Supplementary Material

Article Title: Faces Scales for Anxiety and Anger: A National Study of Measurement Properties

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List of Supplementary Material for the article

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Supplementary Table 1. Overview of Methodological Process			
Development			
Name	Description		
Population Identification	Definition of measurement goal and target population		
Scale Generation	Informed by expert team and literature review		
Pretesting	Revision based on free-text commentary by target population		
Evaluation			
Name	Measurement Properties Assessed	Study	Size
Content Validity	Relevance, comprehensibility, comprehensiveness	#1	300
	Strength-of-association with the construct being measured	#2	300
Construct and Criterion Validity	Convergent validity against a visual method [VAS]	#3	305
	Convergent and concurrent validity against a written method [PROMIS]	#4	1000
Reliability and Measurement Error	Test-retest reliability and measurement error	#5	853

Abbreviations: VAS, visual analogue scale; PROMIS, Patient-Reported Outcome Measurement Information System
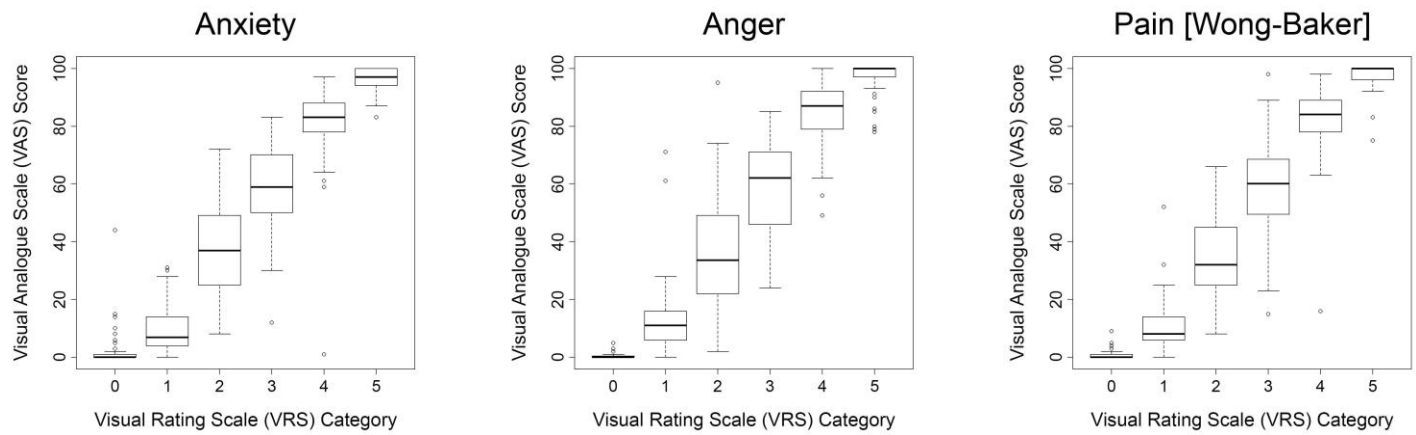
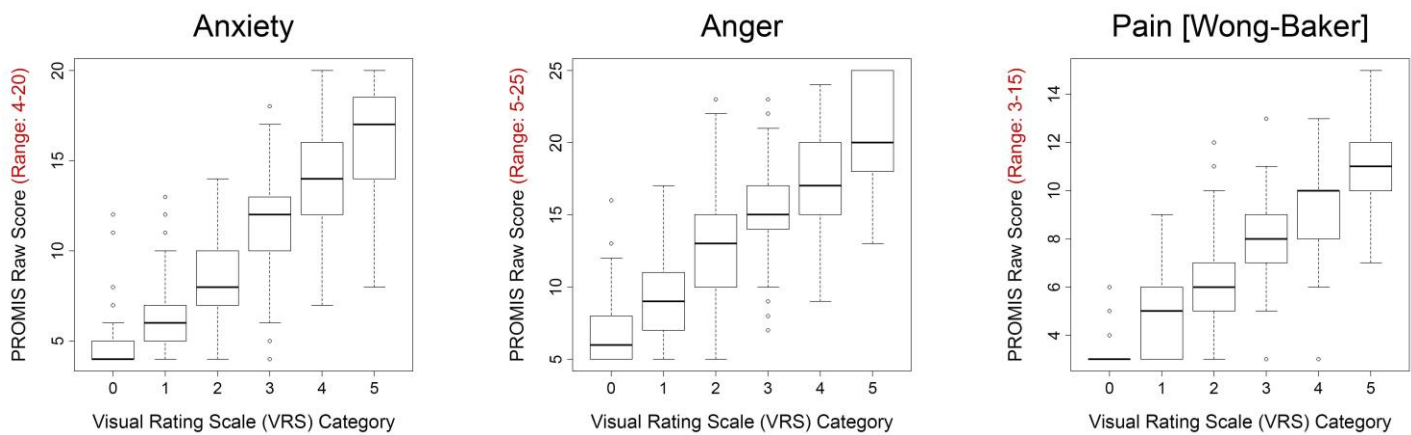| Construct	Synonyms and Sub-Constructs
	Supplementary Table 2. Accepted Participant-Defined Synonyms and Sub-Constructs for Anxiety, Anger, and Pain
Anxiety	anxious, very anxious, anxiousness, nervous, nervousness, sweating nervously, worry, worried, very worried, extremely worried, afraid, being afraid, fear, extreme fear, fearful, 10 fear, terror, terrified, fright, frightened, frightening news, scare, scared, extremely scared, alarmed, panic, panicked, panicking, frantic, uneasy, dread, angst, sweat, stress, stressed, distress, distressed, being in distress, severe distress, overwhelmed
Anger	angry, 10 angry, extreme anger, extremely angry, very angry, very angry to the point of yelling, frustrated, infuriated, furious, fury, mad, very mad, upset, outrage, rage, irate
Pain	worst pain, lots of pain, painful, in pain, very painful, a lot of pain, severe pain, physical pain, extreme pain, great pain

Supplementary Figure 1. The Visual Analogue Scale

0	100
(No Pain)	(Worst Imaginable Pain)

Supplementary Figure 2. Distribution of VAS Scores by Ordinal Image Category for each Faces Scale

Supplementary Figure 3. Distribution of PROMIS Raw Scores by Ordinal Image Category for each Faces Scale

Supplementary Figure 4. ROC Curves for each Faces Scale

95% confidence interval shown in blue.