory Images	Michigan Body Map
<b>Somatization</b>	Single item (included in the BACPAC required dataset): Is your low back pain more severe than pain in other parts of your body?	
<b>Perceived Stress</b>	4-item Perceived Stress Scale	
<b>Fear of Movement</b>	FABQ-PA (Fear Avoidance Beliefs Questionnaire - Physical Activity)	
<b>Chronic Pain Acceptance</b>	CPAQ-8	
<b>Coping Strategies</b>	CSQ-24	
<b>Affect</b>	PANAS Positive Affect 5 items	PANAS Positive Affect 10 Items
<b>Interoceptive Awareness including Ignoring pain</b>	4 of 8 scales (22 items) from the MAIA-2: Not-Distracting, Attention Regulation, Emotional Awareness, and Self-Regulation	
<b>Resilience/Protective Domains: Optimism or Positive Outlook</b>	HEAL POS	LOT-R

<b>Self-Efficacy / Sense of Control</b>	PSEQ-4	<ul style="list-style-type: none"> <li>• PROMIS SE for managing symptoms-4</li> <li>• PROMIS General Self-Efficacy</li> <li>• SEE for exercise</li> <li>• BPCQ on internal versus external control</li> </ul>
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## Social Adversity and Support

<b>PTSD / Adverse life Events</b>	PC-PTSD-5 with the addition of a question as to whether exposure to a traumatic event occurred A) as a child or B) as an adult or C) as both; possibly include a question on disclosure vs not disclosed	<ul style="list-style-type: none"> <li>• Life Events Checklist (LEC)</li> <li>• Childhood Traumatic Experiences Survey (CTES)</li> <li>• ACES</li> </ul>
<b>Financial Strain</b>	<p>Single item: “How hard is it for you (and your family) to pay for the very basics like food, medical care, and heating?”</p> <p>Response options: 1 = very hard, 2 = hard, 3 = somewhat hard, 4 = not very hard, and 5 = do not know.</p>	Thrive SDOH Tool
<b>Perceived Discrimination</b>	<p>Single item recommendation from NIMHD: “How often do people treat you unfairly because of your ethnicity or race?”</p> <p>Response scale of 0-3 Never to Always</p>	Addition of “color,” “sexual orientation,” and/or “gender identity” to the question.
<b>Social Support</b>	4-item PROMIS Emotional Support 4a V2	MOS Social Support
<b>Cognition</b>	<p>From PROMIS-29+2 (PROPr):</p> <p>In the past 7 days, I have been able to concentrate</p> <p>In the past 7 days, I have been able to remember to do things, like take medicine or buy something I needed</p> <p>Response options: 1=not at all, 2=a little bit, 3=somewhat, 4=quite a bit, 5=very much</p>	
<b>Personality</b>	No strong recommendation	6-item NEO-short form

<b>Pain Anxiety / Avoidance</b>	Pain Anxiety Symptoms Scale – Short Form	
<b>Pain-Related Disability</b>	Oswestry Disability Index	Pain interference and pain impact from BACPAC minimum dataset
<b>Expectancy</b>	Expectation of Pain Relief	HEAL treatment expectancy form
<b>Mindfulness</b>	No strong recommendation	<ul style="list-style-type: none"> <li>• FFMQ (Five Facet Mindfulness Questionnaire)</li> <li>• Experience Questionnaire</li> </ul>

**Other Optional Domains**

<b>Pain Behavior</b>	<p><b>PROMIS BANK 1.2 Pain Behavior 4 items:</b></p> <ul style="list-style-type: none"> <li>• In the past 7 days: When I was in pain I moved extremely slowly</li> <li>• When I was in pain I showed on my face (squinting eyes, opening eyes wide, frowning)</li> <li>• When I was in pain I became irritable</li> <li>• When I was in pain I appeared upset or sad.</li> </ul> <p>Response options: had no pain; never; rarely; sometimes; often.</p>
<b>Pain Sensitivity, Sensory Hypersensitivity, and Emotion Regulation</b>	8-item short form for Emotional & Behavioral Dyscontrol from Neuro-QOL

## Quantitative Sensory Testing Recommendations

Domain	Recommendation
<b>Pressure Pain Sensitivity</b>	The assessment will be measured using an analog algometer with a 1-cm rubber probe to quantify pressure pain thresholds (PPT). The primary location of the test will be performed on the lumbar region with the control site over the contralateral trapezius muscle.
<b>Temporal Summation</b>	The assessment will use a 40 g Neuropen Neurotip applied to the skin of the volar forearm and lumbar region.
<b>Conditioned Pain Modulation</b>	Each site will be using a variety of conditioned pain modulation in order to test different approaches to elicit CPM, with the idea that we will look at these results longitudinally in an aggregate data analysis.