Classifying Chronic Pain Patients by Values and Acceptance

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Introduction

- Pain acceptance and values-based action are two psychological processes shown to be relevant to Acceptance and Commitment Therapy (ACT) for chronic pain.[1]
- Pain acceptance entails a willingness to experience pain and other distressing private experiences without unnecessary or unhelpful attempts to control them.
- Values-based action describes engagement in activities that are personally meaningful or help the individual move towards personally-identified important purposes.
- While cognitive behavioral therapy is generally effective for chronic pain, an emphasis in recent years has encouraged researchers to identify therapeutic processes so that they can be specifically targeted in treatment, and thus, aid in improving treatment effectiveness.[2]
- The aims of the present study were to: (1) determine if patient subgroups could be identified based on reported pain acceptance and values-based action at treatment assessment and (2) evaluate if differences in pain, depression and pain-related distress and disability existed between these subgroups.

Method

- Latent profile analysis, a multivariate approach to subgroup identification, was used to classify participants (N = 1196); 69% female (n = 831).
- Two, three, four and five class solutions were evaluated.
- Distal outcomes were computed via the BCH method.[3]
- Analysis were conducted in Mplus ver. 8 and results summarized in R ver. 3.4.

Measures

- Acceptance: Chronic Pain Acceptance Questionnaire (CPAQ)[4]
  - Activity Engagement subscale: engagement in values based action
  - Pain Willingness subscale: disengaging with pain avoidance behaviors
- Values-Based Action: Chronic Pain Values Inventory (CPVI)[5]
  - Values Importance: participants ratings of importance of common values domains (family, intimate relations, friends, work, health, growth and learning); range 0 "Not at all successful" to 6 "Extremely successful".
  - Values Success: participants ratings of importance of common values domains (family, intimate relations, friends, work, health, growth and learning); range 0 "Not at all important" to 6 "Extremely important".
- Physical and Psychosocial Disability: Sickness Illness Profile – Chronic Pain (SIP-CP)[6]
- Pain: Brief Pain Inventory (BPI)[7]
- Pain Anxiety: Pain Anxiety Symptoms Scale (PASS)[8]
- Depression: British Columbia Major Depression Inventory (BCMDI)[9]

Results

Model Fit Statistics

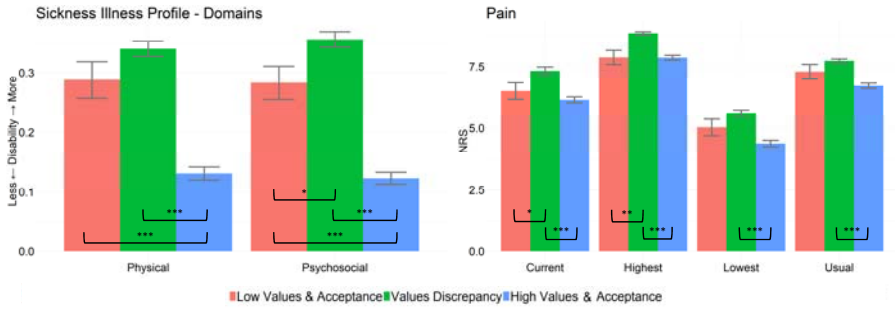
Classes	aBIC	LRT	VLMR	Entropy
2	20519.43	0.00	0.00	0.60
3	20166.96	0.00	0.00	0.70
4	20165.71	0.02	0.03	0.67
5	20128.64	0.02	0.02	0.66

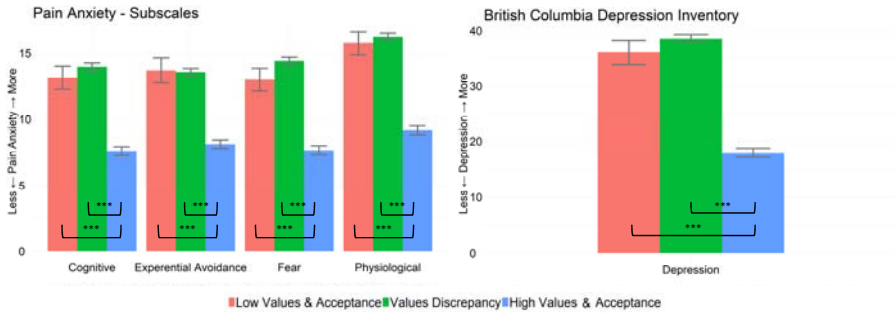
Note:
- LRT = Likelihood Ratio Test (p-value)
- VLMR = Vuong-Lo-Mendell-Rubin Adjusted LRT (p-value)
- aBIC = Sample size adjusted BIC

- A three class solution was determined to be optimal.
- Because LRT and VLMR remained significant for all models, entropy was used as a secondary criteria to determine model fit.

Class Counts (three class solution)

class	count	proportion
Low Values & Acceptance	67	0.06
Values Discrepancy	637	0.53
High Values & Acceptance	492	0.41





Note: * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$

Discussion

- This study builds upon previous studies that use classification techniques to dissect heterogeneity of pain patients by identifying homogenous groups based on indicators of psychological processes relevant to pain treatment: acceptance and values-based action.
- Meaningful groups were identified in this study as predicted group membership was associated with differences in pain, depression, pain related fear and anxiety, and physical and psychosocial functioning.
- By including values in addition to acceptance this study provides expanded support for the theoretical model underlying ACT and justifies a continued focus on acceptance and values processes in the treatment of chronic pain.

References

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