Mechanisms of Motivational Interviewing for Depression in Primary Care

Bethany M. Kwan, PhD, MSPH[1], Samuel Hubley, PhD[1], Robert D. Keeley, MD[1,2]
[1]University of Colorado School of Medicine,
[2]Denver Health & Hospital Authority
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Patient Engagement in Treatment for Depression

- An estimated 10% of primary care patients have major depression
- Underutilization of services and nonadherence to treatment
- Need for strategies to engage patients in identifying preferred services for depression and for increasing adherence

O'Connor, Whitlock, Beil, & Gaynes, 2009
Raue & Sirey, 2011

Motivational Interviewing (MI)

- "Motivational interviewing is a directive, client-centered counselling style for eliciting behaviour change by helping clients to explore and resolve ambivalence." (Rollnick & Miller, 1995)
- Guiding Principle:
  - Clients, not clinicians, voice reasons for change

MI for Depression Study

- 26 Primary care providers (PCPs) randomized to receive training on MI for depression (n = 10) or standard management of depression (SMD; n = 16) for patients with positive depression screens
- N = 168 patients (88 intervention)

MI for Depression Study

- MI Delivery by PCPs
  - Systematic screening with the 9-item Patient Health Questionnaire (PHQ-9)
  - PCPs used MI approach to explore symptoms of depression and treatment options during regular primary care encounters
  - Treatment options included antidepressant medication (ADM), counseling, and other mood-improving behaviors like physical activity

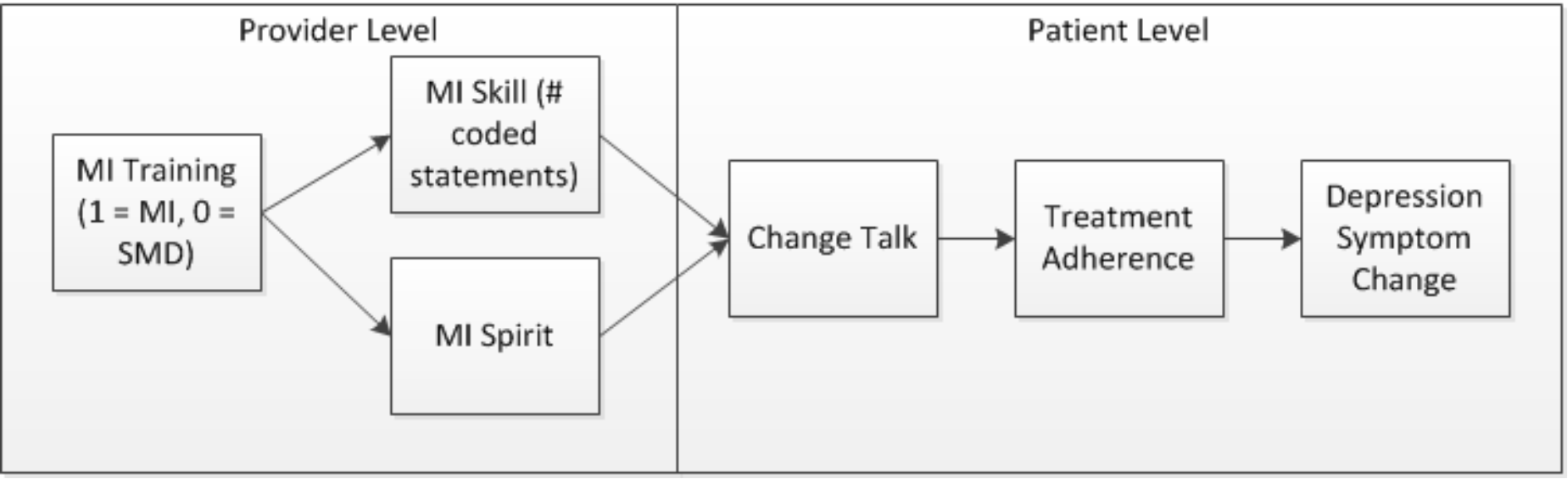
MI for Depression Study

- Significant effects of condition on change in depression symptoms at 36 weeks (Cohen's d: 0.41)

- **Underlying mechanisms for effects of MI on depression are unknown**

Proposed MI Conceptual Model

Figure 1. Proposed Conceptual Model for Effects of Motivational Interviewing Intervention on Depression Symptoms



- Adapted from Miller & Rose, 2009: "Toward a Theory of Motivational Interviewing"
- Treatment adherence leads to improvement in depression symptoms (Kwan, Dimidjian, & Rizvi 2010)

Methods

- MI process
  - Direct coding of baseline visit recordings by 2 raters using standard instruments
- Motivational Interviewing Treatment Integrity 3.1.1 (MITI; Moyers et al)
  - Provider MI Skill = total number of coded open questions, reflections and MI adherence statements at the baseline visit
  - Provider empathy and MI spirit = global score, 1-5
- Motivational Interviewing Skill Code (MISC; Miller et al)
  - Patient change talk = Total # of coded change talk statements (overall and for medication, counseling, and OPA)

Measures

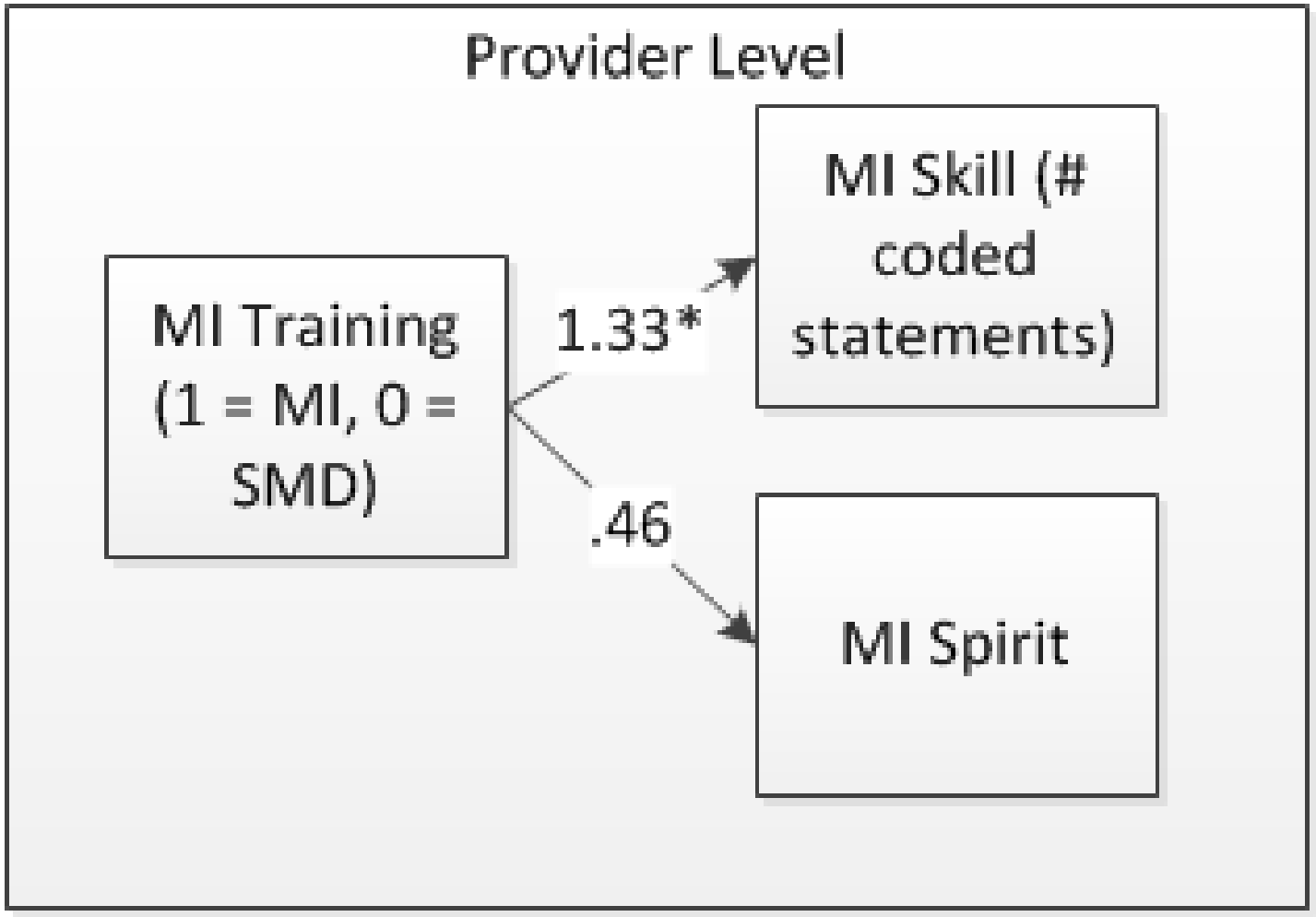
- Patient outcomes
  - Treatment adherence
    - Chart review
      - Number of visits to specialty mental health counselor (minimally effective = 4)
      - Months of refilling antidepressant Rx without a 30 day gap, (minimally effective = 3 months)
    - 12-week follow-up survey
      - Behavioral Activation for Depression Scale (BADS; Kanter et al 2006)
  - Depression symptoms
    - PHQ-9 administered at baseline and 6, 12, 36 weeks

Analysis

- Analysis
  - Multilevel modeling (nested within care team) to test a series of pathways in the MI conceptual model

Note. Multilevel path analysis not feasible given low *n* for care teams

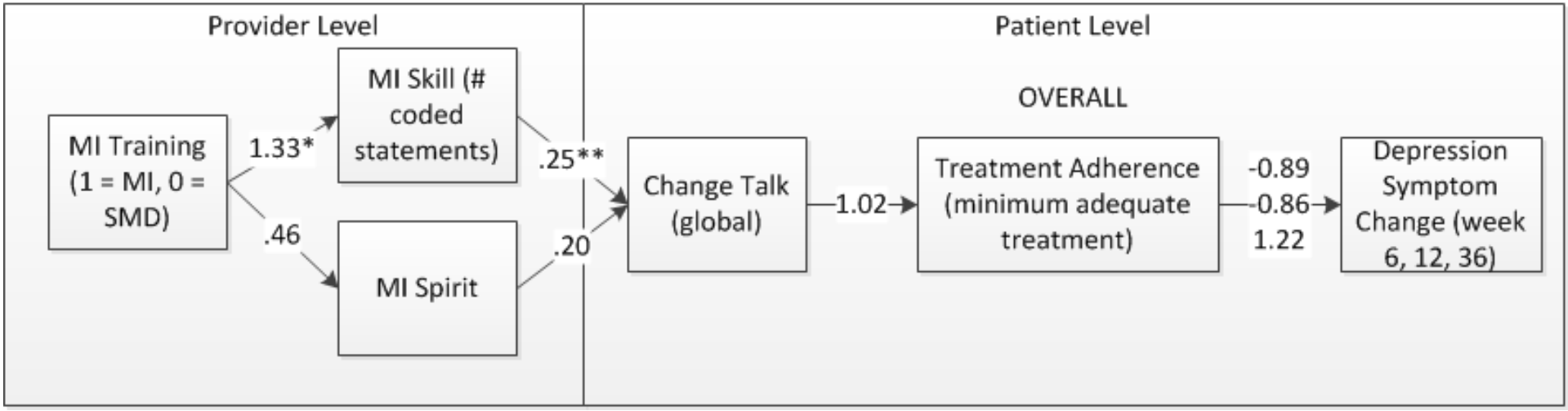
Results: Intervention → Provider MI Skill & Spirit



Parameter estimates shown, *p < .05

Results: Global Effects

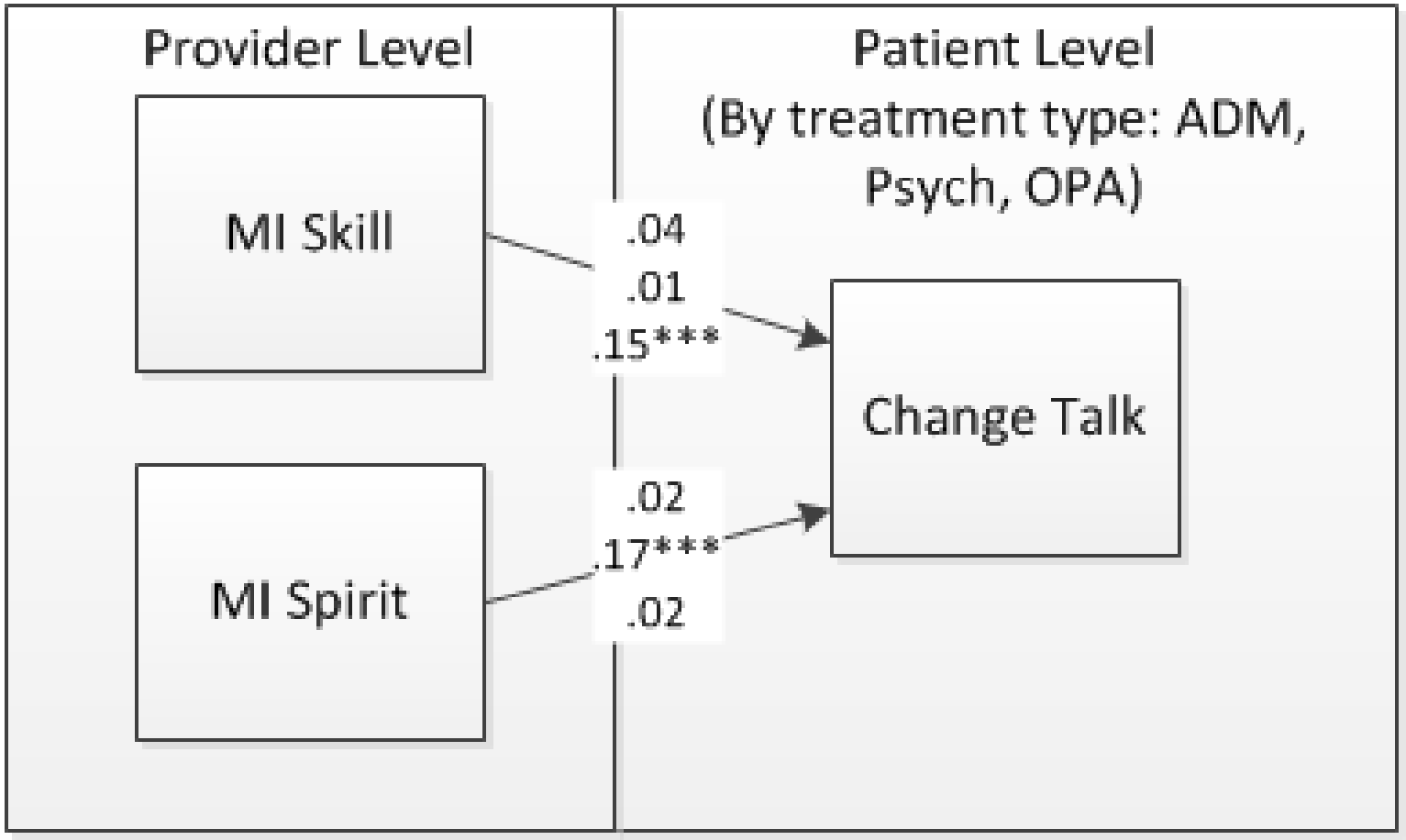
Figure 1. Proposed Conceptual Model for Effects of Motivational Interviewing Intervention on Depression Symptoms



- However, there were significant effects within treatment modality

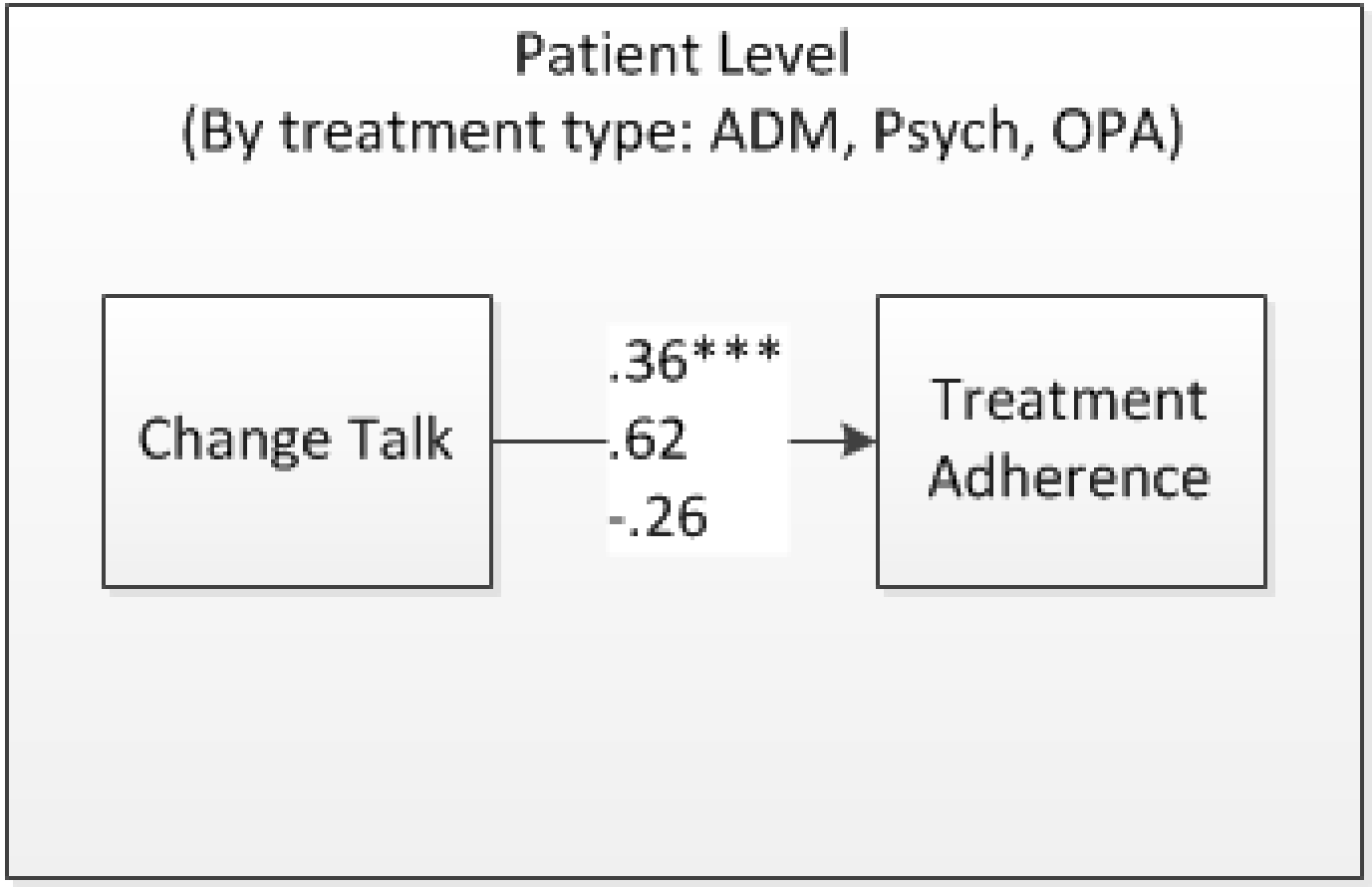
Parameter estimates shown, *p < .05, ** p < .01

Results:
Provider Skill/Spirit → Change Talk



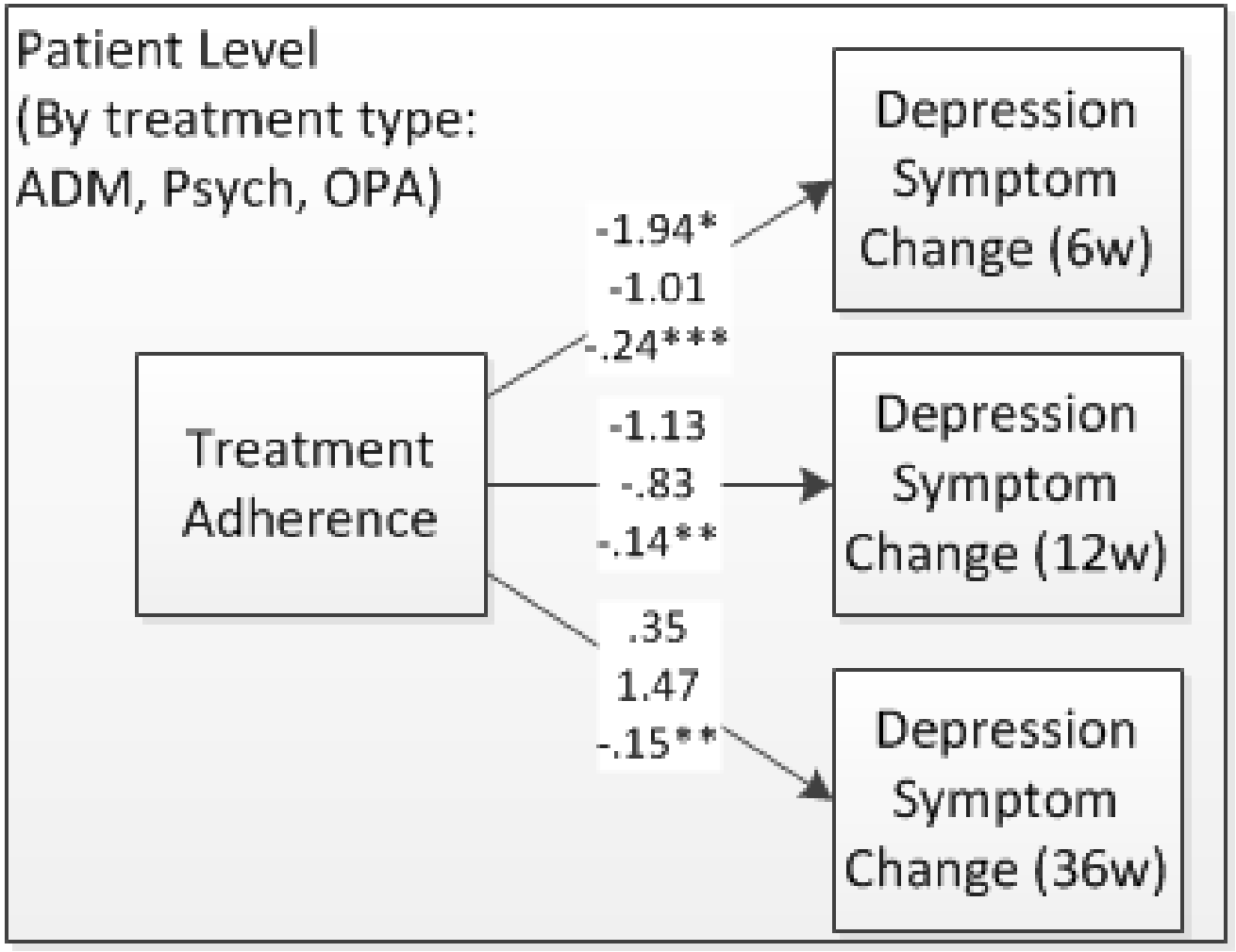
Parameter estimates shown, *** p < .001

Results: Change Talk → Adherence



Parameter estimates shown, *** p < .001

Results:
Adherence → Symptom Change



Parameter estimates shown, * p < .05, ** p < .01, *** p < .001

Discussion

- These data support some elements of the MI conceptual model, especially for change talk and OPA.
- While some patients expressed interest in counseling, lack of access to adequate counseling may have been a barrier.

Other Mechanisms?

- Some mechanism of the effect likely through treatment adherence (assuming treatments are efficacious)
- Other mechanisms are possible
  - Direct effects of MI spirit on depression symptoms
  - Self-determination theory-based explanations
    - Psychological needs support rather than change talk

Acknowledgments

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Key References

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