Investigating if a whole person pain assessment explains functional outcomes in adults with chronic low back pain

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Introduction

- Numerous biopsychosocial factors associate with pain.
- Despite research progress, a comprehensive, clinically useful measure has yet to be developed.
- Our previous research shows an empirically informed, clinically-derived, quantified assessment components help explain clinical heterogeneity in individuals with multi-site pain with or at risk for knee OA (1-3).

Objective: To determine whether the clinical outcome findings from a prior study evaluating the Whole Person Pain Assessment (WPPA) are replicated in individuals with chronic low back pain.

Material and Methods

- Cross-sectional analysis on data from a multi-site, prospective observational study, ERASED 2 (IRB#202306132)
- Participants: 140 individuals, 18-85 years old, with non-specific chronic low back pain, recruited from Vanderbilt (n=68) and Washington (n=72) Universities
- Measures included predisposing temperament (trait anxiety) and quantified life experiences (chronic pain stage, socioenvironmental, and behavioral/psychosocial factors)
- Low-risk and high-risk life experience classifications were based on clinical norms, and combined with proactive and sensitive temperament traits resulting in four profiles:
- Proactive/LR; Sensitive/LR, Proactive/HR, and Sensitive/HR
- Outcome measures: Brief Pain Inventory (BPI) interference, Oswestry Disability Index (ODI), and Timed Up and Go (TUG)

Results

WPPA distributions:
Proactive/Low Risk: n=77
Sensitive/Low Risk: n=34
Proactive/Sensitive High Risk: n = 29

	Total N=140
Age, mean ± std	47.8 ± 16.5
Comorbidities, median [IQR]	1.0 [3.0]
Sex, n (%)	
Male	52 (37.1)
Female	88 (62.9)
Study Site, n (%)	
Vanderbilt	68 (48.6)
Washington University	72 (51.4)
Sociocultural Group, n (%)	
Non-Hispanic Black	57 (40.7)
Non-Hispanic White	83 (59.3)

Table 1. Participant Characteristics

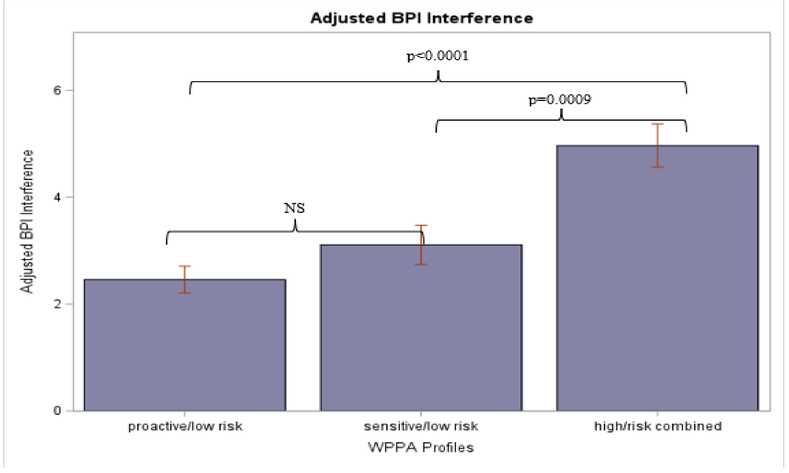


Figure 1. Adjusted Brief Pain Inventory Interference by Whole Person Pain Assessment Profiles. Covariates: age, sex, study site, and comorbidities. Overall model (F=5.57, p<0.0001). Error bars: standard error.

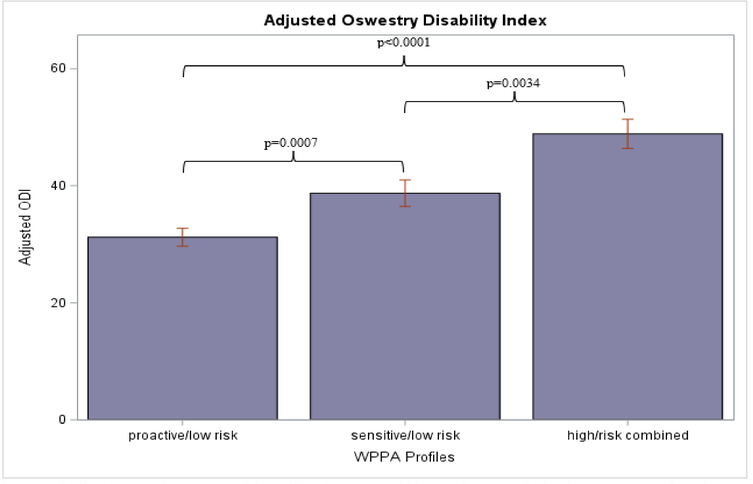


Figure 2. Adjusted Oswestry Disability Index by Whole Person Pain Assessment Profile. Covariates: age, sex, study site, and comorbidities. Overall model (F=5.57, p<0.0001). Error bars: standard error.

Discussion

- Although limited by sample size, findings align with previous reports showing that WPPA profiles help elucidate inter-individual differences in pain and function
- May assist in explaining the variability observed in pain treatment responses, and thus provide guidance for clinical management

References

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