

Introduction

- Methods for assessing patients with chronic pain do not explain clinical heterogeneity. Numerous biopsychosocial factors are associated with chronic pain experiences.
- Despite the progress, a clinically useful measure has yet to be identified. Emerging evidence shows that an empirically informed assessment approach incorporating clinical norms helps explain inter-individual differences.
- The Whole Person Pain Assessment (WPPA) approach will be evaluated to determine if prior findings are replicated across measures of clinical pain and function.

Material and Methods

- A cross-sectional analysis was completed on baseline data from a multi-site randomized clinical trial (PROACT, (IRB#201900232); 1)
- Participants were community-dwelling adults aged 45-85 meeting clinical criteria for knee osteoarthritis.
- All participants provided informed consent.
- The WPPA assessment includes measures of chronic pain stage, socioenvironmental and behavioral/psychosocial factors, and dispositional traits (Figure 1; 2-3).
- Variables were assigned 0 for buffer and 1 for risk based on clinical norms and summed. Low-risk and high-risk classifications were combined with vulnerable or protective dispositional traits, resulting in four groups: protective/low-risk (n=71), protective/high-risk (n=66), vulnerable/low-risk (n=21), vulnerable/high-risk (n=31).
- The WOMAC is a self-administered measure of osteoarthritis pain, stiffness, and physical function, with a total score ranging from 0-96 (4).
- The SPPB is a performance-based screening assessment composed of balance, gait speed, and chair stand with a 0-12 range (5).
- Regression analyses were completed with covariates sex, study site, and total comorbidities.

Results

- A total of 189 participants had complete data to calculate the WPPA and were included in the analysis.
- Participants were on average 61.0± 9.0, 68.3% female, 50.8% non-Hispanic Black, and 43.4% from the University of Florida site and 56.6% from the University of Alabama at Birmingham site.
- In an adjusted model, there was a significant relationship demonstrated between the WPPA groups and both WOMAC total score (p<0.001) and SPPB total score (p=0.0393, Table 1).
- Notably, the high-risk/vulnerable group reported the highest WOMAC total score, indicating greater pain, worse physical function, and greater stiffness than all other WPPA groups (ps<0.01, Figure 2).
- The high-risk/vulnerable group had worse functional performance on the SPPB total score compared to low-risk/protective and low-risk/vulnerable groups (ps<0.05).

	Total WOMAC Score	95% CL	SPPB Total Score	95% CL
Low Risk/Protective	32.3	28.2-36.4	9.0	8.5-9.4
High Risk/Protective	42.9	38.9-46.9	8.0	7.5-8.4
Low Risk/Vulnerable	31.4	24.3-38.5	9.1	8.3-9.9
High Risk/Vulnerable	54.3	48.2-60.5	7.8	7.1-8.5

Table 1: Adjusted Means for WPPA groups and Total WOMAC and SPPB Total Scores . *Adjusted for sex, study site, comorbidities

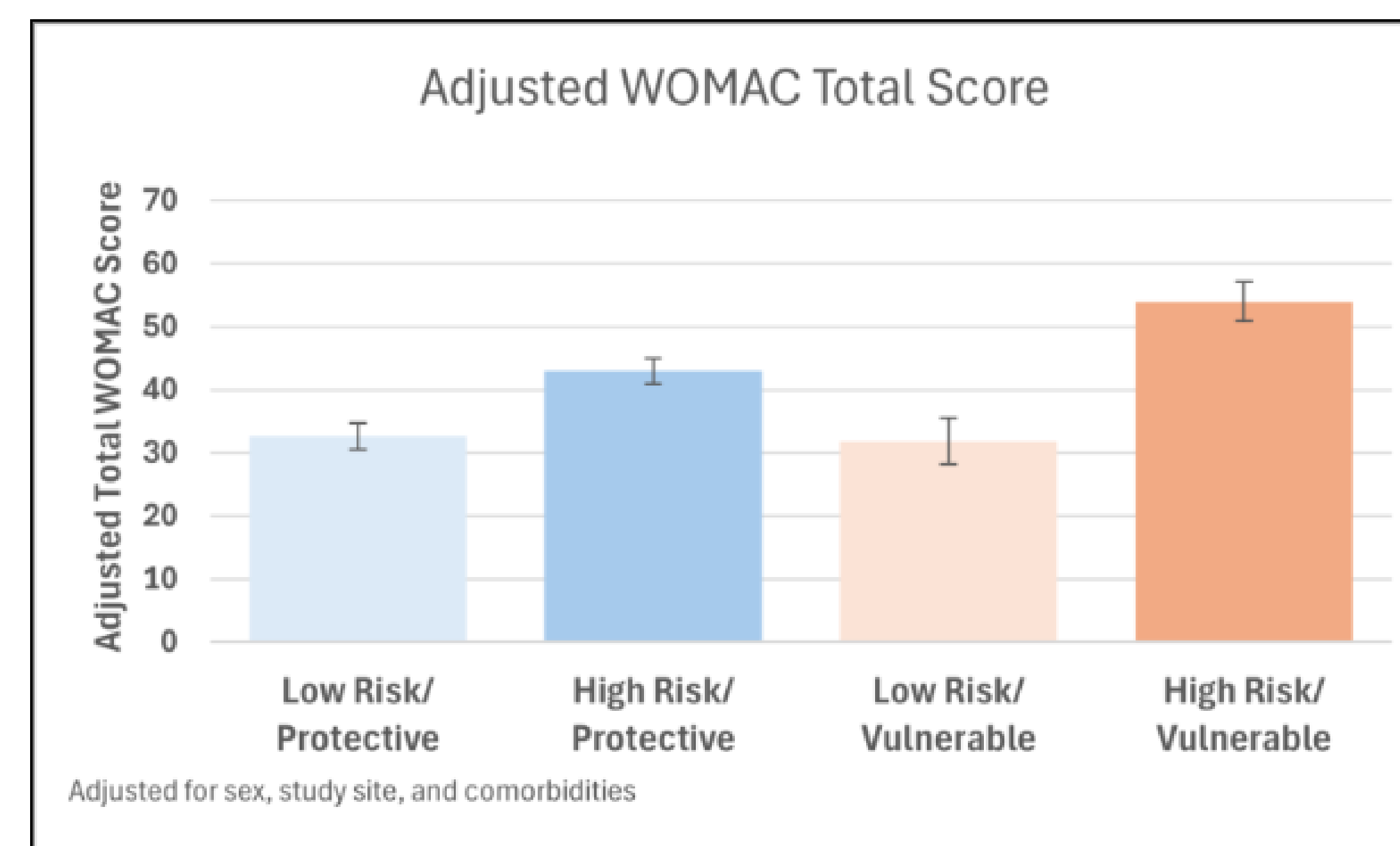


Figure 2: Adjusted Total WOMAC Score by WPPA Groups

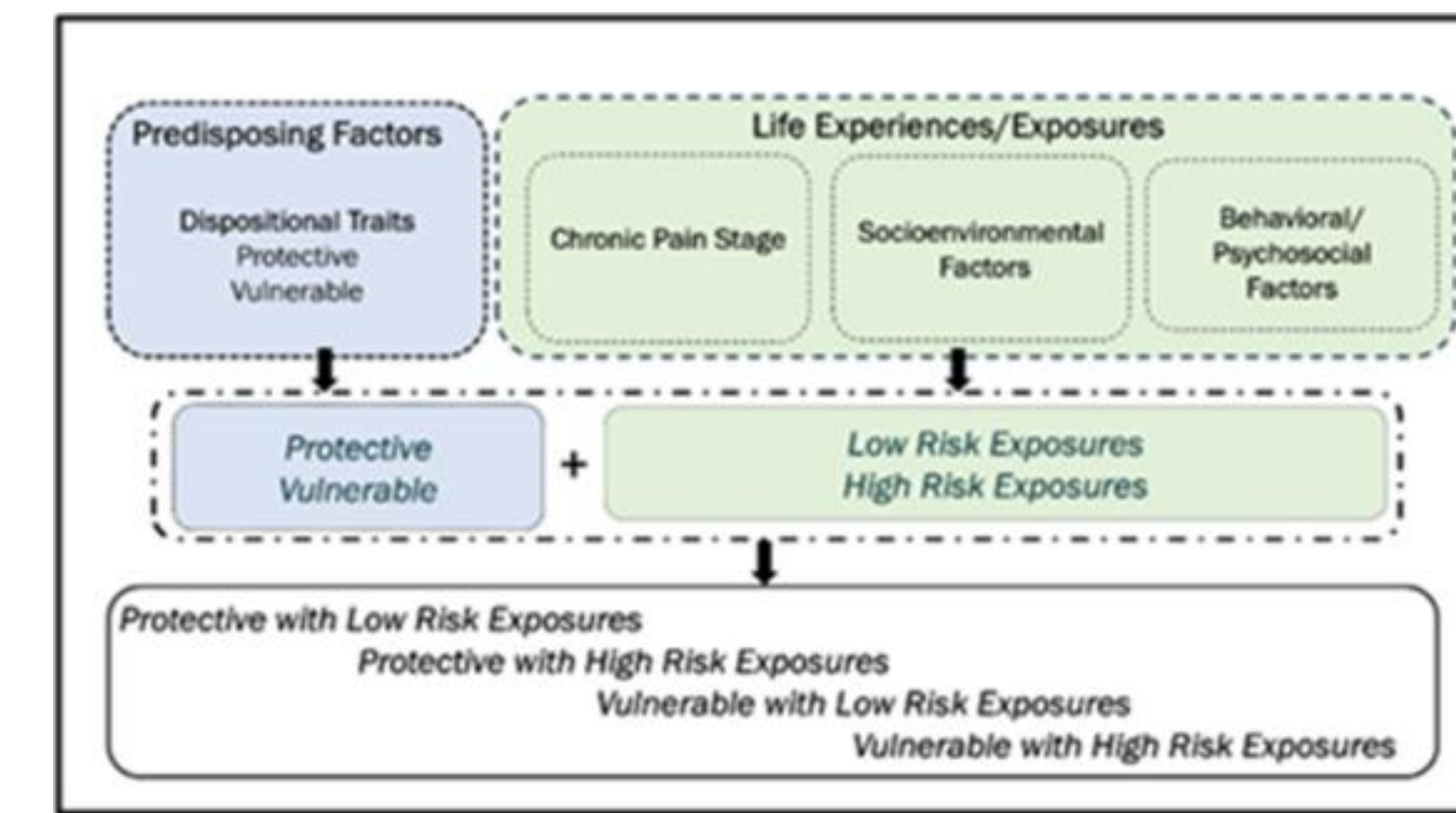


Figure 1: Model of Whole Person Pain Assessment (WPPA) Approach

Discussion

- Group differences are indicated in the Total WOMAC and a measure of physical function, with the pattern of findings aligning.
- Currently, clinical trials include individuals with a pain intensity of 4 or greater and do not differentiate within the sample.
- Evidence indicates components of the WPPA approach help elucidate inter-individual differences in pain, function, and biological outcomes (2,3).
- The clinically applicable approach may explain the modest benefits in treatment response and provide guidance for treatment planning.

References

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Acknowledgements: This project is supported by NIH/NIA grant R37AGO33906.

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