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Appendix 1. Demographics and medical characteristics of patients who met versus did not meet eligibility criteria for study inclusion.

	Mean ± SD (Range) or N (%)	
	Included patients (N=50)	Excluded patients (N=127)
Age, years	58 ± 14 (22-76)	56 ± 16 (16-85)
Sex		
Female	38 (76%)	91 (72%)
Male	12 (24%)	36 (28%)
Race		
White/Caucasian	40 (80%)	100 (79%)
African American	8 (16%)	19 (15%)
Asian	1 (2%)	6 (5%)
Other	1 (2%)	2 (2%)
Ethnicity*		
Hispanic	1 (2%)	2 (2%)
Non-Hispanic	48 (98%)	125 (98%)
Pain duration*		
Less than 6 months	1 (2%)	21 (17%)
6-12 months	2 (4%)	21 (17%)
1-5 years	16 (35%)	65 (51%)
5-10 years	9 (20%)	14 (11%)
10+ years	18 (39%)	6 (5%)
Previous mental health diagnosis†		
Depression	26 (53%)	40 (32%)
Anxiety	18 (32%)	48 (38%)
PROMIS CAT scores†		
Depression	52.2 ± 9.1 (34.2-78.1)	50.5 ± 9.8 (34.2-73.1)
Anxiety	54.9 ± 9.4 (35.9-73.4)	54.1 ± 10.3 (32.9-82.9)
Physical Function	36.0 ± 6.7 (23.2-56.1)	39.2 ± 8.6 (14.7-60.7)
Pain Interference	62.3 ± 7.8 (33.6-73.7)	61.4 ± 7.7 (38.7-83.8)

*For the included patients: n=49 for ethnicity; n=46 for pain duration.

†For the excluded patients: n=126 for previous mental health diagnoses; n=100 for PROMIS Depression, Anxiety, and Physical Function; n=102 for PROMIS Pain Interference.

Abbreviations: PROMIS (Patient-Reported Outcomes Measurement Information System), CAT (Computer Adaptive Test).

Appendix 2. ICD-10 and DSM-5 diagnoses determined from in-person psychological assessment in 50 patients who were evaluated by a board-certified clinical psychologist as part of an interdisciplinary program for musculoskeletal conditions.			
ICD-10	DSM-5	Description	N
Pain Disorders			24
G89.4	316	Chronic pain syndrome	22
F45.42	300.82	Pain disorder with related psychological factors	2
Depressive Disorders			28
F06.31	293.83	Mood disorder due to known physiological condition with depressive features	3
F06.32	293.83	Mood disorder due to known physiological condition with MDD-like episode	6
F31.81	296.89	Bipolar II disorder	1
F32.4	296.25	Major depressive disorder, single episode, in partial remission	1
F32.9	296.2	Major depressive disorder, single episode, unspecified	5
F33.0	296.31	Major depressive disorder, recurrent, mild	2
F33.1	296.32	Major depressive disorder, recurrent, moderate	4
F33.41	296.35	Major depressive disorder, recurrent, in partial remission	5
F34.1	300.4	Dysthymic disorder	1
Anxiety Disorders			15
F41.0	300.01	Panic disorder (Episodic paroxysmal anxiety)	2
F41.1	300.02	Generalized anxiety disorder (GAD)	1
F41.9	300.00	Anxiety disorder, unspecified	5
F42	300.3	Obsessive compulsive disorder	2
F43.20	309.9	Adjustment disorder, unspecified	2
F43.23	309.28	Adjustment disorder with mixed anxiety and depressed mood	1
F43.9	309.9	Reaction to severe stress, unspecified	1
F06.4	298.84	Anxiety disorder due to known physiological condition	1
Other Disorders			4
F60.9	301.9	Personality disorder, unspecified	1
F90.9	314.01	Attention-deficit hyperactivity disorder, unspecified type	1
F98.0	307.6	Enuresis not due to a substance or known physiological condition	1
G47.00	780.52	Insomnia, unspecified	1

Abbreviation: MDD (Major depressive disorder).

Appendix 3. Diagnostic characteristics of PROMIS Depression score cutoffs compared to a clinical psychologist's assessment of a DSM-5 depressive disorder. (N=50)

PROMIS Depression cutoff score	Sensitivity	Specificity	PPV	NPV	AUC
39	96%	18%	60%	80%	0.57
40	96%	23%	61%	83%	0.60
41	96%	23%	61%	83%	0.60
42	96%	23%	61%	83%	0.60
43	96%	27%	63%	86%	0.62
44	96%	32%	64%	88%	0.64
45	96%	32%	64%	88%	0.64
46	96%	41%	68%	90%	0.69
47	96%	41%	68%	90%	0.69
48	93%	45%	68%	83%	0.69
49	89%	50%	69%	79%	0.70
50	82%	64%	74%	74%	0.73
51	82%	68%	77%	75%	0.75
52	82%	82%	85%	78%	0.82
53	79%	86%	88%	76%	0.82
54	71%	91%	91%	71%	0.81
55	57%	91%	89%	63%	0.74
56	46%	91%	87%	57%	0.69
57	46%	91%	87%	57%	0.69
58	32%	91%	82%	51%	0.62
59	29%	95%	89%	51%	0.62
60	29%	95%	89%	51%	0.62

The bolded row represents the PROMIS Depression cutoff score with the largest AUC.

Abbreviations: PROMIS (Patient-Reported Outcomes Measurement Information System), PPV (positive predictive value), NPV (negative predictive value), AUC (area under the curve).

Diagnostic characteristics of PROMIS Anxiety score cutoffs compared to a clinical psychologist's assessment of a DSM-5 anxiety disorder. (N=50)					
PROMIS Anxiety cutoff score	Sensitivity	Specificity	PPV	NPV	AUC
43	100%	11%	33%	100%	0.56
44	100%	17%	34%	100%	0.59
45	100%	20%	35%	100%	0.60
46	100%	20%	35%	100%	0.60
47	100%	31%	38%	100%	0.66
48	100%	31%	38%	100%	0.66
49	100%	31%	38%	100%	0.66
50	93%	37%	39%	93%	0.65
51	93%	40%	40%	93%	0.67
52	73%	46%	37%	80%	0.60
53	73%	46%	37%	80%	0.60
54	67%	63%	43%	81%	0.66
55	60%	63%	41%	79%	0.61
56	60%	66%	43%	79%	0.63
57	60%	66%	43%	79%	0.63
58	60%	66%	43%	79%	0.63
59	60%	74%	50%	81%	0.67
60	47%	74%	44%	76%	0.60
61	47%	74%	44%	76%	0.60
62	40%	80%	46%	76%	0.60
63	40%	83%	50%	76%	0.61
64	40%	89%	60%	78%	0.64

65	33%	89%	56%	76%	0.61
66	27%	91%	57%	74%	0.59
67	20%	91%	50%	73%	0.56

The bolded row represents the PROMIS Anxiety cutoff score with the largest AUC.

Abbreviations: PROMIS (Patient-Reported Outcomes Measurement Information System), PPV (positive predictive value), NPV (negative predictive value), AUC (area under the curve).